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INTRODUCTION

The anthology of papers we are publishing under the title *School and Health: Education and Healthcare* provides a summary of papers produced for the research project implemented by the Faculty of Education at Masaryk University in the years 2005 – 2011 under the title *SCHOOL AND HEALTH FOR THE 21ST CENTURY*. The principal aim of this wide-ranging concept was to get to the heart of issues in education and health leading to more effective and fundamental education and healthcare.

Schools have a fundamental role to play in health education as they provide institutional and specialist education and shape the young generation, while focusing on pan-social educational goals and values, among which health takes an important place.

The concept of our research project as a whole is extremely broad, and as soon as the first theoretical and research results had been obtained, we came to the conclusion that we should place no restrictions on the scope of the topics studied, even at the cost of greater diversity (or even fragmentation) of the areas to which those interested in the given issues would devote themselves. The mutual interrelations between school and health result in a large number of topical questions and tasks that are often difficult to evaluate according to their seriousness and urgency. Issues in health education represent another extremely lively area responding to social, political, economic and local problems, and the alternative experiences of the layman sometimes come to the fore here alongside scientific knowledge.

This anthology shows views of health and school from the philosophical and historical aspect and highlights a number of school problems. Attention is also devoted to questions of diet, specific age timeframes and views of pupils with special physical, psychological and social problems.

In addition to authors who are members of the basic research team working on the research project, further contributions to the anthologies are also made by other people with an interest in the issue of health education, including contributors from abroad.

All the authors are fully responsible for the content of their own contributions, which were for the most part tested at the international conference *SCHOOL AND HEALTH 21*, which we hold every year as part of the project. The authors also offer complete contact details for the purpose of discussion of their studies. The diversity of the papers in the anthology is the result not merely of the diversity of the topics considered, but also the various professions and focus of interest of the individual authors. The anthology *School and Health: Education and Healthcare* presents working and contemporary texts for those interested in health education. Our wish as editors is for the largest possible number of people working in education and health to find ideas here that they will want to take a position on.

October 2011

Evžen Řehulka
researcher, research project MSM0021622421
SCHOOL AND HEALTH FOR THE 21ST CENTURY

PHILOSOPHICAL ASPECTS OF HEALTH

Radovan RYBÁŘ

Abstract: *The study discusses the beginnings of European medicine in ancient Greece. It examines the links between the development of philosophy and medicine. Medical mythology is present already in the cult of Asclepius. The theory combining medicine and philosophy may be traced to the Homeric epic Iliad. Later on, Ionic natural philosophy becomes the basis of all known sciences, including medicine. The doctrine of catharsis as a way of internal cleansing pervaded the entire ancient philosophy. Another frequent term in the old-Greek way of thinking was kalokagathia, an ideal of beautiful and healthy life. The idea of harmony, perceived to be a unity in diversity, played an important part as well. Some particularly insightful studies on kalobiotics appeared during the Czech Biedermeier period, showing how to live correctly, beautifully and harmoniously. They could become a source of timeless inspiration for any reflection on the quality of life.*

Key words: *antiquity, catharsis, harmony, kalokagathia, medicine, mythology, philosophy, quality of life.*

Introduction

We Europeans are proud of our achievements in medicine and surgery, although we have come to understand the limitations of mass medicine based on chemistry and sharp scalpels, the medicine that cures the disease rather than the patient, the organ rather than the organism. And we are beginning to pay the price of doing this kind of medicine, be it organic resistance to drugs or harmful side effects. So we look to other cultures and civilizations for medical wisdom, or to the ancient roots of European medicine in classical Greece, where we seek inspiration for our times.

Medical Mythology in Ancient Greece

The beginning of European medicine may be found in Hellas (ancient Greece), where it first appeared cloaked in mythology, like everywhere else in the world. In the initial period of what is called **Homeric medicine**, the power over illness and health was summarily attributed to gods. The ancient Greeks “started to worship the individual deities as sustainers and saviors of the sick. The **three greatest divine healers** were: **Apollo**, the inventor of medicine and a physician to gods (Paieon), who not only cures, but whose

arrows (rays of sun) also sow disease and death; Apollo's sister **Artemis** as a female counterpart of the god of muses, the protector of women and children, helper of mothers in childbirth, but also an unforgiving goddess of death; **Pallas Athena**, the healer (*Hygiene*) and the guardian of eyesight, who strikes philanderers with insanity and infuses her favorites with combativeness. **Centaur Chiron**, who taught the Hellenic heroes how to hunt and heal, is likewise considered to be the founder of the healing arts."¹

Greek **medical mythology** is extraordinarily multi-faceted, as evident already in the **myth of Asclepius** (Latin **Aeskulap**), who was originally a Thessalian ground demon accompanied by a grass-snake, the oldest symbol of religious bonds with the depths of the Earth.²

The Greeks at first worshipped Asclepius as a hero, but the reports of his miraculous curing of the sick resulted in an apotheosis. Asclepius was supposedly the son of god Apollo himself, born via a "Caesarian section". After the death of his mother Koronis, who was Apollo's lover, the boy's education was entrusted to centaur Chiron, who initiated him in the medical arts. Thus Asclepius the demigod turned into a renowned physician. Blinded by his power, he used it to bring the dead back to life. Zeus punished this arrogance with a lightning. However, after his death, Asclepius ascended to Mount Olympus.

The **cult of Asclepius** spread rapidly in the 5th century BCE and many temples, called asclepiions, were built in honor of this god. The most prominent **asclepion** stood at Epidaurus in Argolis. The individual shrines of Asclepius could be predominantly **mystical in orientation**, with priests dispensing divine treatments to their patients, or conversely of a **secular orientation**. A divine "treatment in a dream" was practiced at Epidaurus, unlike the well-known spas of Kos and Knid where the treatment was natural and rational. The **priestly medicine** with the cult of Asclepius, as opposed to the **medical schools of Asclepius' followers**, were merely representative of **two different approaches to medicine**.

The **asclepion of Kos** was discovered relatively late, in 1902, and subsequently excavated by German archaeologist Rudolf Herzog. Only then the local inhabitants started to commemorate Hippocrates, their great native son.

Hippocrates of Kos (460-377 BCE) was the most important figure of the old Greek medicine. He postulated a so-called humoral theory, that defines the relationship of the basic bodily fluids. But only a few inhabitants had the right idea about Hippocrates, about his stature in ancient medicine, and about the hippocratic collection. The **statue of Hippocrates at the Museum of Kos**, found in the odeion on Kos in 1929, is impressive by its excellent portrayal of humanistic spiritual values of his times: love for the fellow man, a sense of duty, that special blend of scientific thoughtfulness and human kindness -- the qualities that every physician should possess.

¹ See Pollak, K.: *Medicína dávnych časü (The Medicine of Old Times)*. Prague, Orbis, 1973, p. 267.

² The Asklepius' staff-entwining serpent is not a snake of some kind as is generally believed. The symbol came from Near Asia and Egypt, where the most common disease was dracunculiasis, caused by a long thin roundworm (*Dracunculus Medinensis*). The old physicians used to help the afflicted patient by winding the worm slowly and carefully on a splinter of wood. In time, this act became symbolic of the physicians' and healers' vocation. It was adopted by the Greek and Roman physicians, but not knowing the procedure, or not wanting to confuse the patients in Europe where dracunculiasis luckily does not occur, they substituted the roundworm with an elegant grass-snake and the splinter or a stick with a staff. The Greek tales about the serpent as a life-renewing symbol were made up afterwards.

However, **the cult of Asclepius**, with its oriental mysticism, was somewhat foreign to the Greek temperament. The more educated segments of the population did not take it very seriously, even at the time of Hippocrates. For example, Aristophanes, the famous playwright of comedies, even dared to ridicule the cult and lampoon the priests as greedy impostors. Their therapeutic temples were nevertheless well attended by patients, mostly from the lower social classes. It was only after the arrival of Christianity that Asclepius was gradually overshadowed by saints that were able to protect health.

Origins of the Philosophical-Medical Theory

The first insight into Greek medicine may be found in **Homer's Iliad**. In this epic, Homer mentions some fairly advanced medical knowledge that existed in his times. **The first references** to human affairs which could be called **philosophical-medical** appear already in the Homeric period, or roughly in the 9th-8th century BCE. They contain **words like psyche and soma**, although used a little differently than today, namely to describe human destiny after death. Here the dead human body (soma) stands in contrast to life (psyche). The psyche, which leaves the body at the time of death, represents human mortality. The humans, limited by their mortal fate, are juxtaposed with the immortal Homeric gods, who have no psyche. As Homer sees it, the psyche, characteristic of a mortal life, has no connection with the man's psychic abilities as was believed later on. Instead, the Homeric epics are replete with organs called psychic (such as noos, thymos, frenes, and ker), which might refer to various aspects of human corporality, but there is no unifying or general term for body or soul among them.

The Homeric concept of man still does not differentiate between the body and soul, nor does it recognize a precise boundary between the physical and the spiritual. The term psyche, in Homer's way of thinking, is used to distinguish mortal men from immortal gods.³

In the 7th-6th century BCE, the **Ionic natural philosophy** becomes the foundation of all science inclusive of medicine. *"Many of the ancient natural philosophers were also physicians: Empedokles, Alkmaion, Anaxagoras, along with a number of Pythagoras' disciples. The philosophical-medical doctrine of illness that gradually emerged was to remain the predominant theory in antiquity, throughout the Middle Ages until the modern era. At first, it recognized four elements (principles): air, water, fire, and earth, to which four properties were attributed: dry, wet, hot, and cold. Correspondingly, there were four juices: blood, mucus, yellow bile, and black bile, which originated in four organs: heart, brain, liver, and spleen. A balance in the bodily juices constituted health, an imbalance invited disease. The cure was effected by medications of opposite qualities: a mucus-type disease characterized by coldness and wetness had to be fought with something hot and dry."*⁴

In the period represented by natural philosophers of the **Miletus (Ionian) school**, new ideas about physis blurs the boundary between the human and the divine, and likewise between the animate and the inanimate. The world began to be seen as a variable order

³ Cf. Bartoš, H.: *Očima lékaře (Through the Eyes of a Physician)*. A study of the beginnings of Greek thinking about human nature in terms of body-soul differentiation. Červený Kostelec: Department of Philosophy and Natural Science History, Faculty of Natural Sciences at Charles University in Prague, in cooperation with Pavel Mervart Publishing House, 2006, ISBN: 80-86818-35-7.

⁴ See Pollak, K.: *Medicina dávnych časů (The Medicine of Old Times)*. Prague, Orbis, 1973, p. 267.

of physis, where the psyche emerges as a principle of life and its manifestations. The term psyche gradually acquires a psychological dimension that later would become typical.

In the so-called Heraclitus' Fragments of Greek philosopher **Heraclitus of Ephesus** (535-475 BCE), we find the first explicit expression of the relationship between the soul and *logos* (world order) that would become the underlying assumption in a therapeutic approach based on **psycho-somatic difference**. The soul is one of the main themes for Heraclitus. He believes that the psyche participates in some fundamental cosmic processes. Although mortal, it is connected with an eternally live cosmic fire and its ability to change and transform everything. The soul belongs to a universal and inexhaustible principle which is immortal, but, in an individual human situation, always limited by birth and death.⁵

At that time, the reasoning of natural philosophers is already anchored in everyday experiences and observations of natural processes. These philosophers talk about the natural phenomena as elements or antagonists who may *pay a fine to each other or do penance for their lawlessness* (Anaximandros), the air *embraces* the whole world (Anaximenes), the lightning *governs* all that exists (Heraclitus), the incoming fire *sorts or consumes* everything.

The phases of a cosmic cycle are described as either *saturation* or *insufficiency*. The descriptions of macroscopic structures in natural phenomena borrow expressions from human or social activities. The soul is said to be either *dry* or *wet*, or that it *evaporates*, or that it is like *sunshine*. Soul depictions use the vocabulary of gastronomy or meteorology. The soul is identified with a cosmic fire which changes and governs everything. The soul itself is a fire whose intellectual abilities are diminished by dampness, and wetness might extinguish it completely. However, some other philosophers associated such a soul with an airy disposition.

The **later philosophical interpretations** often point to a deeper similarity between the soul and the cosmic fire. They speak of the human soul as an "inner world", or an analogy of "microcosm and macrocosm", in an effort to comprehend man and nature as an integral whole. And yet, starting with Heraclitus, the internal "spiritual" life is categorically different from the external, observable, tangible world.

The analogy between a man and the sun, wherein the life-giving warmth of the sun is compared to a soul, may be found in the **Heraclitus' "river" fractions**. Wading into a river is perceived by him as a macroscopic process, which is mirrored microscopically as wetting of the soul and its subsequent evaporation. Similar analogies apply to other human activities, such as ingestion and digestion of food. The intake of food involves blood, which distributes nutrition throughout the body like a river.⁶ Since blood is wet and warm, the saturation of blood by nutrients brings about an energy deficit, cooling, and sleep. The influx of new waters may be viewed as "spiritual nutrition" in the broadest sense of the word, as stimuli "feeding" the soul. **Heraclitus' image** of rolling waves of water can be understood on several levels without the interpretation losing

⁵ Cf. Bartoš, H.: *Očima lékaře (Through the Eyes of a Physician)*. A study of the beginnings of Greek thinking about human nature in terms of body-soul differentiation. Červený Kostelec: Department of Philosophy and Natural Science History, Faculty of Natural Sciences at Charles University in Prague, in cooperation with Pavel Mervart Publishing House, 2006, ISBN: 80-86818-35-7. As already Homer believed, blood itself comes from vine and bread.

⁶ As already Homer believed, blood itself comes from vine and bread.

its internal logic. Heraclitus appears to be deliberately equivocal (metaphorical) in his speech, but he makes sense on all possible interpretive levels.

Interesting is the example of **Heraclitus' famous utterance quoted by Plutarch**: "*It is not possible to enter the same river twice, nor to touch a mortal creatures twice in the same condition, as it disperses and comes together again in a nimble and rapid transformation.*"⁷ The soul is conceived here as a sort of integrating environment.⁸ Figuratively (metaphorically) speaking, if we enter the river we are, if we don't, we are not.... So at any moment we are, and at the same time we are not.

Even later, **at the turn of the archaic and classical periods of ancient Greece** in the first half of the 5th century BCE, we do not find any direct evidence of a clear contrast (difference) between the body and the soul.

Hippocrates of Kos (460-377 BCE) epitomizes the first phase of Greek medicine. Although almost two and a half thousand years separates us from Hippocrates, he remains a paragon of physicians all over the world to this very day. His concept of a physician having a mission, his principles of medical thought and action, they are all of enduring validity. Even the fact that tradition wrongly gave him the authorship of all Hippocratic Papers (Corpus Hippocraticum) does not detract from his greatness.

Hippocratic Papers are in fact the work of many physicians spanning about one hundred years. These anonymous treatises were written by scholars in the 3rd century BCE for Alexandrian Library on the orders of the knowledge-seeking Ptolemies. The medicinal principles of Kos (Hippocrates' birthplace) predominate, but the views of the Knid and Sicilian schools are also discussed.

The medical papers of the Hippocratic Corpus provide the first evidence of using the psycho-somatic difference in a sense other than the Homeric one. Hippocrates started to be perceived as "The Father of Medicine" already in the Middle Ages. However, of his contemporaries, it is only **Plato**, thirty years his junior, who compares Hippocrates with Polykleitos and Phidias, the most famous sculptors of his time. Hippocrates became known as a physician, and a teacher as well. He was a servant of Asklepius, which means that he was a member of the medical guild that descended from this patron saint of physicians and the divine founder of medicine.

The Asklepians were the physicians who had almost no connection with the cult of Asklepius, as opposed to the Asklepiian priests, who interpreted dreams. Initially, the Asklepians were actually a community of blood relatives who guarded the medical arts as a family legacy. Later, under certain conditions, non-related physicians started to be admitted to this guild as well, so that the original blood-related association eventually became a medical school. The Asklepians liked to settle near the temples of their god. Although secular as physicians, they were not unbelievers. However, as thinkers trained in natural philosophy, they strictly separated knowledge from faith and science from religion. "**The Great Hippocrates**", whose life coincides with the Peloponnesian War period (431-404 BCE), is said to have belonged to the twentieth generation of the Asklepians.

⁷ Cf. Bartoš, H.: *Očima lékaře (Through the Eyes of a Physician)*. A study of the beginnings of Greek thinking about human nature in terms of body-soul differentiation. Červený Kostelec: Department of Philosophy and Natural Science History, Faculty of Natural Sciences at Charles University in Prague, in cooperation with Pavel Mervart Publishing House, 2006, ISBN: 80-86818-35-7, p. 93.

⁸ As opposed to the Plato's concept of a soul, wherein an immortal, i.e. divine, soul is placed into a human body only temporarily from the outside.

The physicians in those days, besides healing, devoted time to teaching. Medical practice at that time was considered a craft open to everyone, so the **quality of physicians varied widely**. While some were experienced practitioners steeped in philosophy, others were dilettantes or fraudulent charlatans. Following a training period, the students were admitted into the Asklepiian guild. Prior to that however, they took an oath preserved in the collection of Hippocratic Papers. In taking it, they swore to the gods, especially to Apollo, Asklepius and others, that they would honor the medical art as their mother and father, and even dedicate to it a portion of their life, that they will safeguard their life and their art to keep it pure and untainted. And that they will, to the best of their knowledge and ability, apply the principles of life for the benefit of the patient, never to his detriment or demise.

Corpus Hippocraticum was first printed in Venice, in 1526. Its subsequent ten-volume edition of the French philosopher and linguist Emil Littré in the years 1839-1861 is not up to today's standards, but as a whole it has never been surpassed. What kind of insights do we owe the Hippocratic medicine?

Let us recount at least a few of the **basic principles of the Hippocratic doctrine**: *Illness arises as a reaction to a wrong way of living, being caused by a disturbance in the balance of bodily juices. Every organism has a natural healing power that tries to restore the imbalance. More important than a diagnosis is the classification of the disease, its prognosis, and the patient's fate. The medical interest centers on his recovery. Thus the main task of a physician is to influence the natural reactions and processes, which tend to be effective but not always are, so as to succeed in saving the organism.*"⁹

Even after such a long time, we must admire the lofty approach to the medical profession in the Asklepiian Oath as well as in many other papers in *Corpus Hippocraticum*. For example: *"A physician who is also a philosopher is on a par with gods. (...) To love people is to love the art of medicine. (...) Physician is a servant of nature. (...) Comprehension and vanity are mutually exclusive. The former leads to knowledge, the latter to ignorance. (...) The art of medicine is the most noble among the various arts."*¹⁰

The Hippocrates' concept of life is thus based on a notion that creation and enhancement of values should be intentionally left to nature for the maximum benefit of the whole. This is why the modern scientific medicine still draws on the Hippocratic teaching, and why the majority of today's medical expressions come from the Greek.

*"The Hippocratic doctrine leads to a conclusion that a physician cannot be only a health technician to individuals and societies, but that he must follow the moral precepts of the Hippocratic Oath. Otherwise he would fail to carry out his mission. The entire Hippocratic medicine -- technically and ethically -- appears to inspire a new humanism that resurrects a moral goal in our technical civilization."*¹¹

Related to all this is the legendary Greek passion for debate. Thus the physician had to converse with the patient, answer questions, and engage in frequent public discourses.

The medical papers of Hippocratic Corpus finally reveal the first evidence of psycho-somatic difference being used in other than the Homeric sense. Hippocrates'

⁹ See Pollak, K.: *Medicina dávných časů (The Medicine of Old Times)*. Prague: Orbis, 1973, p. 274.

¹⁰ *Ibid.*, p. 274.

¹¹ *Ibid.*, p. 275

contribution in the area of caring for people in sickness and health, and precisely the physiologically based body-and-soul relationship evident especially in the treatise *On Lifestyle*, were helpful in the design of some modern diagnostic tools.¹² However, this “diagnostic” form needs to be differentiated from the “therapeutic” form.

For example, philosopher **Democritus of Abdera** (470-360 BCE) recognizes therapy of the body and therapy of the soul, and presents arguments why the soul should get a preferential treatment. Democritus is thus the first author to make a distinction between medicine as a physical therapy and philosophy as a psychotherapy. In this way, he posits philosophy as a soul-caring *techne* (art). By tending to the soul’s “health”, Democritus also seeks a road to happiness. The **Democritus’ fractions** are probably the earliest **evidence of a new psychotherapeutic speciality**, later called **philosophy**.

While a **Hippocratic healer** still does not see a difference in the treatment of body or soul, **Democritus** already holds a divergent view when he says “*Medical art cures the bodily diseases (somas), while wisdom (sofe) relieves the soul (psyche) of passions.*”¹³ Or elsewhere: “*People should care more for the soul (psyche) than for the body (soma), because a perfect soul corrects the body condition, whereas physical strength without rationality does not improve the soul in any way.*”¹⁴

Democritus continues the tradition of Ionian philosophical thinking, such as that of **Heraclitus of Ephesus** (ca 535-475 BCE). This has to do especially with the **analogy of soul and fire** when asserting that the atoms of soul are very similar to those of fire. The most striking idea of Heraclitus, and the basis of Democritus’ psychological reasoning, is the conviction that **everything around and within us is in a perpetual state of flux**. And the Democritus’ atoms, just like the waters of the Heraclitus’ river, are in an incessant motion and change. This is of course reflected on the psychic plane as well.

While Heraclitus, seemingly in vain, seeks *logos* (assessment) for the soul in his doctrine and cannot find its boundaries, Democritus holds a conviction that a good soul does not get lost in the world and that the boundaries do not even exist for it. Asked “where should a man look for happiness and what is the essence of it?” Democritus replies: “*Happiness (eudaimonia) does not exist in a herd, nor in gold; the soul is the dwelling (oiketerion) of daimon* (which resides in human nature).”¹⁵

Another idea of Heraclitus, which plays an important part in Democritus’ doctrine, is the belief that *struggle is the father and the king of everything*. This is best exemplified by the idea of a struggle between the senses and the mind, or a court of law where the body accuses the soul of injustice. When **comparing the two thinkers**, it is apparent that Heraclitus sees struggle as the main driver of all cosmic processes (macrocosmic and microcosmic), whereas that conflict has only a microscopic dimension for Democritus when he declares: “*The fight against a desire (thymos) is difficult. However, winning it attests to a well-balanced man.*”¹⁶

¹² Cf. Bartoš, H.: *Očima lékaře (Through the Eyes of a Physician)*. A study of the beginnings of Greek thinking about human nature in terms of body-soul differentiation. Červený Kostelec: Department of Philosophy and Natural Science History, Faculty of Natural Sciences at Charles’ University in Prague, in cooperation with Pavel Mervart Publishing House, 2006, ISBN: 80-86818-35-7, p. 259.

¹³ *Ibid.*, p. 164.

¹⁴ *Ibid.*, p. 165.

¹⁵ *Ibid.*, p. 160.

¹⁶ *Ibid.*, p. 161.

Democritus, for the most part, offers solutions that accentuate the necessity of learning and training, as in the statement: “*Brave is he who overcomes not only his enemies, but also indulgence. Some may rule cities, but are enslaved by women.*”¹⁷ Only good training makes it possible to resist the dangerous enemy of man, which are his own passions, as illustrated by another of his statements: “*Learning brings good things only through effort, whereas bad things bring their own fruit with no effort.*”¹⁸ Only a continuous, strenuous learning, and fighting one’s own passions can lead to a satisfying life and happiness. Plus the effort to understand oneself and the world around. The road to enlightenment does not require a multiplicity of learning, but a recognition of underlying relationships (philosophy). As Democritus says: “*It is not necessary for us to know a lot of things, but to do a lot of thinking.*”¹⁹ In other words: “**wisdom**” does not consist in knowing much about the details, but in the quality of thinking and the ability to uncover hidden relationships. Democritus’ belief in **rational thinking** thus replaces the earlier **intuitive type of thinking**.

A typical characteristic of the old-Greek thinking is **moderation**, the ability to do things that are rationally justified and in the right measure. The **traditional dictum** therefore is: “**Not too much of anything!**”

At the end of the 5th century BCE, a juxtaposition of body and soul begins to be discussed in a philosophical context. From that time on, the psyche is considered to be something more important than, and superior to, the body. An idea emerges that the soul must rule over the body and control it. That proposition would be impossible to find in the writings of Hippocratic authors.

Plato (427-347 BCE) already considered the **superiority of spirit over body** self-evident, as may be seen in his Constitution. **Socrates**, according to Plato, was already admonishing his fellow citizens to care more for their soul than for their material comfort. **Philosophy, as conceived by Plato**, now becomes a **psychotherapeutic technique** analogous to medicine. Since that time, **philosophy** began to be seen as a **method of separating the soul from the body**, and referred to as “**dying alive**”.

The reason why the originally medical, or more precisely therapeutic, subject matter evolved into a strictly philosophical or moral/political discourse where evil and injustice were considered diseases of the soul, was perhaps a plethora of bad physicians in his times, when medicine was still a profession open to anybody. In those days, bad physicians did not suffer any punishment other than contempt. Quite a few physicians became targets of public ridicule for their arrogance or incompetence. **Plato** held these **pseudo-doctors** in such low esteem that he even counted medicine among the professions unworthy of an honest man.

¹⁷ Ibid., p. 161.

¹⁸ Ibid., p. 161.

¹⁹ Cf. Bartoš, H.: *Očima lékařů (Through the Eyes of a Physician)*. A study of the beginnings of Greek thinking about human nature in terms of body-soul differentiation. Červený Kostelec: Department of Philosophy and Natural Science History, Faculty of Natural Sciences at Charles’ University in Prague, in cooperation with Pavel Mervart Publishing House, 2006, ISBN: 80-86818-35-7, p. 162.

Catharsis As a Method of Internal Cleansing

The word **katharsis** (catharsis), which means cleaning, became a very broad category in all ancient philosophy. It is a flexible term applicable to religion, philosophy and medicine, in fact to the entire human being. **Aristotle** was the first to use it in psychotherapy and psychology of art. The cleansing function of art had been known in antiquity for a long time though, for example **Hesiodos**, in his work *The Birth of Gods*, wrote that a singer's voice calms disturbed souls. And the **Pythagorians** claimed that art cleanses the human mind of destructive passions, cures diseases, and contributes to an overall spiritual well-being.²⁰

Plato also elaborated on the doctrine of catharsis in his works, when he proposed to eliminate ignorance and moral deficiencies from human soul by means of art. His catharsis was based on isolating a perfect idea from everything "unclean", physical, sensuous. The soul is associated with beauty and purity while it sheds everything sensuous, and experiences everything in a "pure" form. To do that, the soul has to detach itself from the body, join reason as closely as possible and let it be totally permeated by it. In the *Filebos* dialog, Plato connects cleansing with the idea of selectivity, clarity, and perfect rendering. He holds that virtues, and in fact all things, should be brought to an utmost perfection, thereby attaining the greatest purity.

Aristotle of Abdera (384-322) finally gave catharsis the most important part in a comprehensive doctrine. **Catharsis** or the cleansing of human soul by compassion, empathy and the feelings of fear or anxiety, was entrusted to art, primarily to tragedy. In his treatise entitled *Poetics*, Aristotle points out that art, and above all the tragedy, has an important function: to move a sensitive viewer emotionally toward goodness combined with rationality and high-mindedness, thereby relieving his mental stresses and worries.

Aristotle believed that catharsis can cure maladies of the soul, which -- just like the diseases of the body -- arise from the organism's disturbed balance, from too much or too little energy, from exhaustion after a day of monotonous labor. The energy invested into a work of art by the artist does not dissipate but engenders more energy, which is a source of emotional strength and agility in people whose souls are receptive to beautiful (i.e. esthetically pleasing) forms. This emotional experience, primarily pity and fear, affect the man's psycho-physical constitution as some soothing and purging drugs.

Aristotle argued that drama and music are good for the soul only if they renew and preserve the body/soul equilibrium (eliminate shortages or surpluses of energy). The drama and music should gently induce a normal (harmonious) state in the organism and bring the disturbed (unbalanced) condition to a golden mean or harmony. This **cathartic treatment** is actually a "homeopathic" healing, where pity is cured by pity, fear by fear, madness by madness, etc. But of course the pity that cures and the pity to be cured are not identical.²⁰

The **viewer** of a vividly and artistically portrayed sorrow in a certain tragedy will succumb to its effects, he will identify with it, and gradually acquire a sense of rebirth, purification, joy, as if given a healing balm. Jumbled emotions (like excessive pity)

²⁰ Cf. Buchtová, M.: *Pojetí krásy v antice (The Concept of Beauty in Antiquity)*. Brno: CERM, 2000, ISBN: 80-7204-184-3.

will transmute into a perfect substance. Aristotle therefore wants the author of a good tragedy to fashion the main character so that he resembles most people in many ways. The viewer has to identify with the protagonist at least on some level, feel affinity and potential similarity of fate, but, at the same time, the protagonist has to behave and act substantially better than the viewer.

The **plot of the drama** had to be structured so as to invoke the right form of compassion, trepidation, etc. and permit plausible reasoning, so that the viewer would find the tragic and terrifying spectacle esthetically pleasing. The fear that destroys a person, robs him of his tranquility and drains his energy must be conquered by a “reasonable” (appropriate) degree of fear. It was therefore necessary for the viewer to understand what the characters were guilty of, why they fell into misfortune, and allow him to “re-hearse” it with them so to speak. Only then the viewer could regain his mental balance and find some peace of mind. The author must allow the viewer to figure out the causes of such tragic events, and transform his nonsensical fear into an esthetically pleasing artistic experience.

Aristotle likewise **studied musical catharsis**. Given the ability of music to liberate the soul from all sorts of passions and charm it quickly with its rhythm and melody, Aristotle believes that it is predisposed to be one of the means for citizens’ edification. Aside from soothing and purifying the soul, music has one other pleasing aspect: it is the act of reason. Music is an inherently “good” and desirable activity. Per Aristotle, everything that has internal “goodness”, integrity, and displays a proper form or charm, is also reasonable.

A **work of art** helps to open an inner valve allowing the person to get rid of emotions considered “bad”, those that people want to avoid. Having experienced an artistic work, people return to reality with more relaxed feelings.

The last ancient philosopher of some prominence that studied catharsis in Hellenistic times was **Plotinus**, who pointed out that the old religious ceremonies and rituals were also instrumental in man’s inner purification.²¹

Kalokagathia: The Ideal of Good, Esthetic and Healthy Life

Another common term in the old-Greek thinking with significance for the therapy of the soul, was “**kalokagathia**”, a word composed of “kalos” (beautiful) and “agathos” (good). The **first interpretations** of kalokagathia are to be found in the **sources** from the sphere of **seven sages** and the **Pythagorians**. For example **Solon** is credited with the statement “*Uphold the kalokagathia of morals more faithfully than an oath*”. For **Socrates** (ca 469-399 BCE) “kalokagathia” is the essence of all virtues, all good deeds. He argued that only a wise man can be kalokagathic and equates kalokagathia with wisdom. By contrast, **Plato** understood “kalokagathia” to be the symmetry of body and soul. Kalokagathic man is the one who has ennobled not only his sense of beauty, music and art, but also his body; a man who can also detect all imperfections of life. For

²¹ Cf. Buchtová, M.: *Pojetí krásy v antice (The Concept of Beauty in Antiquity)*. Brno: CERM, 2000, ISBN: 80-7204-184-3.

Aristotle, “kalokagathia” is the overall virtue, all partial virtues mutually intertwined. In his interpretation, “kalokagathia” is the state of integrity in a man’s spiritual life.

For the **ancient Greeks**, “kalokagathia” meant the harmony of body and soul, the ultimate goal of every human pursuit of “goodness”. For them, beauty was inseparable from virtue. And every virtue implied wealth, health, strength and power. The classic “kalokagathia” was peculiar in that it was perceived as an in-born quality, an idiosyncrasy of the socially privileged, those of noble origin, well brought up and educated.

At the very end of the ancient era, during its crisis, an opinion emerged that “kalokagathia” was the result of an uncompromising moral training accessible practically to everyone. This vision of “kalokagathia” was held by the Greek orator **Isocrates**. He defines “kalokagathia” solely in the moral sense, as a result of man’s inner spiritual quest. That also required an abstemious way of living and rejection of the mundane pleasures (e.g. stoic asceticism). This idea used to crop up in the speeches of **Clement of Alexandria**: “*Not nature (fysis), but the result of learning (mathesis) brings forth beautiful and good people.*”²²

The idea of “kalokagathia” survived into the present, although today it usually has a little different content. It could be the influence of **Miroslav Tyrš**, for whom “kalokagathia” was the **ideal of humanistic education** toward physical and mental fitness, as well as beauty.²³

Harmony: A Unified Diversity

The idea of **harmony** had a significant role in the ancient Greek thinking (harmonia means connection, accord, consonance, agreement). This **idea** testified to the regularity and integrity of all things and all beings, along with their content and importance. The **ancient thinkers** applied this expression to a variety of diverse phenomena in nature and in social life, mixing its philosophical sense (ethical and esthetic) with social and cosmological implications. **The original meaning of the word harmony** is crack, joint, clamp, or wedge. This is still the content of the word harmony in Homer’s Odyssey. But he, too, began to use it **in the sense** of agreement, peace, consent.

The philosophy of pre-Socrates thinkers looked at harmony cosmologically, as a general principle and a universal law. The first **systematic doctrine of harmony was postulated by the Pythagorians**. To them, harmony meant syntonization, unification, the unity of components in a cosmological sense. It was also something positive and beautiful to them. This harmony was not a property of any one thing, but an inherent characteristic of the world as cosmos.

The word “**cosmos**” in Greek means order, arrangement, decoration, world, universe. To the philosophers of the Ionian school, and later the atomists, the term signified a harmoniously structured world governed by a system of laws, therefore perceived by man as beautiful. The **opposite** of the word cosmos is **chaos** or disorderly space. Tradition has it that **Pythagoras** was the first to call the universe cosmos.

²² Cf. Buchtová, M.: *Pojetí krásy v antice (The Concept of Beauty in Antiquity)*. Brno: CERM, 2000, ISBN: 80-7204-184-3.

²³ Ibid.

Pythagoras and his disciples worked from the assumption that **the entire universe is built harmoniously**. This harmony exists between heavenly bodies that move in celestial orbits, setting off vibration in the ether that produce the most exquisite music. Unfortunately, the human ear registers this unfathomable singing as nothing but silence. The regular movement of celestial bodies excites harmonious sounds that resonate throughout the universe, hence the well-known phrase **“harmony of the spheres”**.

The **notion of harmony of the soul** appears in the same context. The soul is also a certain harmony, a consonance based on a definite numerical ratio like the whole universe. This concept of human soul explains the peculiar delight it derives from **music**. According to the saying that similarity means affinity, the **soul** joyfully responds to those harmonic vibrations that impinge on, and resonate with, the related elements within the sphere of orbiting heavenly bodies. Spiritual consonance is like striking a chord on lute strings. The soul has the ability to perfect itself by exposure to music. This is because music is an approximation of, and a conduit for, a divine melody. It can put the soul in tune with the eternal harmony that musicians are supposed to bring from heaven to Earth. Music imprints the soul with a stamp of its divine origin. That was why Pythagoras and his disciples utilized music in treating human diseases.

Music in Greece was generally seen as an **important tool in influencing a person**. Pythagoras is therefore the founder of **musical therapy**. He was the first to introduce education by music, by certain rhythms and tunes. That led to a treatment of human morals and passions intended to restore the mental harmony to what it was before in a healthy person. Pythagoras used to **prescribe musical curing sessions**, a sort of musical tune-up. He tried to convert the obsessions that well up within men and surface in irrational ways (profound grief, anger, sorrow, morbid jealousy, fear, childishness, etc.), in fact all human problems, into virtues by appropriate melodies as if they were medications.

The idea of music as an effective therapy for the soul may be encountered in the so-called orphic cults. Their basic idea was a belief that human soul is imprisoned in the body for previous misdeeds. The soul can free itself only by washing away those sins. This cleaning was done through the so-called **orphic mysteries**, which involved music and dancing.

The **Pythagorians** thought that “bad”, i.e. discordant and disorderly, mixture can never produce anything complete and harmonious, therefore beautiful and healthy. That explains their constant search for harmony in all human doing. The **sophists** were the first who began to think that harmony (beauty), as well as the right approach to life and the world, are the problems of human consciousness.

Harmony ceases to be a strictly cosmological problem and it becomes a purely human issue, not a question of virtue or morality but largely a matter of hedonism and sensuality. The **sophists** came up with an **idea** that it is necessary to concentrate on the details and their relativity, and abandon the search for the universal. The relativistic notions of the sophists, especially in the area of morality, were criticized by **Socrates**. He began to extoll the spiritual harmony for its inner, ethical beauty, beneficial to the whole. His disciple **Plato** then shifted the concept of harmony into a spiritual arena. He reverts to a general viewpoint even in his approach to harmony.

Harmony thus becomes the expression of appropriateness and restraint, while being pleasant to our senses. Harmony is an objective quality of things and of the world.

It reflects the properties of an ideal world structure outside of our physical reality. The archetype of this essentially ideal harmony forms the basis of spiritual beauty and morality in general. Such a harmony consists of beauty, truth and goodness, mutually intertwined. Harmony finds its expression in moral deeds, in the constancy of standards and values, in something permanent, unchanging, independent of time and decay, rather than in shapelessness, temporality, ugliness and chaos.²⁴

Harmony may be approached in several steps. The first step is the ability to generalize the things and phenomena around us. **The second step consists in a transition** from all corporality (materialism) **to spiritual values**, such as the beauty of morals and social laws, the beauty of learning and knowledge. **The third step is a direct contact with the divine harmony** that gives meaning and beauty of all lower levels of reality. This is actually a **mystic ceremony** involving something like extrasensory vision in a quest for absolute values. It cannot be described in words because it exists outside the realm of normal human being and knowing.

Aristotle, too, searches for harmony as a mutual conformity of body and mind, a concept called “kalokagathia”. The combination of health and beauty was very important to him. He perceives harmony as the quintessence of beauty, therefore also as a unity in diversity, a beauty that encompasses everything.

In the period of stoicism, harmony (beauty) is once again seen in nature and in the universe. Its essence is in the measure and proportion, in symmetry, in the agreement of opinions, actions and virtues. Stoics also adhere to the idea of beauty being ubiquitous in the world. To them, nothing is more beautiful than the world because it is ruled by order and harmony. The world was created purposefully and orderly. It is flawless, perfect in all respects, therefore also beautiful.

In Hellenism, the last period of antiquity infused with **neoplatonism**, harmony is again viewed mythologically as various speculative constructs in the tradition of Plato.²⁵

Kalobiotics: Making Life Beautiful

In the period of the Czech Biedermeier, a distinct lifestyle of people in the Czech territory in the period between the Congress of Vienna and the revolutionary year 1848, an extremely insightful study appeared in the Habsburg monarchy on “**kalobiotics**”, or how to live beautifully, harmoniously, and correctly in modern times. The credit for its publication goes mostly to Viennese Professor of Anatomy **Wilhelm Bronn**, whose works (such as *Kalobiotik: Kunst schön zu leben, wissenschaftlich aufgefaßt*, 1839) proclaimed that man should not live merely by the rules of practical reason, but also by the principles of beauty. Man should not only strive to live long (healthily), but also beautifully (meaningfully).

Historical examples of practical kalobiotics in this country were: “*center for beautiful living of Antonín Veith, the enlightened owner of Liběchov, with the commingling of art, politic and science, Czechs and Germans; also the cemetery in Albrechtice*”

²⁴ Cf. Buchtová, M.: *Pojetí krásy v antice (The Concept of Beauty in Antiquity)*. Brno: CERM, 2000, ISBN: 80-7204-184-3.

²⁵ Ibid.

nad Vltavou, which, thanks to father Ciza, acquired the form of a significant Biedermeier artistic and literary artifact (Ciza had eighty chapels built at the cemetery, decorated with paintings of František Mikule and his own poems). These examples may be perceived as a certain fulfillment of ideals of the kalobiotic way of life, in the latter case carried to an extreme."²⁶

To some, the requirements of kalobiotics may appear idealistic, romantic, etc. And it may be true that the majority of people today are too pragmatic. Perhaps the most important thing to them is what can be counted, what can be seen with one's own eyes, what can be touched.

The aim of kalobiotics is to beautify human life, to empower reason and fantasy in their mutual concord and harmony. **Kalobiotics** endeavors to arrange life following the laws of beauty. A **kalobiotic person** faces **two choices**: 1) he can **make the extant beauty visible** (to open people's eyes to a sense of beauty), or 2) he can **create beauty himself** through his natural creativity, without being necessarily an artist.

Unlike esthetics, the core subject of kalobiotics is not art, but real life, or more precisely the quality of life. That is the point. Because **kalobiotics** means to behold and cultivate true beauty within ourselves and everywhere around us. Kalobiotics also builds on the philosophical and cultural traditions of antiquity, on its teaching about harmony, kalokagathia, catharsis and others ideas, which it tries to develop in different times and by somewhat different means.

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FILOZOFICKÉ SOUVISLOSTI ZDRAVÍ

Abstrakt: Studie pojednává o počátcích evropského lékařství v antickém Řecku. Ukazuje souvislost mezi vývojem filosofie a medicíny. Lékařská mytologie je obsažena již v Asklépiově kultu. Počátky filosoficko-medicínské teorie nacházíme už homérském

²⁶ *Estetika 4/2006*. Praha: Academia Publishing House, Academy of Sciences of the Czech Republic. ISSN: 0014-1291.

eposu Ilias. O něco později iónská přírodní filosofie se stává základem všech tehdejších věd i medicíny. V celé antické filosofii se velmi rozšířeným termínem stalo učení o katarzi jako cestě vnitřní očisty. Dalším frekventovaným pojmem ve starořeckém myšlení stal pojem kalokagathia jako ideál krásného a zdravého života. Velmi důležitou roli hrál také pojem harmonie, chápaný jako jednota v rozmanitosti. V období českého biedermeieru se objevují mimořádně objevné studie o kalobiotice, jak krásně, harmonicky a správně žít, které se mohou stát nadčasovým inspirativním zdrojem všech úvah o kvalitě života.

Klíčová slova: antika, katarze, harmonie, kalokagathie, medicína, mytologie, filosofie, kvalita života

HEALTH AND ITS PROTECTION IN SCHOOLS AND SCHOOL FACILITIES FROM THE VIEWPOINT OF THE STANDARDS OF THE ADMINISTRATIVE LAW

Lubica DEMEKOVÁ

Abstrakt: *Human health as a social value and its protection is the interest of many branches of law. The given article focuses on administrative law aspects of the given topic. It deals with health and its protection in specific school environment, mainly in primary and secondary schools as well as in selected school facilities. The given topic is approached from various legal regulations which fall within the so-called special part of substantive administrative law. It clarifies the problem of health and its protection in terms of schools and school facilities in connection with public health, protection from alcohol abuse and protection of non-smokers and with the related structure and responsibilities of public authorities working in this field. Moreover, it deals with the latest changes of legal regulations in this area.*

Key words: *health, public health, health protection, schools, school facilities, public authorities, changes of legal regulations*

1. Introduction

The importance of health as a social value protected by law confirms the content of many legal regulations operative in the Slovak Republic. As written in the Constitution of the Slovak Republic: „Every human being has the right to health protection.¹ „It is important to understand the meaning of this right, i.e. „health is a certain social value which shall be protected with regards to its subject matter.“² It should be noted that „the subject matter of Article 40 of the Constitution is health“ which is specifically connected with the meaning of human being.³ Moreover, „the

1 Article 40, the first sentence of the document of Slovakia „Ústava SR“ (The sentence is translated from Slovak language into English. Other stations of the „Ústava SR“ and of other documents and publications are transcribed, too.

2 DRGONEC, J.: *Základné práva a slobody podľa Ústavy Slovenskej republiky*. Bratislava: Manz, 1999, s. 201.

3 Compare to DRGONEC, T.: *Ústava Slovenskej republiky-Komentár*. Heuréka: Bratislava, 2007, s. 419.

*limits of this constitutional law shall be stipulated by law in case someone wants to solicit this right.*⁴

A scientific opinion exists based on which law which modifies specific rights dealing with health protection means „*the legal guarantee of the implementation of basic human rights and freedoms...*“⁵ At this point it is important to note that this is a scientific opinion which leads to health protection which is performed within the field of common health protection, i.e. within the field of providing health care services, i.e. in which we talk mainly about the performance of right to patients' health protection which in practice is performed through institutions which belong to any individual and patient's right such as information on health state and advice, information on prognosis and methods of treatment and their consequences and information on consent to interference in body which "*have to be respected by health care workers.*"⁶

Generally speaking, it may be said that „*the right to health protection in the Slovak Republic is performed by health care service pursuant to the Act no. 576/2004 Coll. on Health Care Services relating to providing health care, as amended.* (hereinafter 576/2004 Coll., as amended).“⁷

However, I believe that the same principle is applied not only in health care services but also in other fields of social and legal relations. These are modified inter alia by regulations of the administrative law namely those ones which deal primarily with the implementation of constitutional right to education where health and its protection are also important. Education definitely belongs to this field.

From this point of view those legal regulations which modify specific rights, duties, measures and institutions dealing with health protection of children, i.e. students in primary and secondary schools and in school facilities, also form the legal guarantee of implementation of the right to health protection as one of the basic human rights performed in the given school environment but other than through health care pursuant to the Act no. 576/2004 Coll., as amended.⁸

Therefore, any child attending kindergarten, student attending primary or secondary school or university is the subject of the right to health protection pursuant to Article 40 of the Constitution of the Slovak Republic. They also come under the term „every men“ stated in the given Article of the Constitution as „*the subject-matter of constitutional right to health protection is the health of a person*“⁹ and as they are also individuals, persons, their health is the subject-matter of this constitutional rights, i.e. they are those subjects of specific rights constituting the constitutional right to health protection entrenched mainly in § 11 Article 8 Act no. 576/2004 Coll., as amended.¹⁰

4 ČIC, M a kol.: Komentár k Ústave Slovenskej republiky. Martin: Vydavateľstvo Matice slovenskej, 1997, s. 207.

5 Porov. ZIMEK, J.: Právni problematika zásahů do tělesné integrity. In: *Časopis pro právní vědu a praxi*, (1995), č. 3, s. 124.

6 Note by author. Compare to the opinion in the book from 5.

7 Compare to BARANCOVÁ, H. a kol.: *Medicínske právo*. Bratislava: Veda, vydavateľstvo SAV, 2008, s. 29.

8 Note by author.

9 See BARANCOVÁ, H. a kol. *Medicínske právo*, s. 28

10 Note by author.

On the other hand, health as a social value in case of a natural person in a specific position, for instance pupil or student, requires specific ways and means of its protection and consequently it may also grant specific rights or it may impose specific duties to students or to other physical or legal entities working in schools or school facilities for the purpose of pupils' or students' health protection. These are the rights and duties entrenched in inter alia administrative standards which form the content of legal regulation of different legal force used in the area of education. It may represent the rights and duties of precautionary, revisory, repressive or other nature.¹¹

Therefore, the aim of this article is to find out which specific rights, duties and measures connected to health protection in conditions of schools and school facilities deal with this right and in terms of legal or internal prescriptive acts. Due to the given extent of this article, it does not deal with the complex mapping of the issue but only with selected areas.¹²

2. On Health and Public Health. Theoretical Bases for Dealing with Their Protection in Schools and School Facilities in Terms of Law

Fundamental prerequisites for dealing with the aspects of health protection, rights and duties connected to health protection in schools and school facilities is the explanation of basic terminology, i. e. what can be understood under the term health.

In regards to legal regulations - for purposes and needs of this article mainly regulations in the fields of education, health care service and public health care service are included - it is important to mention some definitions of health terminology. Definitions can be found mainly in scientific literature and mainly from the perspective of disciplines other than law.

Therefore, the key definition of this term is the definition provided by the World Health Organization according to which health is „*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*“

Given fields use the term in different variations, phrases and meanings, although - as it has been already mentioned - they do not define it. Its meaning may be inferred from the various uses of the term which is found in the given legal regulation. In majority, the term health is used in connection with health protection. Also, meaning of the term health protection and specific measures of its implementation vary depending on whether the term is used in the field of health care service, public health care service or education.¹³

In the field of health care service the term itself is used mainly in connection with the term health care. In my opinion, the term health is understood mainly as the term which refers to health status, quality and life expectancy of a person which may

11 Note by author.

12 Note by author.

13 Note by author.

be proved by such terms as health care or urgent health care which is more closely defined in Act no. 576/2004 Coll., as amended.¹⁴ The term is also used in connection with clarification of terms which fall under health care, for instance prevention (here the concept of health is used in connection with its maintenance or restoration), diagnosis (in connection with health defects) and treatment (in connection with restoration of health).¹⁵ Urgent health care service is understood in connection with serious health threats, etc.

In other legal regulation, such as Act no. 578/2004 Coll. on Health Care Providers, Medical Workers, Professional Organizations in the Health Service, as amended, or Act no. 581/2004 Coll. on Health Insurance Companies and Supervision, as amended, the term health is used mainly in connection with the term health protection.¹⁶

Act no. 538/2005 Coll. on Natural Healing Waters, as amended, the term is used in connection with health refreshing.¹⁷

In further acts, such as Act no. 219/1996 Coll. On the Protection against Abuse of Alcoholic Drinks (hereinafter Act no. 219/1996 Coll., as amended) and Act no. 377/2004 Coll. on Protection of Non-Smokers, as amended, (hereinafter Act no. 374/2004 Coll., as amended), the term is used in accordance with its meaning and purpose mainly in the following collocations: physical injury, health disorder etc.¹⁸ or health damage, effects on health,¹⁹ etc. Pursuant to the Act no. 139/1998 Coll. on Narcotic and Psychotropic Substances, as amended inter alia the term health risk is also used.²⁰ Pursuant to the Act no. 131/2010 Coll. on Funerals the term is used in connection with health threat.²¹

These phrases suggest that health is viewed from different perspectives and therefore the merit of health protection, i.e. what is its subject-matter and what it has to be protected from, is perceived differently. However, all of these legal regulations see health as a social value which has to be protected. They also state that health as a social value refers to any physical entity, individual.²²

On the contrary, health does not necessarily have to be connected only with individuals for our legal regulations deal also with the so-called public health.²³ Mainly Act no. 355/2007 Coll. on Protection, Support and Development of Public Health and on Amendments and Supplements to Certain Acts (hereinafter Act no. 355/2007 Coll.) defines public health as the level of society's health which refers to the level of health care provision, protection and support of health and which also refers to the economic level of the society.²⁴

There are also other similar definitions on public health, according to which

14 See § 2 ods. 1 a 3 zák. č. 576/2004 Z. z.

15 See § 2 ods. 7, 9 a 10 zák. č. 576/2004 Z. z.

16 Note by author.

17 See § 2 ods. 10 a 11 zák. č. 538/2005 Z. z.

18 See § 5 ods. 2 a § 8 ods. 2 zák. č. 219/1996 Z. z.

19 See § 4 ods. 6, § 3 ods. 2 zák. č. 377/2004 Z. z.

20 See § 3 ods. 2 zák. č. 139/1998 Z. z.

21 See § 20 ods. 1 zák. č. 131/2010 Z. z.

22 Note by author.

23 See BARANCOVÁ, H. a kol. *Medicínské právo*, s. 28

24 § 2 ods. 1 písm. b) zák. č. 355/2007 Z. z..

health is perceived as „state of the highest possible level of health and the smallest health inequalities in society which may be achieved with regard to social and economic level and level of health care service in the given society.“²⁵

The given understanding of public health refers to the perception of the so-called public health as a system based on protection, support and development of public health.²⁶ Similarly to the so-called Acheson commission for questions for further development of public health the definition of public health is as follows: “it is science and art of preventing disease, prolonging life and promoting health through organized efforts of society.“²⁷

According to the above mentioned definitions of public health and public health care services, the term health is used, however, it is not explained and defined. The term is also used in connection with the so-called health determinants as factors determining health which, according to the given legal regulation, are „environment, working environment, genetic factors, health care service, health protection and support and life-style.“²⁸

In terms of this legal regulation and the problem of health care, health is understood mainly as public health, i.e. health is such a social value protected by law which is connected to society, community and public.²⁹

Based on the above mentioned facts it is necessary to think whether and in which connections we meet with health as a social value worthy of protection in schools - primary and secondary schools and school facilities, to extend the meaning of the term and understand it not only as a term related to individuals - as it has been already mentioned - but understand health as public health, i.e. a value which is related to society. However, at this point it is dealt with health only in terms of schools and school facilities. As it has been mentioned in some previous parts of the article we have to find out which specific acts and measures including competences of public authorities - in schools and school facilities - deal with not only health protection but also public health.³⁰

3. Means to Health Protection of Students in Primary and Secondary Schools and School Facilities in Accordance with Selected Legal Regulations

The main legal regulation modifying the problem of primary and secondary schools and school facilities is the re-enacted Act no. 245/2008 Coll. on Upbringing and Education, as amended (hereinafter Act no. 245/2008 Coll., as amended).³¹ The given

25 *Koncepcia verejného zdravotníctva-návrh*. [online]. [cit. 20. 9. 2011]. Dostupné na: <[https://lt.justice.sk/\(S\(s4zenk55xcube451agd0dvk\)\)/Attachmentvlastnymat.rtf?instEID=1661&docEID=14475&matEID=543&langEID=1&tStamp=20081016142647763](https://lt.justice.sk/(S(s4zenk55xcube451agd0dvk))/Attachmentvlastnymat.rtf?instEID=1661&docEID=14475&matEID=543&langEID=1&tStamp=20081016142647763)>

26 § 2 ods. 1 písm. a) zák. č. 355/2007 Z. z.

27 ROVNÝ, I.: *Verejné zdravotníctvo*. Bratislava : Herba, spol. s r. o., vydavateľstvo zdravotníckej literatúry, 2009, s. 11.

28 § 2 ods. 1 písm. c) zák. č. 355/2007 Z. z.

29 Note by author.

30 Note by author.

31 That legal document abolished the legal document Law n. 29/1984 Zb. o sústave základných a stredných škôl (školský zákon) v znení nesk. práv. predpisov a tiež zák. č. 279/1993 Z. z.

legal regulation has brought many significant changes, mainly the change of philosophy in organization and activities of these schools and school facilities. Therefore, it is important to deal with this legal regulation in connection with the concept of health, or public health and its protection.³²

After examining the content of the legal regulation it may be stated that many of the rules contained in the regulations have a character of general principles and moral principles within the so-called precautionary character. These are included in the section dealing with the so-called educational standards and educational aims related to them. This is given by the subject-matter of the legal regulation which emphasizes the need and meaning of education as such. This applies to health of children or students and their protection.³³

In clarifying the basic concept of terms such as *inter alia* upbringing, the given regulation states that for the purposes of this regulation upbringing is understood as „a complex process of education and socialization focused on a child or student with the aim to develop their personality from the physical and mental perspective.“³⁴ If health means „*the state of complete physical and mental well-being,*“ as it has been already stated according to the WHO definition, then according to the given legal regulation upbringing of child or student as a process should lead to the development of their health.³⁵

Furthermore, if we talk about the aims of upbringing and education, it is possible to allow the student to „to protect their health including healthy diet.“

Specific means of implementation of these principles leading to children's and students' health protection in schools and school facilities is the so-called national education program and the so-called school education program related with it and the so-called education program of school facilities.³⁶

In accordance with the given legal regulations even these programs contain specific educational aims which are in accordance with § 4 of this regulation, i.e. they are in accordance with the aim of education as stated above,³⁷ i.e. leading to children's and student's health protection.³⁸

Therefore, even school education programs should include the definition of their own aims and objectives and mission of education.³⁹ As the school education program has to be developed in accordance with the principles and objectives of education according to this Act and in accordance with the given national education program.⁴⁰ I think that its objectives of educations should affect health protection of children and students.⁴¹

The definition of own goals and mission of education is also related with the education program as the main document of school facility according to which educati-

32 Note by author.

33 Note by author.

34 See § 2 písm. f) zák. č. 245/2008 Z. z.

35 Note by author.

36 Note by author.

37 See § 6 ods. 4 písm. b) zák. č. 245/2008 Z. z.

38 Note by author.

39 See § 7 ods. 4 písm. b) zák. č. 245/2008 Z. z.

40 See § 7 ods. 3 zák. č. 245/2008 Z. z.

41 Note by author.

onal activities are performed in school facilities.⁴² I am of that opinion that the aims and objectives of upbringing and education should deal with children's and student's health protection.⁴³

As for the preventive means of non-legal nature leading to health protection, is for example activity of the so-called psychological counseling which is provided in the so-called school facilities of educational counseling and prevention leading to a healthy personal development and mental health development of not only children but also their legal guardians and educators.⁴⁴

Another means is the so-called school in nature as one of the educational purpose school facility forming the system of school facilities, namely as a facility whose aim is to allow children and students to improve their physical and mental health in a favorable environment without education being interrupted.⁴⁵

Duty lying in setting conditions for ensuring health safety and protection also belongs into the field of rules stated in the given legal regulation which is mainly of a preventive character; however, these do not have the character of principles which in case of their breach could be sanctioned.⁴⁶

This applies to national education program which must include the above mentioned issues,⁴⁷ school education programs⁴⁸ and further education programs.⁴⁹

The requirement is mainly emphasized in one of the so-called forms of specific implementation of school attendance which is one of the changes implemented in the new Act on Education - individual learning.⁵⁰ Specifically, request for individual learning - as individual learning shall be authorized by the school's headmaster which the student attends (it is the so-called root school), based on the written request of a legal guardian of an under-aged student or based on the written request of a full-aged student - shall contain description of conditions on health protection while individual learning of the student is in progress.⁵¹ Breach of these conditions may be legally sanctioned in such a way that if the legal guardian of the student does not follow the conditions of the individual learning pursuant to the Act, i.e. including specification and follow-up of conditions leading to health safety and protection, the head-master has the right to prohibit individual learning.⁵²

A very interesting condition of education in schools and school facilities leading to students' health protection is the one which prohibits the sale of products threatening health and which prohibits advertising of such products.⁵³

As to the rules of behavior from the child's or student's side, namely as to the duties stated in the given legal regulation of a mainly preventive nature which in case

42 See § 8 ods. 1 a ods. 4 písm. b) zák. č. 245/2008 Z. z.

43 Note by author.

44 See § 135 ods. 2 zák. č. 245/2008 Z. z.

45 See § 138 ods. 1 zák. č. 245/2008 Z. z.

46 Note by author.

47 See § 6 ods. 4 písm. o) zák. č. 245/2008 Z. z.

48 See § 7 ods. 4 písm. l) zák. č. 245/2008 Z. z.

49 See § 8 ods. 4 písm. i) zák. č. 245/2008 Z. z.

50 Note by author.

51 See § 24 ods. 1 a 5 písm. e) zák. č. 245/2008 Z. z.

52 See § 24 ods. 11 písm. d) zák. č. 245/2008 Z. z.

53 See § 151 ods. 3 zák. č. 245/2008 Z. z.

of breaching may be sanctioned within the so-called disciplinary liability,⁵⁴ is their duty to act in such a way which endangers neither their nor some other people's health and safety involved in the education.⁵⁵

With respect to other clause of the given legal regulation - according to which the school' or school facility's headmaster after negotiations with authorities from school administration and board of teachers he issues, i.e. he has to issue school rules which modify details on the exercise of rights and duties of children, students and their legal guardian in school or school facility⁵⁶ - most likely the very performance of this duty of children and student will be specified in the school regulations being one of the so-called School Internal Regulations.⁵⁷ With this in respect, as one of the student's duty is to follow the rules of internal regulations and further internal regulations of the school or school facility,⁵⁸ their duty will be to comply even those parts of school regulations which state the already mentioned prevention of health in a manner defined above.⁵⁹

Breach of the obligation set by the internal school regulation is followed by child's or student's liability of a disciplinary character.⁶⁰

Regarding the specific forms of sanctions for breach of that obligation, i.e. in case a student will act in such a way which will endanger his life and safety, i.e. he will act contrary to the regulations which are stated in school regulations, i.e. if he trespasses against school regulations,⁶¹ in accordance with the given legal regulation it will be possible to impose an *admonition* or *warning* by the classroom teacher, or practical trainer; furthermore, *warning* from the headmaster, *conditional exclusion* or *complete exclusion*,⁶² whereas in terms of this legal regulation we talk about the so-called *regulation measures in education*.

If a student violates the duty not to act in such a way which would endanger health and safety of other persons involved in the educational process with its behavior and aggressions, whereas according to the given legal regulation this obligation does not have to be stated in school regulations, it will be possible to place the so-called *protective measures* which means *student's immediate exclusion* from the educational process or *placing the students in a separate room* in the presence of a teacher.

According to the legal regulations, these kinds of protective measures may be applied even in those cases when a student's behavior and aggression undermines to educational process in such extent that it disables education of other participants involved in the educational process. The reason of this protective measure is to calm the student down whereas the reasons and conditions of protective measure given by the school's headmaster must be in written form.⁶³

Within the preventive duties which may be legally sanctioned and which main-

54 Note by author.

55 See § 144 ods. 4 písm. f) zák. č. 245/2008 Z. z.

56 See § 153 ods. 1 písm. b) zák. č. 245/2008 Z. z.

57 Note by author.

58 See § 144 ods. 4 písm. b) zák. č. 245/2008 Z. z.

59 Note by author.

60 Note by author.

61 Note by author.

62 See § 58 ods. 2 zák. č. 245/2008 Z. z.

63 See § 58 ods. 3 a 4 zák. č. 245/2008 Z. z.

ly deal with schools and school facilities including students' legal representatives and educators, the given legal regulation also sets the liability to ensure safety and health protection of children and students and to keep records of school injuries which happened during the educational process or during activities organized by schools or school facilities.⁶⁴

As to the complexity of information dealing with rules and regulations leading to health protection of individuals in the position of child and mainly in the position of a primary or high school student and which are of preventive nature and have no legal nature, this information is also included in other legal regulations not only in Act no. 245/2008 Coll., as amended.⁶⁵

In practice it means specific means leading to health protection in terms of its consolidation which lean on support of sport. Realization of development project and programs and organization and funding of school sports competition on regional and national level, for instance, may represent the given means. Pursuant to Act no. 300/2005 Coll. on Sport Organizing and Support, as amended (hereinafter Act no. 300/2005 Coll., as amended) it is now in the agency on Ministry of Education of the Slovak Republic.⁶⁶

Means to protect health of people in this group of non-legal character is in accordance with Act no. 288/1997 Coll. on Physical Culture, as amended, and 455/1991 Coll. on Trade and Entrepreneurial Activities, as amended (hereinafter Act no. 288/1997 Coll., as amended) care of physical culture within primary and secondary schools.⁶⁷ With regard to this area, municipalities and autonomous regions play an important role within schools in respect to those of which they act as founders. This includes, for instance, the support of building and operation of sports facilities in schools, development and care of physical culture in schools and support of school sports competitions.⁶⁸

With regard to the known fact that health protection of individuals within the above mentioned groups lies also in their appropriate diet⁶⁹ and therefore it is essential to mention further legal regulations which modify the means of health protection of non-legal character lying in the support of milk and dairy products consumption inter alia for students of primary and secondary schools and also in the support of fruit and vegetable consumption of individuals within this group. Specific way of this support lies in provision of financial funds and in the aim of the so-called Agricultural Paying Agency which is governed by statutory order no. 339/2008 Coll. on Granting Aid for Promoting Consumption of Milk and Dairy Products for Children in kindergarten and Students of Primary Schools and High Schools, as amended by regulation of the Government of the Slovak Republic no. 341/2009 Coll. on Provision of Assistance for Support of Consumption of Fruits and Vegetables for Children in Kindergarten and Pupils in Elementary Schools.⁷⁰

64 See § 152 písm. c) a e) zák. č. 245/2008 Z. z.

65 Note by author.

66 See § 15 ods. 1 a 2 zák. č. 300/2005 Z. z.

67 Note by author.

68 See § 6 písm. c) a d) a § 7 písm. c) a d) zák. č. 288/1997 Z. z.

69 Note by author.

70 Note by author. See the details in the texts of the given prescriptions of the Slovak government.

3.1 Means of Health Protection of Students at Primary and Secondary Schools from Abuse if Alcoholic Drinks and Smoking within Selected Legal Regulations

A very specific area within health protection of individuals in the position of students of either primary or secondary schools is protection of their health from abuse of alcoholic beverages and smoking.⁷¹

As regards the first area mentioned, this is primarily modified by Act no. 219/1996 Coll. on the Protection against Abuse of Alcoholic Drinks, as amended (hereinafter Act no. 219/1996 Coll., as amended). Certain obligations in connection with observance of the given legal regulation in specific environment of schools and school facilities arise also from Act no. 596/2003 Coll. on School State Administration And School Self-Administration, as amended (hereinafter Act no. 596/2003 Coll., as amended).

Act no. 219/1996 Coll. as amended by regulations of the Government of the Slovak Republic for the purpose of health protection of individuals against alcoholic drinks abuse modifies prohibition of certain activities which have the character of the so-called protective measures. This prohibition, however, in accordance with the given legal regulation does not explicitly refer to primary and secondary school students but it refers to those younger than 18 years of age. As even primary and secondary school students belong to this category due to their age, the given prohibitions of certain activities also refers to individuals within this specific group of people.⁷²

In case of persons younger than 18 years of age it is for example the ban on selling or serving alcoholic drinks or other facilitating their consumption in general as well as on public cultural events for these persons.⁷³

Of important change towards the increase of protection of persons younger than 18 years of age, hence, primary and secondary schools students, is the adoption of this legal regulation, namely Act no. 214/2009 Coll. which modifies and amends Act no. 219/1996 Coll., as amended, is the one according to which these persons have the obligation, i.e. protective measure in the given obligation according to which this time they should not do things which are banned but they should do things which the law prescribes,⁷⁴ except the specified ban on consumption of alcoholic drinks or other addictive substance generally. This is mainly the obligation to undergo an informative breath test or an informative examination with testing devise for the detection of narcotics or psychotropic substance.⁷⁵

This amendment has also introduced further protective measures which refer mainly to under-aged persons - but not to the age of 18 but only up to 15 years of age and it refers to the ban on unsupervised presence of their legal guardians after 21:00 o'clock in public places where alcoholic drinks are served.⁷⁶

71 Note by author.

72 Note by author.

73 See § 2 ods. 1 písm. a) bod 1 a 5 zák. č. 219/1996 Z. z.

74 Note by author.

75 See § 2 ods. 2 zák. č. 219/1996 Z. z.

76 See § 2 ods. 3 zák. č. 219/1996 Z. z.

In case the obligation specified in the given act or in case of not-behaving in a way stated in the act, a new obligation comes into force and it is within the responsibility of the given unlawful acts lying in the duty to pay the fine, or in the form of another sanction.⁷⁷

As regards sanctioning, either a physical or legal entity authorized to business may be sanctioned if the person has breach a ban, restriction or obligation leading on the, inter alia, prohibition on selling or serving alcoholic drinks or other forms of enabling their consumption by persons under the age of 18 years of age and also in public cultural events organized for persons under the age of 18.⁷⁸

Any legal guardian of infants under the age of 18 or legal guardian of a youth under the age of 18 may be sanctioned in cases in which the youngster breaches the ban on consumption of alcoholic drinks or of other addictive drugs and the obligation to undergo informative breath test or informative diagnosis with a testing device for the detection of narcotic drugs or psychotropic substance and also in case of infants under the age of 15 who breach the ban on staying out without their legal guardians after 21:00 o'clock in public places where alcoholic drinks are served.⁷⁹

Another form of sanction apart from fine is warning which, according to the given legal regulation, may be imposed on any persons under the age of 18 in cases in which they breach the ban on consumption of alcoholic drinks or other addictive drugs and the obligation to undergo informative breath test or informative diagnosis with a testing device for detection of narcotic drugs and psychotropic substance. In justified cases it is possible to impose a ban on attending publicly accessible areas and rooms in which alcoholic drinks are served.⁸⁰

In case of fines as a kind of penalty for acts against the law as stated above, these fines are imposed by municipalities for which the given fine means income.⁸¹

As concerns the consumption of alcoholic drinks or other addictive drugs by a person younger than 15 years of age and youngster under the age of 18 and the consumption of alcoholic drinks or other addictive drugs is in the area of primary or secondary school, i.e. it refers to, inter alia, the student of the given school, the given amendment supplies Act no. 596/2003 Coll., as amended, of legal regulations which allocate the headmasters, inter alia, of primary and secondary school specific obligations in this area, namely a new obligation - for the headmaster and the others, namely the managing teaching staff - to notify the municipality of the consumption of such drink or substance.⁸² The reason for implementing the new obligation for the given persons is the fact that fines may not be imposed by the given persons but by the municipality.⁸³

As regards health protection of individuals in the position of primary or secondary school students outlined in the second part, i.e. health protection against smoking, it is important to lean on Act no. 377/2004 Coll. on Protection of Non-Smokers and on

77 Note by author.

78 See § 12 ods. 1 zák. č. 219/1996 Z. z.

79 See § 12 ods. 2 zák. č. 219/1996 Z. z.

80 See § 12 ods. 3 zák. č. 219/1996 Z. z.

81 See § 12 ods. 6 zák. č. 219/1996 Z. z.

82 See § 5 ods. 10 zák. č. 245/2008 Z. z.

83 Note by author.

changes and amendments of some other acts (hereinafter Act no. 377/2004 Coll., as amended).⁸⁴

In order to protect health of individuals from the development of addiction to nicotine as addictive drug and addiction to the harmful part found in tobacco tobacco products, protect from harmful effects of smoking and protect from other uses of tobacco products which harm health of smokers as well as non-smokers exposed to the effects of smoking and their protection from products which are meant for smoking and do not contain tobacco,⁸⁵ the given legal regulation defines specific activities which are in accordance with this legal regulation prohibited on the one hand on behalf of targeted health protection of primary and secondary school students and also with school facilities and on the other hand within their protection but not protection of the target group but protection within groups of persons younger than 18 years of age.⁸⁶

The given protection lies in prohibition of two types of activities. The given legal regulation prohibits the sale of tobacco products and products which are designed for smoking and which do not contain tobacco and within the second type of activities which are prohibited is the act of smoking. Both types of prohibited activities refer to inter alia primary and secondary schools and school facilities.⁸⁷ From the given it can be concluded that - with regards to the place or institutions where these prohibitions are applied as the given legal regulation clearly states that the first activity is prohibited in pre-school facilities and on children's playgrounds, in primary and secondary schools and in school facilities, in universities, dormitories and the second type except from the above stated regulations also deals with the prohibition in places of children's playground - by persons whose health protection we are talking about, which definitely refers to, inter alia, students of these schools and facilities.⁸⁸

Regarding the prohibition of sale of tobacco products and products which are meant for smoking and which do not contain tobacco, this is stated in the given regulation not only by territorial jurisdiction related to the environment of inter alia schools and school facilities implying that the group of persons which should be protected from the development of addiction to nicotine as addictive and harmful part contained in tobacco and tobacco products are students of those schools and facilities but the scope of the stated illegal activity which is prohibited by the given legal regulation is defined also individually for persons within a certain age group, namely persons younger than 18 years of age.⁸⁹

As students of these schools and school facilities belong to this age group it means that the sale of these products to these students is prohibited, i.e. these students are protected before unlawful activity even outside the area of primary and secondary schools and school facilities. I believe that due to increased protection of persons younger than 18 years of age this legal regulation clearly set out to everyone who sells tobacco products and products meant for smoking and do not contain tobacco, the obligation to withhold the sale to such a person.⁹⁰

84 Note by author.

85 See § 1 písm. a) a b) zák. č. 377/2004 Z. z.

86 See § 6 and § 7 zák. č. 377/2004 Z. z. 80 See § 12 ods. 3 zák. č. 219/1996 Z. z.

87 See § 6 ods. 1 písm. c) a § 7 ods. 1 písm. c) zák. č. 377/2004 Z. z.

88 Note by author.

89 Note by author.

90 Note by author. § 6 ods. 2 a 3 zák. č. 377/2004 Z. z.

A very specific environment where the given sale is prohibited, according to the given legal regulation, is grocery store except those stores which have a separate room or stand and stores also sell goods meant for children.⁹¹

After extending the interpretation it can be concluded that this rooms mean potential risk also for health of students of schools and school facilities.⁹²

Acts which are according to the given regulation forbidden meet the merits of violations which can be sanctioned. Bodies dealing with the given illegal acts as violations are in accordance with this legal regulation the so-called public health authorities.⁹³

4. Outline of the Means Dealing with Public Health in Conditions of Primary and Secondary Schools and School Facilities

The second part of the given article suggests that if we think about tools to protect health of primary and secondary schools students and students in school facilities, it is important to focus on health as public health, i.e. to focus on the value bound to the society but whose range is restricted by schools and school facilities.

In this context, the conditions of the given schools and school facilities are applied in the basic legal regulation - Act no. 355/2007 Coll., as amended.⁹⁴

Specifically, areas which in accordance with the given regulation influence the so-called public health and are related to the so-called health determinants are inter alia good life conditions and good working conditions as those ones which do not negatively affect health of people, but which protect and affect positively.⁹⁵

The so-called inner environment of buildings also belongs to these conditions, which must meet, for example, requirements on hygrothermal microclimate, ventilation and heating, requirements on lighting and other types of optical lightning. Particular emphasis is put on the newly built buildings to which schools definitely belong and special requirements on classrooms lighting are implied.⁹⁶

In order to protect public health in environment of schools, the given regulation puts emphasis on requirement and on the so-called facilities of catering which provide catering services connected with the production, preparation and distribution of meals or drinks at workplaces inter alia in school facilities and schools.⁹⁷

The given regulation also modifies further requirements related to the environment of schools and school facilities which are mentioned in the article in order to protect public health in the specific environment; it further modifies the competences of public authorities in this field and also the merits of violations and other administrative offenses.⁹⁸

91 Note by author. See § 6 ods. 1 písm. a) a b) zák. č. 377/2004 Z. z.

92 Note by author.

93 Note by author. See § 11 ods. 5 zák. č. 377/2004 Z. z.

94 Note by author.

95 See § 2 ods. 1 písm. f) zák. č. 355/2007 Z. z.

96 See § 20 ods. 1 a 2 písm. d) zák. č. 355/2007 Z. z.

97 See § 26 ods. 1 zák. č. 355/2007 Z. z.

98 Note by author.

As health protection in general as well as in specific environment requires specific attention, it is not possible to deal with it in regards to all its aspects; therefore, I am outlining only some of them through the given examples.⁹⁹

Conclusion

Based on the findings which I arrived at in the given chapters of this article it may be said that the aim stated in the introduction of this article was fulfilled. At a relatively small space limited by the number of pages I approached specific forms of the right to health protection, partially public health and means for its implementation in specific environment of schools and school facilities.

After examination of the content of legal rules and regulation modifying the specific conditions and means for realization of mainly the rights to health protection of primary and secondary schools students and students attending school facilities it is important to note that the mentioned specificity of environment for exercising these regulations was shown for example in the wide range of means on their realization of different character and in the involvement of a relatively wide circle of public authorities working in this field at both prevention of threats or breach of health of individuals of the group or at the level of implementation of sanctions.

In connection to this I am approaching the aspect of the problem in accordance with the legal state, i. e. I depict or point out the latest modifications of legal regulations in this area.¹⁰⁰

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⁹⁹ Note by author.

¹⁰⁰ Note by author.

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ZDRAVIE A JEHO OCHRANA V PODMIENKACH ŠKÔL A ŠKOLSKÝCH ZARIADENÍ Z POHĽADU NORIEM SPRÁVNEHO PRÁVA

Abstrakt: Zdravie človeka ako spoločenská hodnota a jeho ochrana je predmetom záujmu viacerých právnych odvetví. Príspevok sa zameriava na správnoprávne aspekty tejto problematiky. Venuje sa zdraviu a jeho ochrane v špecifickom prostredí škôl, a to predovšetkým základných a stredných škôl a tiež vybraných školských zariadení. Túto problematiku približuje z pohľadu viacerých právnych predpisov spadajúcich do tzv. osobitnej časti správneho práva hmotného. Objasňuje problematiku zdravia a jeho ochrany v podmienkach škôl a školských zariadení, a to aj v nadväz-

nosti na verejné zdravie, ochranu pred zneužívaním alkoholických nápojov a ochranu nefajčiarov a s tým súvisiacu štruktúru a kompetencie orgánov verejnej správy pôsobiacich v tejto oblasti.

Kľúčové slová: zdravie, verejné zdravie, ochrana zdravia, školy, školské zariadenia, orgány verejnej správy, zmeny právnych predpisov

SOCIAL CARE FOR CHILDREN AND YOUTHS IN THE FIRST CZECHOSLOVAK REPUBLIC

Jaroslav VACULÍK

Abstract: *Public health care and social services for children and youths were absolutely insufficient in the interwar Czechoslovakia. Some tasks, such as care for disabled or mentally handicapped children, were transferred to the provincial governments of Bohemia, Moravia, Silesia, Slovakia and Subcarpathian Ruthenia, municipal authorities were forced to take care of children dependent on public welfare due to being poor or deserted. Municipalities lacked funds, necessary facilities and often sympathy.*

Key words: *children and youth; social services; first Czechoslovak Republic*

Public health and social care for youths were absolutely insufficient in the interwar Czechoslovakia. Some tasks, such as care for disabled children, were transferred to the provincial government. Municipal government was forced to take care of those children dependent on public welfare due to being poor or deserted. Municipalities lacked funds, necessary facilities and often sympathy. There was also a big difference between Czech Lands, Slovakia and Subcarpathian Ruthenia. The tasks in Slovakia, provided by municipalities in our country, were provided by the state, which was taking care of all orphans up to 15 years. Also, the care of disabled children was provided by the Slovak State. Therefore, the Ministry of Social Welfare in 1927 prepared a bill that would care for young people across the united Czechoslovakia. According to the unification ministry, if the Hungarian state was able to take care of orphans, then the Czechoslovak democratic state must be able to do it too.

Social care for young people was based on the principle that the basic sociological unit is the family which is the foundation of the community, nation and state. Social care for adolescents of 14 to 18 years tried to develop a harmonious person who wanted advice on choosing a profession, convey to him employment and to enable the socially poor people to gain this goal. After leaving school in some regions more than half of the children were forced to seek employment outside the home – both as workers and as apprentices. Therefore, the Czech Provincial Youth Care wanted to register the needs of young people in different districts in adolescent departments at District Youth Cares. Teenagers should be concentrated in junior groups because of their education. Counselling centers for adolescents used to be set up - especially for their career choice. Mediation of apprenticeships and youth employment was suppo-

sed to be more effectively organized with a help of job centres. Attention should be paid to feeding the poor young people by establishing cafeterias, housing in orphanages and providing clothing needs.

According to State Statistical Office (SÚS), especially in Bohemia the birth rate dropped so low it was not enough to maintain the population status. Therefore, the Ministry of Health established the Advisory Council on population issues, which should propose appropriate economic and financial-political measures. State Statistical Office (SÚS) pointed to the unusually high mortality of children under one year and an excessive number of stillbirths. Of the total of 202 thousand cases of death in 1936, 6 thousand were stillborn children and 33 thousand were deaths of children under one year.

The number of live births per 1 thousand citizens of Czechoslovakia was 3,9 people, including 0,3 in Bohemia, 4,0 in Moravia and Silesia, 8,6 in Slovakia and 16,4 in the Carpathian Ruthenia. However, in Slovakia out of the total number of 82 thousand births there were 2 thousand stillbirths, 2 200 children died in the first week of life, 10 thousand children died under one year of age. The main cause of infant mortality was congenital weakness (4 500 cases). Another problem was the issue of abortions – mostly illegal and only half were conducted by physicians. The killing of the fetus was a crime, which carried a 15 year jail term. Abortion should be prevented by improving prospects for unmarried pregnant women, illegitimate children, ensuring a sufficient income for the young couple and by education leading to responsibility.

The Ministry of Health convened a panel of scientific and socio-political workers to establish the Advisory Board for the issue of population. They emphasized that it was not only a medical, but also a biological, moral and economic problem. The Advisory Board was to provide an economic and financial basis for a systematic fight against depopulation.

The Ministry of Health carried out the central administrative guidance To Our Children designed for mothers and infants. Each clinic led, inter alia, an overview of fertility and infant mortality in its district. The clinics cooperated with all local institutions of social and health care. Counselling for mothers and children should also include children in someone else's care and children out of wedlock which was carried out until the child was six, including regular medical surveillance records.

The Czech Provincial Commission for the Care of Youth in Bohemia asked the Regional office for support and cooperation in identifying causes of stillbirth and infant mortality (children under one year). A part of the Provincial Commission was also the Department for Mothers and Infants, which previously operated independently as the Czechoslovak Protection of Mothers and Children. The Provincial Commission developed an extensive questionnaire recording details of all deaths and stillborn children. A purely medical part was supposed to be filled in by a doctor in order to ensure professional standards of action. The social part was filled in by the social worker.

The Association for the Protection of Mothers and Infants in the Czech Kingdom was already founded in 1915. During the First World War it took over the distribution of milk to poor mothers in Prague and it also extended its organization in the Czech countryside. It supported 10 thousand mothers in Prague and 50 thousand mothers in the countryside. It was based on the fact that the child's health care is the foundation of social hygiene. In Czechoslovakia the bearer and executor of public care for mothers were the public corporations – the state, country, counties and municipalities, as well

as the health insurance companies headed by the Central Social Insurance Company. Organizations worked only as subsidiary bodies and additional authorities, particularly the Provincial Headquarters of Youth Care, the Czechoslovak Protection for Mothers and Children (150 organizations in Bohemia) and Czechoslovak Red Cross (ČSČK). Community care e.g. supported 58 counseling rooms called For our Children.

The Slovak division ČSČK established health stations for children according to the English pattern. The first one was established in Žilina - founded by an English mission which after the First World War handed out food, clothing and financial support. It also provided medical and health advice. In the years 1920-1921 it founded 20 children's stations, including 10 permanent and 10 travelling. In 1921 their activity was taken over by ČSČK. The aim of the stations was to eliminate social poverty by material support and build children's stations in every political district. ČSČK emphasized more prevention, limited medical care to the poorest and unemployed. All efforts should be aimed at education at work and charity, and also support activities restricted to cases of abandoned mothers with many children, the elderly and the ill. The children's stations were the institutions where people could find support and advice on health and on medical, moral, legal and material issues. ČSČK warned that people underestimated the importance of health advice, they forgot to change dark and crowded dwellings and that the change of ventilation, use of the sun and nature, improving nutrition, awareness of the importance of breastfeeding was often the same and sometimes more important than treatment and financial support and that the moral support was more important than the material one. In total there were 62 children's stations in Slovakia, mostly in the northern mountainous regions of Slovakia. Most stations were in the district of Čadca. In the records there were 37 000 people. At each station there was a nurse. Social work was also performed by ČSČK adolescents – they worked at 2 000 Slovak schools.

In the winter period of 1928-1929 the government authorized five million CZK on the diet for poor children. The Czech Provincial Commission for the Care of Youth set up and kept 1 000 local stations. The average number of children boarded daily in the period of critical frost exceeded 68 thousand. During the whole winter they issued 3 750 000 doses of a food supplement for the nourishment of the family. In the solid freeze up to -30 °C, in freezing winds and snowdrifts the school children waded knee-deep and waist-deep through snow, struggling on the slippery icy roads to school in many cases up to 2 hours away. They came to school exhausted from fatigue, chilled and frozen and they often cried in pain. Therefore it was necessary to cheer them up with a hot tea and at noon to give them hot food so that their health would not permanently suffer.

The Czech Provincial Commission for the Care of Youth in Bohemia in 1929 stated that the financial situation of voluntary organizations for the care of youth was critical because of the drop in public finances after the beginning of the Great Depression, so it was not enough for the large tasks if they had not received support from state authorities part of whose agenda was engaged in the care of young people. They suggested that the association of child care would be focused in one organization, thereby the collections held by individual organizations would be unified.

Religious associations were also engaged in the care of youth – it was e.g. the Child Asylum of the Gracious Infant Jesus of Prague under the Protection of Saint Joseph in Prague that was catholic and a purely non-political charity. The purpose of the

asylum was to take care of Catholic children who were abandoned and orphaned, particularly those who were illegitimate, 1 year old, so that they would later become proper Catholic Christians, Czechs and - first since 1908 - Austrians, later Czechoslovaks. The asylum warned that if a third of the amount withdrawn from cinemas were given to charitable institutions, there would not have been any starving children who had no place to sleep. The Asylum in 1929 accommodated and fed 93 children, the meal cost per child a year was 3 398 CZK (in 1928 it was 2 828 CZK).

The Home for Abandoned and Orphaned children in Prague nurtured, clothed and raised in their two homes in Záběhlce and Strašnice an average of 48 children aged 5 to 15 years, of which only a few parents contributed a little. The Home was established for illegitimate children – the foundlings, but there were also more and more children from broken marriages, children of unemployed parents and abused children.

The Czech Provincial Commission for the Care of Youth in Bohemia warned the Interior Ministry of the bad influence of scouting and camping that undermined the moral upbringing of youth. It claimed that boys and girls have the field trips together, they behave indecently on the way and on a train, they spend the night outdoors or in tents, which compromises their morality. In addition, boys ruthlessly ravaged the countryside.

Similar views were held by the District Care for Youth in Beroun. The scouts were allegedly stealing firewood, they startled the deer in the district and at night they slept in tents with young girls. It was suggested that the juvenile scouts were excluded from the night train services. The district youth welfare in Jílové depicted the wild scouts and ramblers as the terror of the countryside which caused the owners of forests, gardens, fields and meadows major damage, they committed garden and field theft. Immature young people often camped in tents together, they drank alcohol, smoked, went poorly dressed and committed bloody fights. And also the District Care for Youth in Zbraslav thought the tramping was unacceptable in the whole area of Vltava and Sázava. It drew attention to the shouting, singing and playing of record players at night. In the evenings - when it was still light and with the sounds of accordions - they demonstrated coitus on the square. Youth under the age of 16 slept in tents. They went to the square in swimsuits, speaking roughly, singing and playing on the decks and roofs of railway wagons. They were ignoring the separate boys and girls rides in school wagons. District Care for Youth of South Bohemia demanded that the District Attorneys there established social and health boards to make the district authorities send their representatives to administrative committees of the District Cares for Youth, so that the district annual budgets would include a reasonable amount to support District Cares for Youth, then they asked the district offices to have stable social-health officers, and the municipalities to take into consideration reasonable allowances for District Youth Welfare in their budgets and to make the illegitimate fathers pay alimony.

In 1931 the Czechoslovak Union of Care for the Young was appointed. It grouped Land Youth Welfares of all countries of Czechoslovakia. Headquarters of the Union was in Prague, but the offices were in Brno. It was a response to the increased need for social care for young people in times of economic crisis and therefore the need to increase financial assistance from public funds. During a period of 3-6 months there were on average 76 000 children nurtured daily, they were distributed about 4 million doses of dishes. Orphans were placed in colonies of the Czech Provincial Commission for Youth

Welfare in Bohemia, which built the Masaryk Children's Home in Mariánské Lázně. The Home cared for needy children from 6 to 14 years.

Presidium of the Czech Provincial Commission for the Care of Youth in Bohemia, chaired by Senator Vojta Beneš, did not even have an approximate idea of how many disabled children there were in the country. Individual facilities for handicapped children were not organized as parts of a single overall plan according to reliable statistical findings. Therefore the commission announced the four directives: plan, usefulness, economy, efficiency. The first step should be a register of disabled children as well as all social institutions and facilities. There were only 20 thousand physically and mentally disabled children in Bohemia.

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SOCIÁLNÍ PÉČE O DĚTI A MLÁDEŽ ZA PRVNÍ ČSR

Abstrakt: Veřejná zdravotní a sociální péče o mládež byla v meziválečném Československu naprosto nedostatečná. Některé úkoly, jako péče o postižené děti, byly přeneseny na zemskou samosprávu v Čechách, na Moravě, ve Slezsku, na Slovensku a na Podkarpatské Rusi, obecní samospráva zase byla nucena se starat o ty děti, které pro chudobu nebo opuštěnost byly odkázány na veřejnou péči. Obce k tomu neměly dostatek financí, potřebná zařízení a často ani porozumění.

Klíčová slova: děti a mládež, sociální péče, 1. ČSR

HEALTH AND BIOPHILIC TRANSFORMATION OF EDUCATION

Josef ŠMAJS

Abstract: *The author shows that also the human health is a reliable feedback indicator of a degree of proportionate relationship between culture (civilization) and the wider natural system. Of course education does not directly create conditions for the human health but it helps forming the man and culture. The education system can promote the change of the present predatory paradigm of culture to the biophilic paradigm, can influence how people behave to nature, culture and their own health. If we want to moderate and eventually overcome today's ecological crisis, we have to change the content of education and its aspirations. In view of that the author presents and comments on eleven theses of the new educational minimum in his paper.*

Key words: *biophilic transformation of education, health, nature, culture, new educational minimum*

It mainly used to be smoking, alcohol and drugs that young people would once use – if I may borrow the metaphorical expression from our immunologist and poet Miroslav Holub – to successfully work *towards ruining their bodies*. Today, this trio of insidious killers is joined, with tacit consent given by adults, by another addictive life-wrecker which creepingly invades our families and causes harm to the young bodies and souls in an unnoticeable way: *the internet*. Instead of running around and playing with friends outside it makes already small children sit alone at home in the company of just one faithful friend - the computer. In order for this new parasite to effectively take root and gain a lifelong power, it has to meet the child as early as possible. Definitely as early as pre-school age. It does not make them think, work or exercise, it only stimulates fruitless intellectual curiosity and playfulness, and therefore it can frequently only fully develop at school.

On the issue of computer literacy

No one will deny the need of computer literacy today. A pupil, a grammar school and university student are all interested in acquiring it. It tends to be easily forgotten that school should teach proper ways of learning, evaluating and thinking and to do so it needs respected teachers and scientists, not just computers. As if we did not know that

communication technology does not produce classical education, but only 'information awareness' and partial knowledge that is cold, instrumental and susceptible to misuse, inadequate to base a world view, since such knowledge develops to the detriment of atrophying emotions and the broad philosophical rationality. This critical remark is not intended, though, to diminish the importance of partial knowledge and use of computers in science, top management of production, transport and administrative institutions, in banks and offices.

In this reflection on possible negative effects of computers on educational process, I intentionally do not draw on any sociological survey, only on reading specialized books and my theoretical and educational experience. I also consciously leave out the general crisis of education which seemingly did not only hit us but the whole of Europe and which an Austrian philosopher Kurt Liessmann has grippingly written about in his recent work (*Theory of lack of education Errors of knowledge society*. Praha: Academia 2008). I will only quote one of his observations which is easy to remember: "Students count credits, teachers publications, the school counts money."

Of course I do not know the share that computers and the Internet have had in contributing to this sad evaluation of education. I believe, though, it is a major one. Also I cannot establish, whether the loss of the positive emotional relationship of pupils and students to nature today is caused to a greater degree by the increasing computer literacy or rather by the decreasing biological and philosophical literacy, in summary *evolutionary-ontological literacy*, that I will deal with in the following part. Based on my personal experience I will only mention one negative effect computers may have on the teachers' motivation at school. I will leave out students from this consideration, who surely find this technical device very convenient, as it is very easy today, as Miroslav Čejka once wrote, to "rake up information on the web like hay in the garden".

As I use the computer also at home, i.e. in a relatively free creative environment, I make so bold as to suggest a provocative thesis that draws parallel between the technological oppression that once hit workers and forced them to break the machines, and the computer-based oppression fully impacting researchers and teachers in the school system today. I assume that many of us are familiar with the meaning of the term 'technological oppression' from the history of technology. Omitting manufactories, the worker in the factory, where science materialized in the machinery for the first time, suddenly experienced this form of manipulation unknown before. The content of his work, as opposed to traditional handicrafts, was no longer determined by his abilities, craftsmanship in using his tool and technological knack, but by a monotonous run of the machine driven by the main steam engine. Since the age of steam the production technology has substantially changed and the extreme forms of technological oppression have been done away with, the schools, however, have paradoxically come closer to the pattern of modern "education factories" in many aspects of their work. At a qualitatively higher level and in a more sophisticated form, creative people are subject to information technology pressure here.

On coming to his study, an educationalist, theoretician and teacher in one person turns on his machine - his desktop. He does not discuss the latest literature, his observations drawn from reading, issues related to his research with his friends, his sight is glued to the glass monitor instead. The computer which should be used for

writing texts, reading of otherwise unavailable books and preparation of the content for courses, persistently keeps offering him incoming mail. It actually serves the school, not the teacher, just as machinery once served the factory owner, not the worker. More than two thirds of some imaginary fifty messages received by an imaginary standard teacher every week, more than two thirds arrive from the centre (of a university, faculty or department), many of them doubled or tripled by the respective secretaries. These are group e-mail messages that are easy to send, but disturb, disperse attention and keep the receiver from work. In part they are informative or meant to 'pass the buck' only, i.e. announcing where we are to collect luncheon vouchers, which department has holiday, when a department meeting or a training will be held, who to report different personal changes to and suchlike. Another portion of the incoming messages brings disguised orders: a duty to report a business trip in time, reminders of handing-in of its accounts, reminders of reporting publications to higher institutions, entering various new items into the information system, entering assessments of diploma theses, recording of students and doctorands' assessments, a duty to secure classrooms and computer technology etc. Less than a third relates to what the university teacher should engage in in the first place: his/her research, teaching and community involvement.

I am not mentioning this general framework here just to complain about the increasing paperwork load imposed on teachers. My concern is that instead of paperwork we should concentrate on the research and teaching well. The teacher's work, if it is to bring him satisfaction and use to society, should follow the logic of the problems he is theoretically and didactically concerned with, not the logic of the machine. Given its nature, his work may not be dominated by the mechanical, creative thinking and health damaging technology. The central reporting logic aimed at the measurement of immeasurable performances, causes damage to a creative educationalist, stresses and burdens every one who is really engaged in research and publishes his work, while, paradoxically, relieves those not pursuing anything in that way.

On the problem of evolutionary-ontological literacy

Our present education system which helps forming humans and culture, unfortunately also helps to deepen the global ecological crisis. If we want to moderate and eventually overcome the crisis, we we have to change the content of education and its aspirations: the misleading abstraction calculations in mathematics and physics which helped forming today's counternatural culture, may not be placed above the evolutionary interpretation of natural or artificial systems any longer; education at school must be directed toward the understanding of irreplaceability of natural processes and structures, the evolutionary fabric of the Earth; dissemination of partial information leading to passive accepting of knowledge will need to be replaced by a structure of exploration of the world that will be based on the *evolutionary ontological method of thinking*.

From the point of view of this new ontology it turns out that human rationality on which I base my hope for overcoming of the global ecological crisis, is conditioned and derived in two ways: *in one way* (at the level of our biological species) it is governed by the conservative *biological basis of human mentality*, i.e. human genome, but

in the other way (as the product of and precondition for the individual cultures) it is determined by the relevant generally binding *spiritual mindset of the culture in question*. It is therefore determined by cultural archetypes, i.e. a cultural *spiritual paradigm*. I presume that the rationality of the education system, similarly as the whole present-time culture undergoing globalization – leaving out the biological factors – is still governed by the *predatory spiritual paradigm*. Its change to the paradigm of respect and admiration for the Earth therefore presents the condition for biophilic transformation of both culture and education system.

The rapid progress of the partial study of nature, which rather than the understanding of its innerly harmonized system looks for the procedures to force the human will upon nature, is today followed at a distance by the slow process of rational understanding of the world. People who are successful in practical life, i.e. actively participating in creating the counternatural culture, are, regrettably, often unaware of what is happening to the world today. The globalizing culture as a nature-dependent system which is only limited so far by the lacking possibilities of sharing its metabolism with nature, and therefore lacks a long-lasting rational negative feedback from the Earth, i.e. the superior host system within which it develops.

Our ancestors who did not know the evolutionary theory of the Universe and Earth yet, could not know *who was man, how he developed and in what sense his birth was essential for the Earth*. Only now we are beginning to understand that humans are *a highly active and ever better organized animal species*, the only one to have ever managed to outwit nature. Within it humans started another process, of temporary benefit for them, though damaging the Earth – *counternatural cultural evolution*. Now we are discovering that this evolution which has been short-sightedly disrupting the rare natural structures and adjusting them to suit the humans, started a critical period in the history of the Earth. That is to say, the expansion of systems and structures of the cultural being causes *damage to and diminishing of the natural being, it brings about devastation to the irreplaceable structure of the Earth*.

The weight of this threat cannot be made lighter even by the fact that culture has been predominantly perceived positively until today, i.e. as a spiritual culture, cultivation of the man and nature. The threat is also not moderated by the school and later civic education not giving a long-term attention to clarification of the relationship between nature and culture. The reverse is true. For example the physical principles taught at school (e.g. the mass - energy equivalence) which legalize the technological subjugation of nature, obscure the root of the ontological conflict between culture and nature. The fundamental abstract calculations in the secondary school physics present the human knowledge of the world with lack of criticism: they disregard the evolution and natural conditions on the Earth and by putting an emphasis on mass and energy they conceal the destructive element of human knowledge; the theoretical interpretation of nature thus appears in the positive light only, just as the necessary condition for human cultural creativity.

From the perspective of evolutionary ontology, I reject this simplified idea. Education is a great influence in shaping the culture as well as human relationship to the world, it is an important knowledge and value based component of both the formative process and human ontogenesis. Together with the effects of nature, family and social environment it influences the world-view attitudes of people.

To overcome the global ecological crisis which consists in the conflict of the present counternatural culture and nature, we therefore need, along with the new theoretical concept of nature and the new concept of culture, also a new education system that will encompass their world-view and didactic components in the generally understandable form. As what we need is the didactic rendering of the process of natural evolution which produced the Earth and the human species, and, on the other hand, of the opposition process of cultural evolution which has been developing to the detriment of natural evolution. Schools, education institutions and the lay public, however, need to be not only offered an understandable philosophical reflection on the causes of the global ecological crisis, but also be shown possible ways to their reduction and solving. But I can only present here a rough outline of this special ontological minimum which should be understandable to pupils, students and all citizens.

Eleven theses of the new education minimum

1. In view of the fact that the present global ecological crisis is an ontic conflict of the young, dependent and partial cultural evolution with the older, independent and broader natural evolution, i.e. the conflict between culture and nature, we have to consistently differentiate within its reflection between *two different evolutions, two types of the ontic structures, two different sets of constitutive information*.

2. *The Universe*, including living earthly nature, the humans and the genetic information of live systems, is a product of natural evolution, i.e. *the product of the spontaneous creative Big Bang activity*. Humans owe the set of biological conditions including their creative ability that made it possible to ignite and develop the “competitive“ cultural evolution to nature, not to culture.

3. *Human culture*, including the material and spiritual culture, is not a product of the natural evolution, but that of the cultural evolution, that is, *the spontaneous creative human ability*. Culture is an open non-linear system with inner information which, however, is not the natural genetic information which integrates biosphere, but a social spiritual culture which develops within culture and which forms, integrates and helps developing the cultural system.

4. *Human* is a normal, accidentally developed biological species. Its uniqueness does not first of all consist in that man acquires knowledge, thinks, cooperates, learns and believes. It principally consists in that man as a result of his genetic predisposition for an aggressive adaptive strategy, as well as due to the ability to code through language and ontologically use non-biological neuronal information, has gone all the way to become the other earthly demiurgo, the “small oppositional god“.

5. *Man is not the only being, however, who can feel, experience and acquire knowledge*. All living systems feel and explore their outer environment, and often with far greater subtlety. They spontaneously “explore“ it through their genomes that make their organisms suited to the habitat structure, and many of them also “intentionally“, i.e. through sensory neuronal perception, so as to adapt their behaviour to its changeable structure.

6. *Man* as the partial product of natural evolution, i.e. one of the many normal biological species, *could not be equipped with a sensory neuronal system for adequate exploration of the natural Earthly structure, providing the general picture*. As he deve-

loped a cognitive system for self-preservation, his cognition and thinking cannot be – unlike his genome as the memory keeping non-living and living matter – fully compatible with the structure and processes relating to Earth ontological activities. His learning and thinking is aimed at a purpose, that is, he reduces the comprehensive natural reality to just one organizational surface within which he interprets nature pragmatically, in his favour.

7. *The human conceptual knowledge* (spiritual culture including education system) which has produced the basis for an *open scattered genome of the cultural system*, though being the product of culture, is at the same time the point of departure and guideline for its creation by human activities. Its knowledge and value content is not so noble and lofty as we believed it to be. It co-creates the cultural system which unnecessarily devastates the planet Earth today.

8. *The process of damaging the natural structure* by the locally more powerful cultural structure, which is ontically at the root of the present ecological crisis, cannot destroy nature, but it poses a threat to man and culture. For it devastates the natural world in which man developed and which his existence still depends on. The cultural structures such as cities, cars and computers are actually created based on the older natural structures. They arise in the process where the human productive activities first disrupt and consume the naturally organized structures, and only after that form them as useful objects and constructions. For humans can only use the mass and energy already embedded in the unique natural structures.

9. As all the physical principles discovered until now continue to act on the Earth and in the Universe, the cultural evolution cannot effect the amounts of mass or energy to increase. What has been changing dramatically after culture developed is the proportion of the natural to the cultural being. With the expansion of technology, cities, fields and roads the *rare natural structure* disappears which once formed man and which the human conservative genome (and therefore the human organism too) remained homogenous with. Habitability of the globe creepingly diminishes also because of that.

10. As a result of the inappropriate content structure of education most people today are unaware of what evolution means and what it produces. People have not been instructed that *evolution can only produce shapes, structures, organization, i.e. information*. They are not aware that the Universe is spontaneously creative and its natural evolution has formed the beautiful earthly nature including man, i.e. all the natural systems, structures and shapes, all the *natural information*. It is not emphasized to pupils and students that culture, if it is to create its own forms, structures and shapes, must produce its own sociocultural information and modify or irretrievably disrupt natural forms, structures and shapes. School does not teach us that the ongoing *extinction of species* caused by culture is actually barbarian burning of the rare original “texts“ of living nature, it is unforgivable and irretrievable *burning of natural genetic information*.

11. Arguably it is only the philosophical aspect of evolution, whose outline needs to be included in the curriculum at secondary schools and universities, that may rehabilitate nature in terms of value and mediate the understanding of the substance and ontic roles of both natural and cultural information. As we are discovering today, the natural biotic information which develops together with life and integrates biosphere, does not divide and damage the Earth. It is only the *human cultural information governed by*

the predatory paradigm, which is, unfortunately, hostile to the Earth. Temporarily, it divides it into nature and culture and, temporarily, turns the expansive cultural system, existentially subjected to the broader and more powerful order of nature, *against the natural evolution, against life*.

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Klíčová slova: biofilní rekonstrukce vzdělání, zdraví, příroda, kultura, nové vzdělávací minimum

HEALTH AS A MOTIVATIONAL FACTOR IN ENVIRONMENTAL EDUCATION

Hana HORKÁ, Zdeněk HROMÁDKA

Abstract: *In the paper we define the basic mental constructions of environmental education in the context of health education with an emphasis on the biophile orientation of school education. The curricular reform of the school system brought about a significant change in this area. It is based on an assumption that being “a cultural protector of health and the environment“ is an essential competence of an individual, which enables an awareness of the existing mutually causal, spontaneously realised relationships in the environment and thus influencing the quality of environment protection and consequently also health protection. Based on the hitherto research investigations the patterns of thinking about environmental problems are surveyed in student teachers and basic school pupils. Furthermore, perception of health related to environment protection is described. Special attention is paid to the environmental and health impact of transport, leisure and sport activities. The authors prove that health can become a significant motivational factor in the process of forming a relationship towards the environment.*

Key words: *transport, eco-therapeutic potential of nature, environmental education, quality of life, health promotion, sports activities, relaxation outdoors, sport, health education, health, environment*

Health, the environment, education and the biophile focus in education

Being “the cultural protector of health and the environment“ is a basic competence of an individual enabling understanding of the existing mutually causal, spontaneously operating relationships in the environment and based on this it also enables individuals to influence the quality of environment protection and thus also health. The vision of “life in harmony with nature“ corresponds with the demand on “*the transition from distancing oneself/becoming alienated from nature to the value rehabilitation of nature by imprinting life as the supreme value*“ (Šmajs 2008, p. 55). As mentioned by Koger and Winter (2009), the crises of the environment lies not only in endangered species of plants and animals, but also is “*the external symptom of the crises of mind and soul*“.

Education is traditionally seen as as a remarkable phenomenon, which can help

overcome the problems of humankind and promote the realisation of new necessary qualities of life by means of its biosocial and sociocultural function. It is becoming a regulator of human behaviour towards nature and the world as such and a determinant of modification and development of culture. From our point of view the most topical issues currently are those related to building the relationship towards the environment with an emphasis on the nature component, threatened by the development of civilisation and up-to-date lifestyle. The principal role in this process is played by environmental and health education, as they have several common features. Namely, leading a healthy lifestyle does not mean only the elimination of health risks related to human health, but it means to help improve the health of the environment too.

The overlap of environmental and health education is explicitly applied in key competences (The Framework Educational Programme for basic schools, p. 6-9). It assumes that a basic school graduate will:

- *understand basic ecological connections and environmental problems, respect the requirements on quality environment, decide for the sake of the promotion and protection of health and sustainable development of the society (the civic competence),*
- *approach the results of work also from the point of view of the protection of one's and others' health, environment protection and the protection of cultural and social values (work competence),*
- *employ the acquired communication skills to develop relationships essential for peaceful coexistence and quality cooperation with other people (communication competence),*
- *establish a positive image of himself/herself, based on thoughtfulness and respect while dealing with other people foster good interpersonal relationships (social and personal competence).*

Environmental problems in the content of education are presented and explained as the problems of the environment with the natural, cultural-symbolic and physical-civilisational dimensions and primarily as the “*problems of threat*” caused by human behaviour towards nature. In the educational context the fact is addressed in calling for “life-supporting, life-respecting and protecting“, or in other words biophile focus in education. It builds on the requirements of education (not only environmental) and develops them further aiming at:

- explanation of what nature, culture, evolution and its products are,
- the shift from factual information and passive acceptance of facts to the encouragement of process thinking and responsiveness to the relationships and interconnections in nature,
- explanation of the value priority of nature for human life including the fact that nature has a value as such regardless of human needs,
- overcoming the opinions that every value springs from humans and that it is enough to take only humans, not nature into consideration,
- reinforcement of the system and evolutionary way of thinking in the sense that humans are responsible for culture and actions that unnecessarily harms the natural system (Šmajš 2008, p. 58);

While exploring the possibilities of enhancing the effectiveness of education attention is paid to the ways of effective promotion of environmental behaviour by a change in the field of relationships towards nature, personality or the environment. Psychological research related to environmental topics offers a number of studies (mainly foreign). Especially inspiring are those that describe the context of behaviour towards the environment with general personality characteristics, e.g. qualities and values or aspects of human psyche, directly connected with nature and the environment (defined by J. Krajhanzl (2009, p.134) as “*relationship towards nature and the environment*“). Ecopsychologists characterise a complex system of stimuli, among them ranking *environmental attitudes* (such as that of a master, religious attitude, attitude of a partner etc.), *environmental responsibility* (the willingness to behave pro-environmentally in the environment where environment-friendly behaviour is not a part of social norms), *environmental inclusion* (the degree to which an individual considers himself/herself a part of nature and nature a part of himself/herself), *environmental identity* (the degree of identification of an individual with the idea and beliefs of environmentalism).

There are apparent differences in the *ecological awareness* of an individual, that is in the extent to which environment protection is considered in decision-making, why the environment is protected (Krajhanzl 2009, p. 134 according to Schmuck, Schultz 2002). The teacher respects also the so-called defence mechanisms (Koger, Winter 2009, p. 33), which hinder the acquisition of available environmental information. Individual’s experience, background, need of contact with the natural environment, environmental sensitivity have to be taken into consideration. Environmental interest as an aspect of motivation distinguishes the ways of directing our moral norms (egoistic interest, social-altruistic and eco-centric – cp. Nickerson 2003).

It is a well-known fact that actual behaviour is a result of a whole chain of biogenic, sociogenic, psychogenic motives, gained experience etc.

In the discussed topic it is important that motivational content is present in attitudes, needs, abilities, nature-oriented interests, as they influence experiencing and behaviour towards nature. The need of contact with nature is therefore significant regarding the quality of life and the physical, mental and spiritual health.

The source of motivation of humans for environmental-friendly behaviour can be the health risks brought about by environmental problems. This assumption was a stimuli for our investigation that examined thinking of student teachers and basic school pupils about environmental problems in the context of health care.

The overlap of healthcare and environment protection in research

In the course of our investigations we attempted to capture the relationship between healthcare and environmental education, or rather to find an overlap in the field of “healthcare“ and “environment protection“. Our motivation was the key imperative of the aim of environmental education, which is to act for the benefit of nature and the environment. This approach can be encouraged in various ways, we focused on the issue of “health“, more specifically on “health risks caused by environmental effects“. We can not assume that love for nature itself could be sufficient motivation for significant

changes in behavioral patterns and lifestyle for the benefit of nature in the majority of population. There are researches (e.g. Franěk 2004, Krajhanzl 2009), however, that demonstrate that people are willing to change the patterns of their behaviour only if they themselves or their close friends directly benefit from that.

We can not rely on the change of approach towards the environment solely on the basis on mechanical acquisition of humanistic ideals in environmental education. Rather, it is essential to focus on the people whom noble ideals do not affect. The centre of our attention was educational, or methodological identification of objective health risks generated by the damaged environment, which can represent strong motivation to rethink certain patterns of behaviour across the population.

In our investigation (Horká, Hromádka 2009) we primarily sought to determine whether in the sample of the students of the Faculty of Education Masaryk University (N=163) there is a relationship (such as a correlation) between an attitude towards the environment and an attitude towards one's healthcare.

We formulated the following research hypotheses:

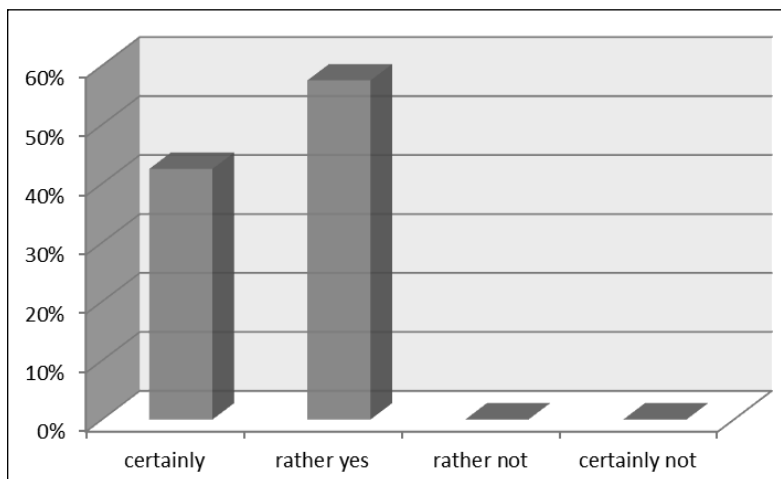
h1: There is a relationship between an attitude towards one's own health and an attitude towards the environment.

H2: The respondents appreciating their health want to get involved in environmental protection.

H3: The respondents who consider car transport to be a health threat intentionally choose more environment-friendly means of transport (Horká, Hromádka 2009).

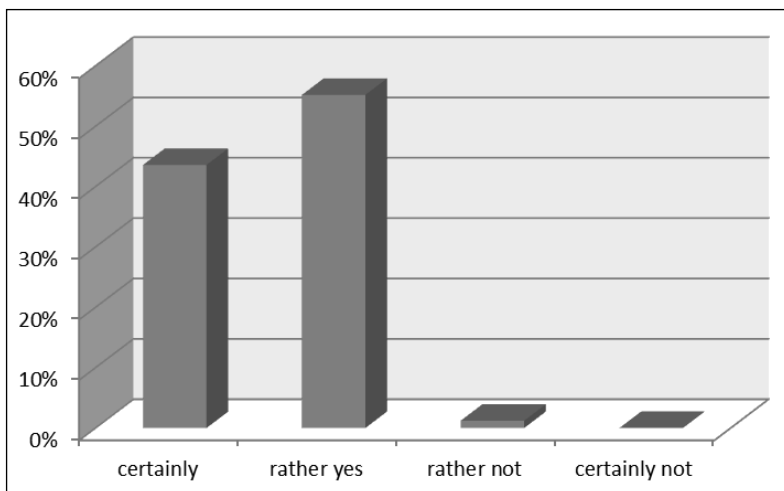
In all three hypotheses we had to accept zero hypothesis – a relationship between variables was not proved. Nevertheless, in our descriptive analysis we obtained interesting results. E.g. it is apparent from the following diagrams that students have a positive attitude towards environmental protection:

Diagram No.1; The degree of agreement with the statement: "I want to participate in environment protection."



(certainly: 42,5 %; rather yes: 57,5 %; rather not: 0 %; certainly not: 0 %)

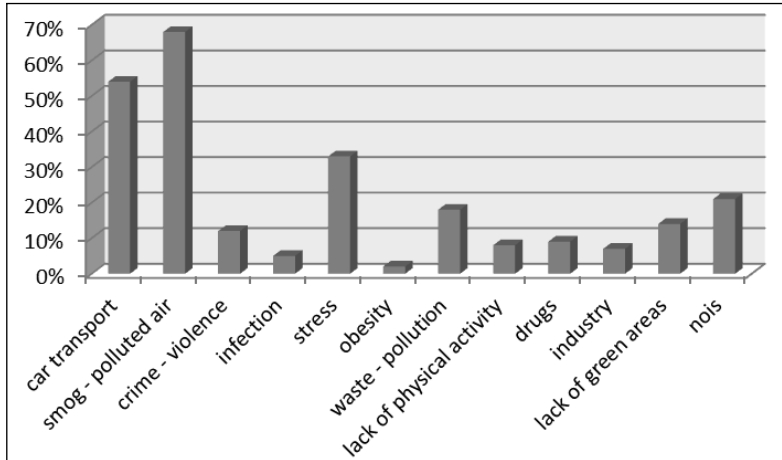
Diagram No. 2; The degree of agreement with the statement: “I want to live in an environmentally-friendly way.”



certainly: 43,6 %; rather yes: 55,2 %; rather not: 1,2 %; certainly not: 0 %

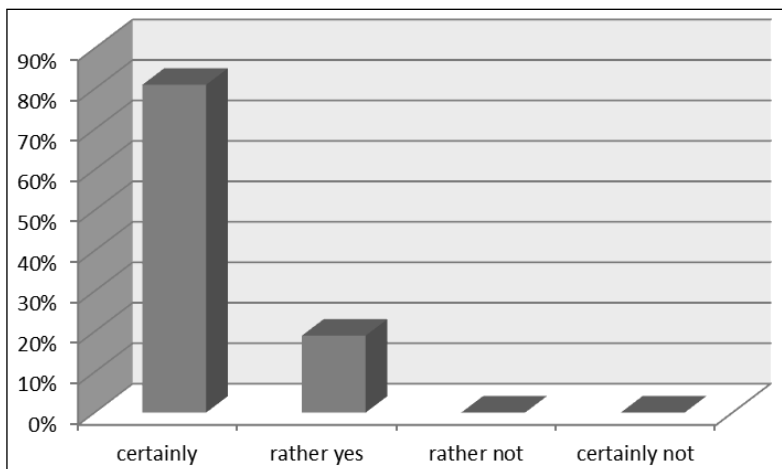
We obtained rather positive results in the area of concerns about one’s health as 50.3 % of all students ranked “own health“ first. Although we did not succeed in establishing a relationship between an attitude towards environment protection and concerns about one’s health, we did identify an area of overlap of those two topics. In our research we formulated an open question: “Write down what you consider to be the greatest threat to life in a city“. We found out that (as illustrated in diagram No.3) the respondents largely associate concerns about their health with environmental issues (*car transport, smog – air pollution, wastes – pollution, industry, lack of green areas, noise*). In terms of relative frequencies the most frequent was the category *smog – air pollution (68.4 %)* and *car transport (53.8 %)*. It is apparent that students feel threatened by what we consider a natural and probably also inevitable toll that civilisation takes – more specifically motoring and related dangerous exhausts (Horká, Hromádka, 2009).

Diagram No. 3



While in our previous investigation we attempted to find out whether respondents perceive damaged environment as a health threat, in the following investigation (Horká, Hromádka, 2010) we were examining whether undamaged environment represents positive contribution to human health. A pilot study indicated that the environment is from the point of view of human health interesting mainly as a platform for relaxation. Therefore, we tried to determine, whether the students of the Faculty of Education Masaryk University in Brno (N = 104) actually consider relaxation a significant activity in the context of health care – diagram No.4:

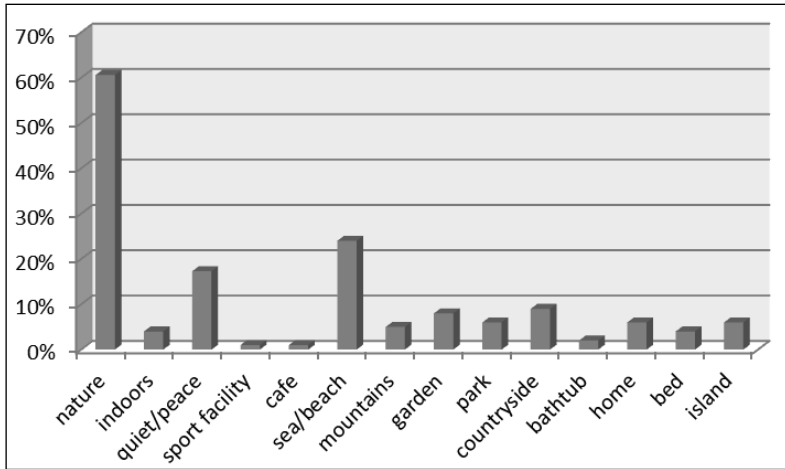
Diagram No. 4; “To what degree do you agree with the statement: Good relaxation is particularly important for human health“.



As illustrated in the diagram students consider relaxation to be an important activity. Subsequently, we attempted to find out what natural environment represents an

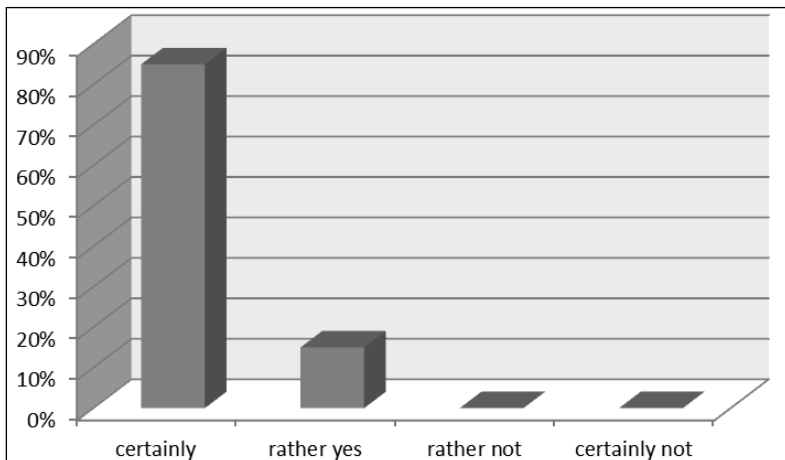
interesting place for relaxation within the sample. In our investigation we formulated an open item: “Imagine a place (or places) where you would most like to relax and describe the place briefly“. Relative frequencies of the categories formed from the answers are featured in diagram No. 5:

Diagram No. 5



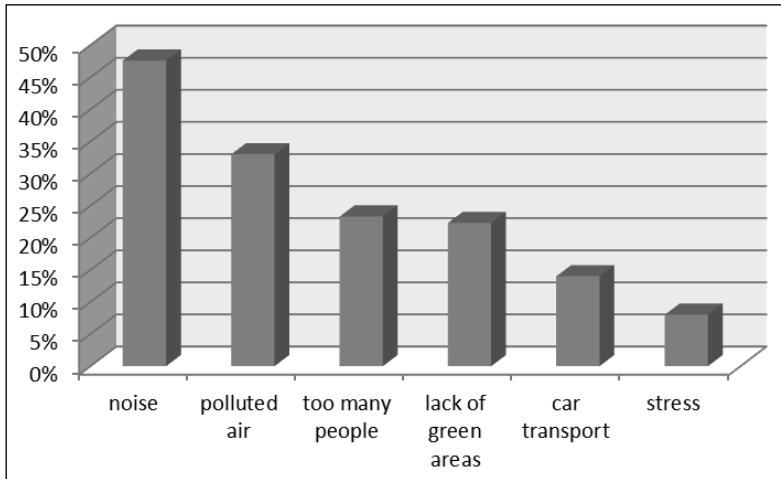
The most frequent is category *nature* with 60.6 %. Other significant categories are: *sea/beach* (24 %) and *quiet/peace* (17.3 %). Although the term “nature“ is rather general and we can not strictly define how the respondents understand it, we consider this a confirmation of the assumption that students perceive nature mostly as a place suitable for relaxation. To specify we used the following closed item (its results are displayed in diagram No. 6):

Diagram No. 6; “To what degree do you agree with the statement: Nature (green areas, park, forest, etc.) is a suitable place for quality relaxation.“



In our investigation we were attempting to find out, whether the respondents perceive any obstacles to quality relaxation and whether these have environmental context – see diagram No. 7:

Diagram No. 7: “If you think that life in a city places obstacles to quality relaxation, write down which“.



It seems that obstacles to quality relaxation often have environmental context – on the first place there is *noise* with 47.6 %, then *polluted air* with 33 %, on the next position there is a category (rather social than environmental) *too many people* with 23.3 %, but next is *lack of green areas* with 22.3 %.

It is apparent that quality relaxation is an important component in health care and also, that respondents often associate it with relaxation in natural environment. It has also been found that obstacles to quality relaxation are often attributes of the damaged environment (Horká, Hromádka 2010).

In the relational part of our investigation we tested these hypotheses:

h1: There is a relationship between the place of residence and perception of conditions for relaxation in a city.

(We assumed a zero hypothesis – no relationship.)

h2: There is a relationship between a place of residence and the choice of environment for relaxation.

(Kendall's tau = - 0.29. The relationship is low, but significant).

H3: There is a relationship between the choice of environment for relaxation and attitude towards environment protection.

(We assumed a zero hypothesis – no relationship.)

h4: There is a relationship between subjective evaluation of one's relaxation and subjective evaluation of one's health care.

Kendall's tau = 0.30 The relationship is low, but significant.

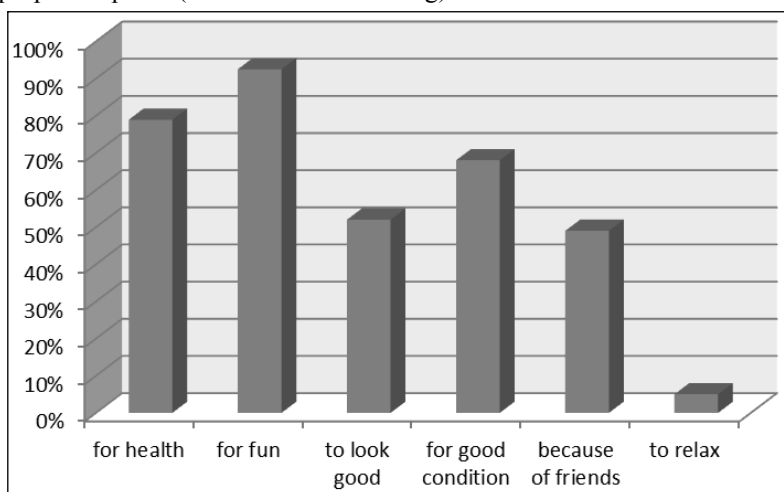
h5: There is a relationship between popularity of cycling in the country and relaxation outdoors.

Kendall's tau = 0.39. This relationship is (almost) of middle strength and significant (Horká, Hromádka 2010).

What we find interesting in the context of the discussed problem are especially the results showing the absence of relationship between the choice of the environment for relaxation and the attitude towards environment protection, which can be interpreted in the way that if one enjoys natural environment as a place for relaxation, it does not necessarily mean the person has more positive attitude towards environment protection. The result of the last hypothesis can be interpreted in the sense that a more active form of relaxation can be associated with the preference for natural environment for relaxation.

Another investigation we are dealing with in this paper is focused on a situation when one's personal health care (such as physical activity in this case) contradicts environment protection. In the sample of students of the Faculty of Education MU (N=133) we were initially examining why the students have physical activity and whether there are connotations with one's own health care – diagram No. 8:

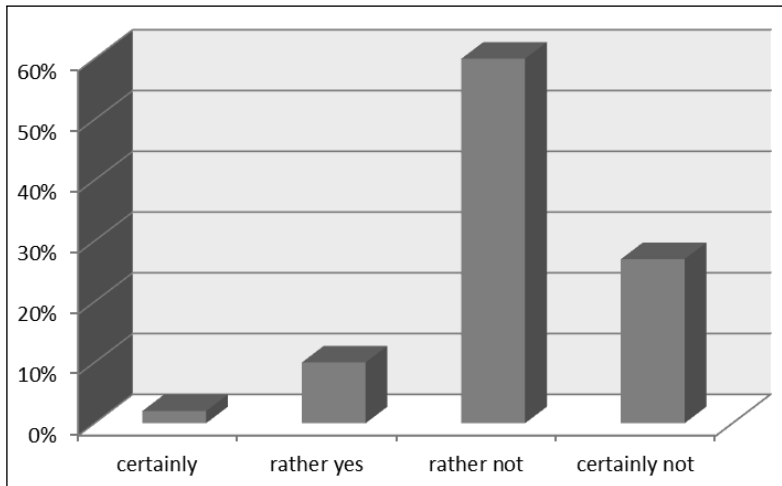
Diagram No. 8; “If you come across a reason or reasons for having physical activity, tick the appropriate spaces (or add others if missing).“



As demonstrated, the respondents on the one hand most often do sports or have physical activity for fun (92.5 %), but the second most frequent category is the category “for health“ - 78.9 % (Horká, Hromádka 2010).

We were further examining whether the respondents take possible effects on the environment into consideration (we admit that this may sound absurd in some cases and validity of the item is therefore problematic). For results see diagram No. 9:

Diagram No. 9: the degree of agreement with the statement: “When having physical activity, I take into consideration what effect this might have on the environment.”



Modal category: rather not

Our focus on potential environmental dimension in doing physical activities was represented also by a variable in the form of the degree of agreement with the statement “I look after my health in such a way not to damage the environment.” The modal category was: *rather yes* (61.6 % valid). Thus, the surprising majority declares that they look after their health in such a way that damages the environment as little as possible. A similar trend is reflected also in the results of the evaluation of another variable: the degree of agreement with the statement: “Nature should not be an obstacle to projects developing facilities for physical activities“, where the modal category is the choice *rather not* with 82.7 % (Horká, Hromádka 2010).

Concerning the applied indicators, in the relational part of the investigation we found an interesting correlation between “responsible attitude towards one’s health“ and “effort to act in an environmentally-friendly way“ (correlation Kendal’s tau $t_b = 0.32$). That is to say that in our research sample we eventually discover low (but significant) relationship between concerns about one’s health and environment protection (Horká, Hromádka 2010).

Conclusion

An analysis of three conducted investigations about the possible relationships between “concerns about one’s health“ and “environment protection“ yielded a number of overlaps – a whole range of areas where these topics overlap and influence each other. It seems that nature is perceived as a platform for health care and the damaged environment is perceived as a serious health risk. We assume that these are quite interesting starting points for the motivation of environmental education. Health can become

a significant motivational factor in the process of establishing the relationship to the environment. It can play a pro-environmental role in the so-called internal focus of control which indicates the extent to which an individual feels to be an active agent in the world around him/her (Krajhanzl 2009, p. 138 according to Allen, Ferrand 1999). These people feel that “*it is in their power to change things, in contrast to the people with the external focus who believe the world controls their life absolutely*“ (Krajhanzl 2009, p. 138). It is suggested that the realisation of the value of health of people will affect human indolence which is ranked among obstacles to pro-environmental behaviour.

Although we are aware of the fact that it is time-consuming and challenging to develop a personality pro-environmentally, it is our duty to strive for environmental awareness purposefully and systematically. While building it we accept that sufficient and true information is available, however, there is a contradiction between people’s attitudes or held values and observed behaviour. Also, we take into consideration that a special role is played by unconscious preferences of individuals and pressures placed on individuals by their social circles, social norms and the situational distortion we succumb to in our decision-making.

Professional training (in specific disciplines, educational science, psychology, philosophy, etc.) enables a synergy of the outputs of individual disciplines focused on nature, culture, society and individual. Each discipline deals with the rich, complex and integrated phenomenon of life differently and each of them finds the true meaning only in the complexity of cognition, which is an orientational constant for a person and his/her life. If the expectation of coherence, mutual cooperation or consilience is not met, then according to Wilson (1992, p. 322) what follows is “*disintegration, separation and fragmentation leading to a dangerous imbalance and uncoordinated tendencies and attitudes.*“ System learning brings about the aspects significant for environmental education and subsequently for the management of human development and the whole planet.

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ZDRAVÍ JAKO MOTIVAČNÍ FAKTOR ENVIRONMENTÁLNÍ VÝCHOVY

Anotace: Ve stati jsou vymezena základní myšlenková schémata environmentální výchovy v kontextu výchovy ke zdraví s akcentem biofilní orientaci školního vzdělávání. Kurikulární reforma ve školství přináší v této oblasti významný posun. Počítá s tím, že být „kulturním ochráncem zdraví a životního prostředí“ je základní kompetencí jedince, která mu umožňuje orientaci v existujících vzájemně příčinných, spontánně se uplatňujících vztazích v životním prostředí a na tomto základě ovlivňování kvality péče o prostředí a potažmo o zdraví. Na základě dosavadních výzkumných šetření je mapováno uvažování a přemýšlení studentů oboru učitelství a žáků základní školy o environmentálních problémech a je popsáno vnímání zdraví v návaznosti na péči o životní prostředí. Zvláštní pozornost je věnována environmentálním a zdravotním důsledkům dopravy, rekreace a sportovních aktivit. Autoři dokazují, že se zdraví může stát významným motivačním faktorem v procesu utváření vztahu k životnímu prostředí.

Klíčová slova: doprava, ekoterapeutický potenciál přírody, environmentální výchova, kvalita života, péče o zdraví, pohybové aktivity, relaxace v přírodě, sport, výchova ke zdraví, zdraví, životní prostředí

THE SENSE OF COHERENCE AS THE FACTOR DETERMINING PROGRESS OF LIFE SKILLS IN THE CONTEXT OF THE INDIVIDUAL'S HEALTH

Anna SLADEK

Abstract: *The modern interpretation of health pays the attention to the range of individual responsibility for health. Among the factors which are favourable to elevate the health potential the life style is emphasized and within it the life skills which let the individual to cope with everyday problems and build up the positive social relations. In this context it is worthy to draw the attention to the sense of coherence as the component of personality including three elements: sense of comprehensibility, sense of manageability and sense of meaningfulness. On the base of the analysis of biographies of social activists the contents range of elements of their sense of coherence was described. The analysis shows a number of their life skills which can facilitate their potential of health.*

Key words: *potential of health, life skills, sense of coherence, social action*

The sense of coherence and life skills as favourable resources for human's health

The tendency for positive understanding of health connects with attention paid to its meaning for coping with everyday life problems but not solely with disease which becomes only one of the difficult situations a man struggles during lifetime with. Dynamic expression of health — as the potential of adaptation abilities of an organism to environment's requirements; those abilities let the individual to keep the balance between him/her and environment's requirements (Tobiasz-Adamczyk 2000, p. 23) — caused inter alia the increase in interest of possibilities of health enhancement and not only its protection. Health enhancement binds with building-up its resources and health protection with prevention of risk factors and diseases. Among direct conditions of health main groups of factors are enumerated. These are: biological predispositions, environmental factors, health care and life style. Among them the meaning of life style is emphasised but the attention is paid to its integration with the other factors (Kowalski, Gawel 2007, p. 121; Woynarowska 2008, pp. 44-45). This trend of thinking about health is connected

with attributing the responsibility for health (the own one and the society an individual lives in) to an individual. However, taking responsibility demands the special predispositions such as knowledge and skills which let to take activities proper for health in an intentional way.

Among the subjective health determinants most of all is underlined the meaning of: knowledge, health convictions and expectations, habits and attitudes connected with health, life skills (socio-psychological) and instrumental skills connected with care of health (Woynarowska 2008, pp. 103-106; Kowalski, Gawel 2007, pp. 114-115). These classifications mostly pay the attention to cognitive and behavioural determinants. At the same time emotional-motivating determinants are closely connected with them. They make some kind of 'drive' which forces an individual to take the activities which are in accordance with his/her beliefs. The determinants mentioned above make exactly the range of individual's personal resources which can be used in process of coping with everyday life problems.

Among the health determinants great meaning is paid to life skills. Life skills are defined as "skills (ability) which enable an individual positive adaptation behaviour which lets effectively to cope with tasks and challenges of everyday life" (Sokołowska 2008, p. 444). These skills serve in different ways. They let to reach life which gives satisfaction. They let an individual to know himself/herself. They help in solving the problems. They decide about aware management of decisions, choices and acts of an individual. They are also the condition of good and satisfying relations with other people. They help to create favourable conditions for engagement into social life, coping on the job market. They also help to protect and improve health, including the decrease of frequency of risky behaviour (Sokołowska 2008, Woynarowska 2001; Woynarowska 2002). This term was described mostly for health education of children and youth with the aim of giving them better possibilities to cope with different difficult situations, including many addictions. With the passing of time this term started to be used in health promotion in wider meaning.

In the literature we can find many different classifications of life skills. This differentiation was dictated by recognition that some of the functions were superior to the others. Hence, the first division done by WHO took into consideration the specificity of health problems and its prophylaxis among children and youth. Two groups were distinguished: skills basing for everyday life and special skills creating favourable conditions for managing the risk of health (Woynarowska, 2001). By contrast, in UNICEF document from 2000 there are five groups of life skills (Woynarowska 2001, Sokołowska 2008):

1. interpersonal skills (empathy, active listening, verbal and nonverbal communication, assertiveness, honesty, negotiation, solving the conflicts, cooperation, group work, relations and cooperation within community);
2. skill of awareness building-up (self-esteem, identification of strong and weak points, positive thinking, building-up the positive picture of person and body);
3. skill of creating of own value system (understanding of different social norms, beliefs and cultures, tolerance, creating of own values, attitudes and behaviours, countermeasures against stereotypes and discrimination, working for law, responsibility and social justice);
4. skill of taking the decisions (critical and creative thinking, solving the problems,

identification of risk for themselves and others, looking for alternatives, getting information and evaluation of its value, predicting of consequences of own activities, determining the goals);

5. skill of managing and coping with stress (self-control, time management, pressure, fear and difficult situations management, searching for help).

Whereas in WHO document from 2003 are mentioned only three groups of life skills (Sokołowska 2008):

1. communication and interpersonal skills (verbal and nonverbal communication, assertiveness, empathy, cooperation, advocacy);
2. taking the decisions and critical thinking (information getting, evaluation of the solution and its consequences, analysis of values and attitude influence on motivation and action);
3. self-management (building-up of self-esteem, self-consciousness, goals determining, management of emotions, coping with stress).

Both of these classifications pay the attention to the so-called basic life skills, which enable solving different difficult situations which arise during everyday life. Therefore they include range of indispensable sources which are to a considerable degree cognitive-instrumental. It seems, after all, it doesn't run out process of coping with difficult situations during the lifetime.

More and more research on dispositions favourable for better coping with difficult life situations has come out recently. In the beginning the research was about to find the best model of risky behaviour prevention. That model should have been grounded on improving of personal traits. Currently the goal is to look for the personality which helps to reach good physical and mental state and personal life success (Kowalski, Gawel 2007, p. 141). In psychology of health the attention is paid to many personal and social resources which could help to cope with different difficult situations. Among personal resources we can find: formal traits of personality linked with temper, characteristics of 'I' structure (inter alia self-acceptance, self-esteem, sense of identity, sense of (personal) agency, sense of control location, optimism, sense of coherence), life competences including cognitive, emotional and social ones. While among social resources the role of social support is stressed (Heszen, Sęk 2007, pp. 161-171). Among the trends of modern research in psychology of health particularly dominate these dedicated to coping with stress. In that research attention is paid to subjective conditions including cognitive, personal and instrumental factors which enable coping with stressful situations (Heszen, Sęk 2007, pp. 142-159).

Both personal and social resources favour building of health potential, what means building of range of psychological dispositions which help to cope with difficult life situations. The salutogenetic conception of A. Antonovsky refers to this trend (Antonovsky 2005; Heszen, Sęk 2007, pp. 76-89). This sociologist assumed in his theory that the normal state of functioning for a man is state of unsteady (fragile) balance. A man constantly meets different stressing stimuli in life which he/she must struggle with. An individual's reaction is to adapt to requirements of surrounding and keep the dynamic balance of life processes on certain optimal level. The level of health depends on the

skill of meeting the internal and external requirements. It also depends on the ability to keep the balance and limit the state of entropy or, at least, its negative influence on organism. The level of man's health depends on cooperation of a few factors: generalised resistance resources, stressors, sense of coherence, life style and behaviour. In author's understanding generalised resistance resources mean individual's characteristics and traits of socio-cultural surrounding which help in coping with stressors. They could be compared to personal and social resources described above in the paper. On the other hand the stressors in the concept of salutogenesis indicate internal and/or external requirements for which the individual has not ready and automatic reactions. And because of this the state of tension arises within an individual. The stressors, however, can play negative threatening role and also positive one, which favours progress and health. Concerning the life style the attention is mostly paid to behaviour which enables progress of immunological resources and sense of coherence. The last element is the main factor which, according to Antonovsky, helps man's health.

The sense of coherence it is "global human orientation expressing degree in which this man has got dominating, lasting, although dynamic, sense of certainty that (1) stimuli coming during lifetime from internal and external environment have structured, predictable and explainable character; (2) the resources which let him/her to meet the requirements done by these stimuli are available; (3) these requirements are for him/her the challenge worthy of effort and engagement" (Antonovsky 2005, p. 34). The sense of coherence includes three elements closely connected to each other. These are: sense of comprehensibility, sense of manageability and sense of meaningfulness. Sense of comprehensibility has got a cognitive character. Thanks to that a man sees coming but also predictable stimuli as cognitively sensible, understandable, consistent and organised. Sense of manageability has got a cognitive-instrumental character. Thanks to that a man sees available stimuli — both his/her as these ones which are in the surrounding — as sufficient to meet the requirements. It means he/she feels he/she can manage in a certain situation. In turn sense of meaningfulness has got emotionally-motivating character and it describes to which degree a man sees life situations as sensible, being the challenge worthy of effort and engagement. According to Antonovsky the latest element plays the superior role. It holds the other elements together; when it is strong the others are also increasing (Antonovsky 2005, pp. 32-37; Heszen, Sęk 2007, p. 82). Sense of coherence is a personal variable similarly as some part of immunological resources but it is isolated because of that reason its character is more complicated. And to great degree sense of coherence decides about the extent of usage separate resources for taking certain activities to cope with requirements which are met by the internal and external stimuli. Sense of coherence gives the individual some global orientation in the world. It has got a cognitive structure, hence, it makes a system of beliefs thanks to which a man knows about relations in the world, about himself/herself and also about the resources which are available for him/her. It also encourages a man for taking the activity — on base of available resources — which let him/her to meet the requirements. We can acknowledge that sense of coherence constitutes peculiar complex element of personality which enables a man to manage in difficult life situations and in this way to keep him/her healthy and progressing.

Therefore it can be perceived some relation between sense of coherence and life

skills as the basic resource which an individual possesses. The skills distinguished and described above have, to great degree, cognitive character. They let to determine both the variables concerning of own person (process of self-knowledge and building-up of self-awareness), and knowing and understanding other people and environment and also the prediction of the consequences of actions done by an individual and others. The skills have also got the instrumentally-behavioural character because they let to take the decision about the direction of action, about the choice of the most suitable way of managing, limitation of fear and stress. Finally, they have social character because they let to build and keep personal relations. So their range is very wide and in this way they play a special role in process of coping with certain problem situations during the lifetime. However, possessing of such skills it is not enough to manage the life problems. The ability to change and adjust them to the particular situation is necessary.

It is worthy here to take a stance to the process of managing or coping with the difficult life situations itself. According to H. Şek, coping with critical life events means “complex and dynamically changing group of psychological processes and actions heading to shape new ways of meeting the requirements and achieving the goals in the situation when internal and external requirements essential for an individual cause mental strain and the state of disturbing of individual’s adaptive resources” (Şek 1991, p. 34). The resources possessed by a man can in this way appear insufficient to cope with requirements in a difficult life situation. They can require the transformation, changes or looking for a new ways of coping in a creative way. But in this process a certain factor is needed which let a man to merge these processes and integrate them and include into the current structure of own life activity. It seems that precisely the sense of coherence — as generalised life orientation, which let a man to realise about himself/herself and his/her relations with surrounding — could be that factor bringing together the processes of using many life skills during the struggle with difficult life situations.

The relation of sense of coherence and life skills – the analysis of life’s stories

The interest in a connection of life skills and sense of coherence was conceived during the research on the meaning of social activity taken by the regional activists for their self-development. The qualitative analysis of their biographies have showed many interesting relations and have also given a rise to the question about the superior argument of giving the meaning to the activity taken for self-development in regional association.

The present paper is the part of a wider research. And its goal wasn’t describing the degree of sense of coherence of the activists but the contents range of separate elements of their sense of coherence paying the special attention to the connection of developing and using life skills in coping with difficult life situations. The analysis included 14 biographies of social activists undertaking the social activity in regional associations in Silesia (Poland). The stories of their life concentrate on course and meaning of social activity during the lifetime. But simultaneously show the whole life experience within the most important areas of their life activity. The biography analysis was taken within the life stories, including: content and narrative analysis. The content analysis of col-

lected material was taken in the context of distinguishing the categories describing the elements of sense of coherence which were shown by A. Antonovsky. The next step of analysis was to determine the range of life skills which are used by the participants of the research in different everyday life situations.

To distinguish categories which describe separate elements of the sense of coherence firstly the definitional properties, pointed out by Antonovsky, were used. Next, based on 'mapping sentence', which was procedure for making the research tool for him (Antonovsky 2005, pp. 80-83), single questions from SOC-29 (Life Orientation Questionnaire) were analysed. It was done in order to isolate and name separate categories which characterise the elements of the sense of coherence. Then, the stories of the examined people were analysed to point out the separate categories which describe the elements of the sense of coherence. And these elements were analysed in content range concerning the kinds and ways of using different life skills.

The sense of coherence has got global character and constitute kind of flexible orientation. Which means it isn't reaction for the specific situation but rather the predisposition for some ways of behaviour in many situations concerning different areas of life activity. The description of separate elements of the sense of coherence is rather general, to be used for research in differentiated social and cultural groups, but in case of the individuals it takes on diverse exemplifications. In the presented paper the specification of these categories in people's experience becomes the goal. The most important conclusions are shown below.

Sense of comprehensibility seems to be the initial element in the description of own life for the examined activists. In their stories appear following categories of this element of the sense of coherence: the evaluation of own life in the context of arrangement, clarity and predictability, the evaluation of own behaviour in unknown situation, the evaluation of own skill of solving difficult problems (the choice of solution), the evaluation of own emotions — in the context of their clarity, mark, degree of approval, especially those emotions which are unwanted and mixed (ambiguous), the evaluation of own skill of appropriate evaluation of events and situations and the evaluation of being understood by others. All these categories concern three time perspectives: past, present and future.

Sense of comprehensibility has got the cognitive character and in case of presented stories expresses itself in a shape of some tendency for analysis own life situation the most often in a wider socio-cultural context. The analysis of own situation bases on looking for an explanation of life situation. Whereby, in the most number of cases there is the tendency to the widest explanation taking into consideration factors which concern own person, other people and different points of view. Examined people try to describe the norms, values or rules which are the base of some activities or situations in which they occurred. They try to identify the factors which have an impact on situation and explain their meaning and predict the consequences. Even in situations which they evaluate as personally unfavourable, they try to recognise and explain their sources and reasons. The described tendency is connected with using different ways of getting information and acquire knowledge. The need of improving knowledge in different areas is strongly emphasised by examined people. The need of prediction of the consequences of activities (taken personally or in a group) is also very well visible in the told stories.

In process of explanation of life situations examined people pay the attention to different strategies of critical thinking. Considering the emotional reactions the cognitive attitude is connected firstly with auto-reflection and self-awareness of own feelings, with the ability to name them and analyse them. This tendency can be found in most of the cases but in different range. Taking into consideration the identification of solving the difficult situations people's reactions are the most often connected with looking for the different possibilities of actions. Generally sense of comprehensibility in the told stories is the most often expressed as attitude of reflection and auto-reflection taking into account different points of view.

Looking at described kind of activities taken by examined people we can notice that they concern following categories of life skills distinguished by UNICEF, which I've already mentioned (Sokołowska 2008, p. 445): building-up of self-consciousness, building-up of the own system of values, taking the decisions. Outlined sort of activities, however, goes beyond described categories.

The next element of the sense of coherence, which is sense of manageability, combines closely with sense of comprehensibility. It forms with general evaluation of possibilities of using different external and internal resources to cope with difficult situations. In stories of the activists we can point out the following categories of this element: optimistic point of view; the evaluation of own skill of overcoming troubles in important areas of life, the evaluation of own skill of coping with negative emotions, the evaluation of influence of external situations on own life and emotions; the evaluation of own emotional attitude to unpleasant situations, the evaluation of the sense of being unjustly treated by others, the evaluation of possibility of relying on others, balance of the sense of being the loser or the winner in different life situations. The described categories also concern mostly all three time perspectives.

Sense of manageability has got instrumentally-behavioural character because it is connected with taking the certain activities to find the solution of problematic situation. But it bases on cognitive analysis of this situation, hence the base here are skills about which I have mentioned during the description of sense of comprehensibility. The starting point of action is in this case understanding of the situation and the place a man takes within it. Generally in the analysis of the stories told by the activists we can see the picture of a man as a person who can manage in different situations. In the stories appeared the descriptions of different difficult situations. Characteristic were those stories in which critical events (sometimes even very traumatic) were described. Those events were changing their life situations, were evoking strong negative emotions and feeling of strain. Very often they caused the sense of harm and injustice. But it is very important that in the perspective of story such a traumatic event from the past were evaluated in the wider context. Examined people noticed their wide context, differentiated factors influencing the whole situation and their place within it. They also noticed many different consequences including the positive ones. This approach to show wide context of events indicates the aspiration to sense of comprehensibility. In turn, the description of process of coping with traumatic events itself indicates that examined people looked for the different possibilities to solve the problems. Temporary breakdowns or inability to act were overcome in the different ways. The most often it was connected with: looking for the support in environment and getting it; looking for possibilities for independent action or

with others, another interpretation of situation. Sometimes the strategy was waiting for the end or the change of external conditions and/or the change of way of thinking about the situation. There were many used strategies. Generally the participants of research showed active attitude in difficult situation. It means they looked for the personal resources but also external ones which could help to find the solution in a certain situation. Except this, in coping strategies described by examined people we can see the tendency for analysing the situation, for identifying the risk and consequences of the certain acts for the activists and other people. We can also find optimistic but at the same time quite realistic attitude to ability of meeting the requirements. It is quite interesting fact that examined people describe many negative feelings which accompanying these situations, also the defeats. However, they point out the ways of coping with these emotions, mostly cognitive ones. These are for example: the change of interpretation of situation, downgrading the meaning of emotions, new goals. At the same time the optimistic attitude to own abilities for managing in different life situations is connected with seeing own failures and successes and analysing them. Many activists pointed out the need to develop the ability to manage not only the failures but also the successes what has got emotional results too. The very common way of coping with emotional consequences of difficult situations is for the examined activists the concentration rather on further goals of act but not only on the results which are at the exact moment. Activists described also many difficult situations relating to the interpersonal relationships. In the such cases solving was connected with shaping the interpersonal skills, especially the skill of listening, empathy, communication, assertiveness, negotiation and cooperation.

Relating the described kind of skills used by the examined activists in the context of sense of manageability we can notice they concern following categories of life skills: taking the decisions, coping and managing stress, building-up of self-awareness and interpersonal skills. Separate actions, which are mentioned in these categories, are after all connected to each other.

Summing up it is worthy to emphasize the categories connected with sense of meaningfulness. According to A. Antonovsky, it is the element of the sense of coherence which plays the dominating role in giving the direction and meaning to the other components. The significance of sense of meaningfulness is very well seen in the stories of the examined activists. The following categories of this element can be shown: the evaluation of own life as interesting and engaging, the evaluation of everyday activities and occupations as giving satisfaction and happiness, establishing own goals and aspirations (from the closest to distant ones), the evaluation of own interest in things around, the evaluation of own activities as meaningful and intentional, the general evaluation of own life in the context of meaning and goal. Also all these categories appear in all time perspectives.

Sense of meaningfulness has motivating character, hence, it plays such a crucial role. Seeing own activities in categories of interest, goal and meaning causes that a man has got a motivation to act and so to cope with troubles. The starting point of the described categories can be taken the tendency to see own life situations as arousing the interest. They are treated as an adventure, some challenge. The important area of taken activities described by the participants of research were life goals. It is typical for the stories that social activity which they take is seen by them as something what gives the

meaning to life. A few people were describing their goals in this area in the context of a calling or a mission. All of examined people described many social goals. The next important area of activity was building-up of own hierarchy of values and following it within acting. In this hierarchy the social goals took very important place. The whole was also connected with seeing the relation between value and meaning of taken activities and building-up of the picture of own person. For the participants crucial meaning of taken acts was connected with two the most important motives: serving the others and leaving some own tracks. Both motives indicate the need of giving the meaning to own life. It is the principal category which motivates an adult to take activities, especially the social ones. Generally, sense of meaningfulness was expressed in the stories in some tendency to shape and give continuity to own life. The life goals orient their life activity on confessed values. During the lifetime we set some stable direction of life engagement, it is connected with looking for own place in the world and aspiration for self-description. In the case of the examined activists the leading area of their life activity and engagement was social activity for their town (place). The remaining areas of activity were concentrated around it. With this area they also bind the meaning of own existence, seeing the value of own person through the prism of realised tasks. Sense of meaningfulness, therefore, outlines the direction of done outcome of life.

Describing the range of life skills as part of sense of meaningfulness on the base of the stories it is possible to show that they come from the following categories: building-up of the own system of values; taking the decisions, building-up of self-awareness. It seems, however, described skills needed in building of sense of meaningfulness definitely go beyond the skills pointed out within the frame of life skills conception.

Based on the analysis of the regional activists' stories I described the range of the most important life skills which were used by examined people in course of coping with everyday life situations. The range of such skills differentiated the individual biographies. I tried to get the attention to the most important ones. Each of elements of sense of coherence connected with specific life skills belonging to all described previously categories. Only little differences in range among examined people occurred. So we can come to a conclusion that solving different problems of everyday life is always connected to the need of using diverse life skills. It is hardly possible to point out the specific pattern. Essential seems to be the fact that in whole biography (especially in cases of summing up the whole life) some regularity can be perceived. The skills used in specific situations are to some degree submitted to tendency to giving the sense and order to own life. It is also the tendency to unite own life as a certain whole. Just this tendency finds the expression in sense of meaningfulness, which becomes crucial category of the own life's description.

Summary

Positive expression of health concerns to wide understood well-being and quality of human's life. Among the dimensions of psychological well-being the attention is paid to self-acceptance, personal development, autonomy, life goal, environment-control and positive relations with other people (Ryff, Singer 2005). The characteristic of these dimensions shows a number of personal and social resources which can be in

favourable for individual's well-being and health. Among them many life skills can be pointed out.

Based on the analysis showed above I tried to describe the content range of separate elements of the sense of coherence and their degree of 'saturation' of life skills which are described in the literature. The examined activists use in their life experience many life skills and they overcome everyday problems with the use of them. The attention is paid, however, to an aspiration (common for all of them) to give the sense to life, to sort out the telling story in the direction connected with higher goals and engagement to fulfil the aims. The appealing to the sense of coherence category lets to interpret these life stories as some general life orientation orientated towards realization of superior values and goals. The author of salutogenesis pays the attention that sense of meaningfulness is the core category for understanding of the sense of coherence because this term organizes the whole past experience and anticipates definite order of reality and in such a case the sense of happiness and satisfaction.

This way of thinking is confirmed by the research on connection of psychical well-being and health. The challenges linked with 'engaged life' and struggle with them constitute the core of individual's sense of happiness. They are the fundamental elements of health and quality of life (Ryff, Singer 2005). People, who are engaged in some areas of the reality, even if it causes the trouble, have the sense of satisfaction because of this reason. They are generally more happy and satisfied with themselves and life. Engagement, treating the difficult situations as the challenges, establishing goals and looking for the meaning are the indicators describing sense of meaningfulness according to Antonovsky. Research on connection of the sense of coherence and life satisfaction shows that "the higher is subjective sense of meaningfulness of taken activities the stronger is conviction about resourcefulness and acting" (Sitarczyk 2006, p. 297). The other words, if we feel that our acting has got meaning, at that time it is easier for us to take the challenge, struggle with trouble and look forward into the future with hope. Sense of meaningfulness giving the direction and value to life can simultaneously release the tendency for looking for better ways of coping with life difficulties. In a way it is possible to acknowledge that the sense of coherence could make one of crucial conditions developing and using life skills in process of coping with troubles of everyday life. The essential role in this process plays the sense of meaningfulness. The analysis of this connection demands, however, further research.

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SOUZNĚNÍ JAKO FAKTOR URČUJÍCÍ VÝVOJ ŽIVOTNÍCH DOVEDNOSTÍ V SOUVISLOSTI S LIDSKÝM ZDRAVÍM

Abstrakt: Moderní výklad zdraví zdůrazňuje míru zodpovědnosti jednotlivce za zdraví. Mezi faktory, které zvyšují zdravý potenciál patří životní styl v rámci životních zkušeností, což napomáhá jedinci zvládat každodenní problémy a umožňuje budovat si pozitivní sociální vztahy. V těchto souvislostech je nezbytné se zaměřit na souznění jako součást osobnosti čítající tyto tři faktory: porozumění, řízení a smysluplnost. Na základě rozboru životopisů sociálních aktivistů byla popsána míra jejich zastoupení. Z analýzy vyplývá množství životních zkušeností zúčastněných ve výzkumu, což může pomoci jejich zdraví.

Klíčová slova: potenciál zdraví, životní zkušenost, souznění, sociální aktivity

THE INFLUENCE OF THE ECO-SCHOOL AND HEALTHY SCHOOL PROJECTS ON ENVIRONMENTALLY RESPONSIBLE BEHAVIOUR OF PRIMARY SCHOOL PUPILS

Barbara BAJD, Tina LEŠČANEC

Abstract: *More than 600 schools in Slovenia are included in the Eco-school programme and more than 250 schools in the Healthy School programme. In our investigation we compared ecological awareness and environmental responsibility among 9-10 years old pupils involved in the Eco-School project with those of pupils who are not participating in the Eco School project but are involved in the Healthy School project. We also compared the ecological awareness and environmental responsibility of the parents of children involved in the Eco School project with those parents whose pupils are at schools participating in the Healthy School project. Our results show that pupils at schools involved in both projects display moderately good ecological awareness and environmental responsibility, but the results of pupils at schools involved in the Eco-school project were better.*

Key words: *ecology, Eco-School project, Healthy School project, ecological awareness, environmental responsibility, ecological education, permanent development*

Introduction

Environmental education is one of the more important topics in today's schools. Some understand environmental education to be merely about the protection and maintenance of the natural environment. Whilst crucially important, this of itself is insufficient (Marentič-Požarnik, 2000). Others understand environmental education to be about ensuring a clean environment and removing waste and avoiding pollution of the natural environment. Another aspect promotes the view that pupils need as much knowledge as possible, and an acquaintance with data that emphasize the increasing ecological threats - largely man-made - that face the natural environment. The Slovene national curriculum incorporates a section on environmental education, requiring it to be taught so that pupils acquire knowledge of their environment that is connected and understandable, and provides the opportunity for children to approach the subject in several ways, involving varied approaches and ways of thinking, and arriving at differing conclusions. It is

important to be aware that environmental issues should not be treated in isolation, but need to be discussed in relation to their natural, social and economic contexts and prevailing policies and directives, whether local, national or international (Pavšer, 2004).

In 1996 Slovenia became a member of the European project Eco-School, supported by FEEE (Foundation for Environmental Education in Europe), which aims to promote environmental education and ecological awareness. The Eco-Schools project and its programme offer a wide choice of practical approaches to environmental topics, and encourages pupils' enhanced environmental awareness, both within and outside school. In particular, it provides teachers and the pupils with opportunities to use their environmental knowledge in everyday contexts (Maatko, 2006).

From its inception in 1996 we now (2011) have 628 registered Eco Schools (which include kindergartens, primary and secondary schools and Field Centres) in Slovenia. The project includes not only pupils and teachers, but also professionals, schools' technical staff, parents, and local authority workers, so that the schools' connections and influence extend beyond their surroundings, into their local communities.

From 1993 Slovenia has also been a participant in the European network of Healthy Schools, and today (2011) 268 schools are included in this project. The focus for these schools is to promote better health in different fields (physical, mental, social and environmental). As with Eco-Schools, the project also includes institutions and individuals outside the school. Pupils in the Healthy Schools project must acquire knowledge about healthy living in the context of clean and healthy environments, and discuss the issues involved in this.

In our investigation we compared the ecological awareness and attitudes towards environmental responsibility of 9-10 years old pupils involved in the Eco-School project with those of pupils who are not participating in the Eco-School project but who are involved in the Healthy School project. In particular, we wanted to determine whether there are any differences in the knowledge and ideas of pupils from Eco-School, whose programme content includes a greater environmental education component than that of pupils in the Healthy Schools project. We also compared the ecological awareness and environmental responsibility of parents involved in the Eco School and Healthy School projects, and while referred to below, these results are not be presented in detail in this paper.

Methodology

In our investigation we included 53 pupils who were attending schools in the Eco School project and 54 pupils from schools in the Healthy School project. Both groups were 9-10 years old. All pupils received an anonymous questionnaire with 13 questions, the majority of which were closed-type questions. Pupils did not need more than 15 minutes to complete the questionnaire in school. The parents' questionnaire had similar questions to that provided for the pupils; parents completed it at home few days after the pupils had answered their questionnaire at school. The questions were as follows:

1. How well do you think you know the project Eco-School (Healthy School)? *I do not know, very badly, well, very well*
2. Do you think that your school does enough for your ecological awareness and for the ecological awareness of your parents? *Too little, enough, much, very much*

3. Do you think that your ecological awareness would be less if you did not attend the Eco-School (Healthy school)? *Yes, no, I cannot decide*
4. Try to estimate your ecological awareness. *Minimal, medium, high, very high*
5. Try to estimate the ecological awareness of your parents. *Minimal, medium, high, very high*
6. What do we call the place where waste bins are placed for separate collection of the waste? *Collecting place, ecological island, recycling place*
7. When we separate our waste for re-cycling we must be careful to place the waste in the appropriately coloured container. What do we throw in the container coloured: *red; green; yellow; brown?*
8. Do you think that with a change to your habits you can contribute to a better environment? *Yes, no*
9. How well do you think people take care of the environment? *Very badly, badly, well, very well*
10. To what extent, do the following influence your ecological awareness? *School, parents, grand parents, friends, books, journals, internet*
11. Do you separate waste into different categories at home? *Yes, no*
12. Which of the following recycling activities are you involved in, and how often? *Collecting old paper, collecting plastic bungs, collecting cartridges, collecting electrical equipment (monitors, mobile phone), collecting dangerous waste (batteries,...), cleaning (collecting) wastes in the environment.*
13. To what extent you agree with the following statements:
 - *If I see waste in the school's surrounding I throw it in the waste bin;*
 - *I call my friends' attention to the need for a careful attitude to the environment,*
 - *I call my parents' attention to the need for a careful attitude to the environment,*
 - *At home I save electrical energy by switching off equipment when not in use, by switching off electric lights when it is bright enough*
 - *When brushing my teeth I turn off the water;*
 - *When I go shopping I take a cloth bag, and don't use plastic carrier bags provided by the shop.*

Results

The responses to each question were collected, divided into two or more categories and represented by graphs and tables. The results indicate some interesting differences between the answers of pupils from schools participating in the Eco-School project and those from schools in the Healthy School project.

In responding to the question: "How well do you know about the Eco-School project/Healthy School project?" 60 % of pupils from Eco School knew about the school project very well, whereas only 16 % of pupils from Healthy School knew the project of their school very well.

In reply to the question: "Do you think that your school does enough for your ecological awareness and that of your parents?" we obtained different answers. But it

is obvious that the pupils participating in the Eco-School project have a more positive opinion about its effectiveness: 62 % of the pupils from Eco-School think that their school effectively promotes ecological awareness, while only 57 % of the pupils participating in the Healthy School project think that school does much (and not very much) for ecological awareness.

We got interesting responses to the question: “Do you think that your ecological awareness would be less if you did not attend the Eco-School?” 60 % of pupils from Eco-School could not decide, whereas 48 % of pupils from the Healthy School project think that their ecological awareness would be the same if their school was not involved in the Healthy School project.

When the pupils were asked to estimate their ecological awareness, half the pupils on both school projects think that their ecological awareness is ‘high’, and half the pupils from Eco-School estimate their ecological awareness as ‘very high’, whereas only 24 % of pupils from Healthy School estimate their ecological awareness as ‘very high’.

Compared with the pupils’ estimates of their own ecological awareness, both groups’ estimates of their parents’ awareness show practically no difference. Both groups answered that their parents have ‘very high’ (49 %) or ‘high’ (40 %) ecological awareness.

The pupils at Eco School were better at naming the place where waste bins are placed for separate collections, with 60 % pupils correctly naming the place, compared with 22 % of pupils from Healthy School. Similarly, pupils from Eco-School were better at correctly recognizing the colour of the container into which we throw the waste (53 % compared with 43 % from Healthy School). The great majority (more than 90 %) of pupils from both School projects are aware that by changing their habits they can contribute to a better environment.

We obtained different answers in response to the question about how well people take care of their environment. The pupils from Healthy School were generally more critical, with 39 % of them thinking that people do not take enough care for the environment, whereas only 24 % of pupils from the Eco-school are of the same opinion.

Both groups of pupils gave practically the same responses to the question asking them to identify influences on their ecological awareness. In first place for both groups were school and parents, followed by friends, and then books. Internet sources had the least influence on both groups.

The results indicate that pupils from the Eco Schools were markedly more active in different environmentally related activities, such as cleaning the school’s surroundings, collecting old batteries and plastic bungs, than the pupils from Healthy School. However, a major reason for this outcome is that schools in the Healthy School project did not organise collections for selected waste such as batteries or plastic bungs, or for recycling. Pupils from both schools were most active in collecting waste paper (64 % and 41 % respectively).

More than 90 % of the children in both groups gave a positive response to the question “Do you separate your waste at home?”

From the answers of the Eco-School pupils it is evident that they are more aware than those in Healthy Schools about how important is to keep the environment clean

and unpolluted. 64 % of them always put litter into the waste bin, whereas only 24 % of pupils from the Healthy School do this. Additionally, Eco-School pupils to a much greater extent call the attention of their friends and parents to the need for a responsible attitude to the environment.

Eco-School pupils are generally also more conscientious in switching off unused electric devices compared with Healthy School pupils (56 % and 33 % respectively). However, in relation to two major sources of energy waste, while differences are still evident between the groups, they are not so marked: pupils from both school projects are aware of the need not to leave lights switched on during the day (90 % and 77 %), and also not to leave water running when brushing their teeth (90 % and 81 %). In terms of re-cycling, 51 % of Eco-School pupils use a cloth bag for shopping, while only 33 % of Healthy School pupils do so.

Discussion and conclusion

Our investigation shows that pupils from schools participating in the Eco-School project are generally more ecologically aware than pupils from schools in the Healthy School project. For example, Eco-School pupils were better at naming the place where waste bins are placed for the separate collection of categories of waste for re-cycling. Eco-School pupils were also better in correctly identifying the colour of the container in which we dispose of the waste than pupils from the Healthy School. However, it is interesting that Healthy School pupils were more critical than pupils from Eco-Schools in the statement that people do not take enough care of their environment.

Eco School pupils were more active in different activities associated with environmental awareness, such as cleaning the school surroundings, collecting old batteries and plastic bungs for re-cycling, than the pupils from schools within the Healthy School project. But the main difference here derives from the fact Healthy School do not generally have environmental, re-cycling and cleaning schemes organised within their programmes.

In their responses the Eco-School pupils generally provided more informed answers than the pupils from the Healthy Schools project. We therefore conclude that involvement by a school in the Eco-School project has greater influence on their pupils concerning ecological awareness and environmentally responsible behaviour than participation in the Healthy School project. Such pupils are more aware of the need to keep their surrounding clean, to switch off electricity and water when they do not need it, and to appreciate the need to conserve energy and resources generally.

Our investigation also demonstrated that, besides schools, as might be expected, parents provide a positive influence and good example for children on how to care for their environment. But the influence is not all one way: on the other hand schools within the Eco- School project also influence parents and enhance their ecological awareness because pupils bring home new information learned in school and through the different activities within the framework of the project.

Given the general contrasts in replies between the two groups of pupils, it is rather surprising that the great majority of those from both school projects answered that they separate waste at home to a great extent for recycling. However, waste separation and

recycling is not only a function of ecological awareness, but also requires organisation by the local community. In some cities in Slovenia there are still not enough containers for separating waste into categories. So even when people are aware of the importance and benefits of separation, they cannot do it if there are no special waste bins. In Slovenia there is still much to do for us to become “a society of recycling” (Žunec, 2011). For example, more than 80 % of our waste goes to waste sites for deposition or to land fill sites for burial, whereas the European average is 40 %. So whilst it is encouraging that the percentage of recycled waste has grown in the last few years, there is still much leeway to make up. There is no doubt that in the future Slovenia must both diminish the quantity of its waste, *and* improve the quality of the surrounding environment. So we need to pay greater attention to developing well-designed conservation projects and targeting resources for these. As part of this policy, schools should be more focused on educating pupils about environmental issues, and the importance of sustainability and recycling activities. One step to achieving this aim is certainly to include schools in ecologically-themed projects such as the Eco-Schools project. Our investigation shows the value of the Eco-school project in raising pupils’ awareness, and that of their parents, in appreciating the vital need for developing environmentally sustainable approaches in both policy and practice, in recognising the ecological fragility of our surroundings, and in learning how to protect them from further degradation.

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VLIV PROJEKTŮ EKO-ŠKOLA A ZDRAVÁ ŠKOLA NA VÝCHOVU K ODPOVĚDNÉMU VZTAHU ŽÁKŮ ZÁKLADNÍCH ŠKOL K ŽIVOTNÍMU PROSTŘEDÍ

Abstrakt: Mnoho škol a dalších vzdělávacích institucí ve Slovinsku se začlenily do FEEE (Nadace pro enviromentální vzdělávání v Evropě). Více než 600 škol se zařadilo do Ekologického programu a více než 250 škol do programu Zdravá škola. Zároveň jsme také srovnávali povědomí o životním prostředí a odpovědné chování k životnímu prostředí u jejich rodičů, a to z hlediska obou zmíněných projektů. Hodnocení výzkumu ukázalo lepší výsledky u žáků v projektu Eko-škol, jejich velmi dobré povědomí o životním prostředí a v podstatě odpovědné chování vůči životnímu prostředí, zatímco u žáků v projektu zdravých škol byly výsledky jejich ekologického povědomí a odpovědnosti vůči životnímu prostředí o něco horší. Podobné výsledky jsme získali

při porovnání odpovědí rodičů, které ukazují, že povědomí o životním prostředí a odpovědné chování k životnímu prostředí je o něco vyšší u těch rodičů, jejichž děti se účastní ekologických projektů.

Klíčová slova: ekologie, projekt Eko-škola, projekt Zdravá škola, povědomí o životním prostředí, odpovědné chování k životnímu prostředí, ekologická výchova, udržitelný rozvoj

REQUIREMENTS FOR SOCIAL HEALTH OF STUDENTS IN TERMS OF BASIC EDUCATION CURRICULUM

Michal SVOBODA

Abstract: *The post is focused on the analysis of curricula from the perspective of social health. The post has the character of content analysis of a text document, which is the basis of the curricular reform in primary and lower secondary education in the Czech Republic. The analysed text document is the framework curricula for elementary education. The post is focused on the definition of social health and its classification. The content of social health in the context of school educational system consists of personality development, interpersonal relationships, self-cognition and self-acceptance, which are based on the holistic concept of the health of an individual. The social health of pupils and youth is a current priority, which has been emphasized in the document of the World Health Organization WHO – Health 21. Social health of children and youth can help to eliminate social-pathological phenomena, which have recently been increasing in school environment.*

Key words: *social health, framework education programme for primary education, personal and social development*

Basic Characteristics of a Social Health Concept

One of the areas of current health care approaches concerns Social Health undoubtedly. Along with physical and mental health, it forms one of the three pillars of most definitions of health. This could be substantiated by the general definition of health by the World Health Organization (WHO): “*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*”¹

The issues of social health can be seen from several areas; one of them is related to socio-economic aspects. These aspects are based on the belief that coping with high morbidity and mortality it is necessary to systematically exploit the elements of social control, such as law and legislation, education, economics, mass media, etc. From that point of view, the concept of social health can be characterized as a condition in which

¹ <http://cs.wikipedia.org/wiki/Zdrav%C3%AD>. N.p., 20 Sept. Web. 20 Sept. 2010.

people live with the ability to care for their health with the help of the health system.

Another view of the social health concept may be approximated by the idea of W.A. Russell, who believed that *“human health is subject to not only personality-physiological factors but also how the individual can relate to other people and cope with social institutions.”*²

Quoted concept of social health contains conditions which relate not only to the socio-health system, but mainly to the personality of a man as a social being. This implies that an individual needs optimal interpersonal relationships managed by their social competencies. The social competencies could be described as a cluster of knowledge, skills, attitudes, and values that enable a man to manage various social tasks in an optimal manner. The key social competencies supporting the social health of an individual are considered as follows:

Effective communication competency, cooperation competency, prevention and conflict resolution competency, and empathetic and pro-social behaviour competency. The above-mentioned competencies will be shortly characterized:

Effective communication competency:

Effective communication can be considered as an important personality and social condition of an individual relating to the social health. Social communication is defined by J. Mareš and J. Křivohlavý from the point of view of the narrow and wide approach. *„From the narrow point of view, the social communication is comprehended as a bare communication, i.e. the information exchange. From the wide point of view, during a common activity people exchange each other’s ideas, moods, feelings, attitudes, etc. All of this could be understood as information.”*³

Co-operation competency:

Co-operation is an important condition for successful problem solving process during the interaction with the others. H. Kasíková⁴ states that the co-operative ordering of group interaction is based on the principle of co-operation in achieving common goals. Individual results are supported by the whole-class activity, and the whole class benefits from the activity of one individual. The fundamental notions of the co-operative ordering are sharing, co-operation, and support.

Prevention and problem solving competency:

The content of human social competency comprises mostly of preventing and solving interpersonal conflicts. The interpersonal conflict (external, interpersonal) is an encounter between two (or more) individuals or groups with different interests, needs, beliefs, motives, etc.

Empathetic and pro-social behaviour competency

The competitive behaviour in the area of helping, and showing empathy belongs to the major assumptions of human social behaviour. B. Buda considers empathy as *“the*

² <http://www.answers.com/topic/social-health>. N.p., 20 Sept. Web. 20 Sept. 2010.

³ MAREŠ, J., KŘIVOHlavý, J. *Komunikace ve škole*. 1. vyd. Brno : MU 1995, s. 15.

⁴ KASÍKOVÁ, H. *Kooperativní učení, kooperativní škola*. 1. vyd. Praha : Portál 1997, s. 32.

ability that enables to the subject to empathize with other subject in immediate situation.”⁵ I. Slaměnik defines the prosocial behaviour as “*behaviour that is characterized by deeds and actions done in favour of another without expectation of reward (material or financial) or social approval. These acts of behaviour have neither the nature of providing selfless assistance when there is no expected benefit nor reciprocation of assistance in the future.*”⁶

Social Health Requirements Analysis from the View of Curricular Document for Elementary Education

Basic Characterization of Curricular Document for Elementary Education

The Framework Education Programme for Elementary Education (FEP EE) developed by Research Institute of Education in Prague – VÚP ranks among the current education programs intended for elementary education. According to this program, the educational and training activities at elementary schools were institutes in 2007. General objectives for elementary education within this document are defined by Key Competencies. At the elementary stage of education, the following are considered as key competencies: communication competency, social and personal competency, civic competency, and professional competency. The key competencies are reflected in all educational areas in terms of expected outcomes. FEP EE consists of the following educational areas: Language and Language Communication (Czech Language and Literature, Foreign Language), Mathematics and Its Application (Mathematics and Its Application), Information and Communication Technologies (Information and Communication Technologies), Man and His World (Man and His World), Man and Society (History, Civics), Man and Nature (Physics, Chemistry, Natural Sciences, Geography), Arts and Culture (Music, Fine Arts), Man and Health (Health Education, Physical Education), Man and the World of Work (Man and the World of Work), Additional Educational Fields (Other Foreign Language, Drama, Dance and Movement Education, Ethics Education, Film / Auditory training). FEP EE comprises the following cross-curricular subjects: Moral, Character and Social Education; Civic Education for Democracy; Education towards Thinking in European and Global Contexts; Multicultural Education; Environmental Education; Media Education.

Social Health Requirements Analysis from the View of the Expected Outcomes in the Framework Education Programme for Elementary Education

Educational areas analysis:

Note: The analysis lists the expected outcomes related to the development of pupils’ competencies that contribute to higher levels of social health.

- Language and Language Communication (Czech Language and Literature, Foreign Language): At the lower elementary school pupils acquire the following social presumptions – competencies (expected outcomes): “*he/she respects the*

⁵ BUDA, B. In ŠVEC, V. *Klíčové dovednosti ve vyučování a výcviku*. 1. vyd. Brno : MU 1998, s. 78 – 79.

⁶ VÝROST, J., SLAMĚNÍK, I. *Sociální psychologie*. 1. vyd. Praha : ISV 1997, s. 339-362.

basic communication rules of conversation..., breathes properly and select an appropriate pace of speech in short oral expression..., selects suitable verbal as well as non-verbal means of expression in everyday situations both at school and outside of school..., correctly conducts a dialogue..., recognises manipulative communication in an advertisement or commercial;” an the upper elementary school pupils acquire the following social presumptions – competencies (expected outcomes): *”he/she participates in a discussion, run a discussion, and applies the principles of communication and rules of a dialogue.”*⁷

- **Man and His World (Man and His World):** A lower elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she expresses tolerance for his/her classmates’ natural differences, their strengths and weaknesses..., expresses, based on his/her experience, principal relationships between people, deduce and observes the rules of coexistence at school, among boys and girls, in the family, municipality (town)..., identifies the basic differences between individuals, defends his/her opinions during specific activities, or admits a mistake that he/she has made, agrees with classmates on a joint procedure and solution..., identifies conduct and behaviour in his/her surroundings that are beyond the limits of what is tolerable and that violate fundamental human rights or democratic principle..., behaves considerately towards the opposite sex.”*
- **Man and Society (History, Civics):** An upper elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she applies adequate forms of behaviour and communication in various real-life situations, resolves possible disputes or conflicts with others without violence..., explains how his/her more realistic knowledge and evaluation of his/her own personality and potential can positively influence decision making, relations with others and quality of life.”*
- **Man and Health (Health Education, Physical Education):** A lower elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she cooperates in simple team movement activities and competition..., acts in the spirit of fair play: observe the rules of games and competitions, recognise and indicate obvious violations of the rules and react accordingly; respect the opposite sex during movement activities;”* an upper elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she respects the accepted rules for coexistence among peers and partners; contributes, through positive communication and cooperation, to the formation of good interpersonal relations..., behaves towards the opposite sex in a cultivated manner..., applies the mastered social skills and models of behaviour when faced with sociopathic phenomena at school and outside of it; evaluates on the basis of his/her knowledge and experience the potential manipulative influence of his/her peers, the media, sects; applies the mastered defensive communication skills against manipulation and aggression..., refuses drugs and other noxious substances as incompatible with sports ethics and health; fulfils basic Olympic ideals in the school environment – fair competition, assistance*

to the handicapped, respecting the opposite sex..., agrees on cooperation and simple tactics leading towards his/her team's success and observe..., organises simple tournaments, contests."

- **Man and the World of Work (Man and the World of Work):** A lower elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *"he/she observes the rules of proper table manners and etiquette,"* an upper elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *"he/she observes the basic principles of etiquette..., shows in model situations the ability to present himself/herself when entering the labour market."*

A quantitative summary of the occurrence frequency of expected outcomes related to the social health:

Educational areas	Areas of social competency comprising social health				Total expected outcomes
	Communication	Cooperation	Preventing and solving conflicts	Empathetic and prosocial behaviour	
Language and Language Communication	6	0	0	0	6
Man and His World	1	0	3	4	8
Man and Society	1	0	2	0	3
Man and Health	2	3	2	8	15
Man and the World of Work	3	0	0	0	3
Total expected outcomes	13	3	7	12	35

Analysis of Additional Educational Fields:

Note: The analysis lists the expected outcomes related to the development of pupils' competencies that contribute to higher levels of social health.

- In terms of Drama Education, a lower elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *"he/she expresses basic emotions using voice and movement, and recognise them in the conduct of others..., explores themes and conflicts on the basis of his/her own actions..., identifies themes and conflicts in situations and stories; considers them from the viewpoints of different characters..., works in a group to create a short staged performance; presents his/her staged performance in front of his/her classmates; watches his/her classmates' presentations,"* an upper elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *"he/she makes use of cultivated verbal and body language expressions, observes the basics of vocal clarity and proper body posture..., combines physical skills during both verbal and non-verbal expression; shows specific examples of connection between experiencing and acting in his/her case and in the case of others..., explores themes from various aspects and identifies the main theme and conflict..., accepts responsibility for joint work and the final presentation of its outcome."*

- In terms of Ethics Education, a lower elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she addresses others by their first names, uses appropriate forms of greeting, listens to the others, communication follows the simple rules in the classroom, takes acknowledgment, apology, appropriate gestures; participates in creating the class community through acceptance of clear and achievable rules; learns the basics of positive evaluation and acceptance of others; deals with prosocial behaviour; helps others in common situations, shares with the others, expresses sympathy, interest in his/her classmates; express his/her feelings in simple situations, reflects the situation of the others and helps adequately;”* an upper elementary school pupil acquires the following social presumptions – competencies (expected outcomes): *”he/she reflects the importance of nonverbal elements of communication, removes rude expressions from verbal communication, manages to ask the appropriate question; is able to enjoy the happiness and success of others, expresses the participation in the joys and sorrows of others, evaluates others positively in normal conditions; identifies the basic emotions, leads a conversation with others about their experiences, on the basis of his/her empathy offers specific assistance; realizes creativity in interpersonal relationships through simple acts, especially in family and classroom groups; initiates peer relationships, can differentiate their offers for activity, and responds assertively to inappropriate ones. “*

A quantitative summary of the occurrence frequency of expected outcomes related to the social health:

<i>Educational areas</i>	<i>Areas of social competency comprising social health</i>				Total expected outcomes
	Communication	Cooperation	Preventing and solving conflicts	Empathetic and prosocial behaviour	
Drama Education	5	2	3	1	11
Ethics Education	9	0	3	10	22
Total expected outcomes	14	2	6	11	33

An analysis of the cross-curricular subject Moral, Character and Social Education:

The cross-curricular subjects Moral, Character and Social Education has not been elaborated into expected outcomes. The mentioned subject is characterized by words that *“the pupil him/herself, the particular group of pupils as well as more or less common situations of everyday life becomes the subject of instruction.”*⁸ From this characteristic point of view it is evident that Moral, Character and Social Education is not considered an independent subject but it is discussed as a part of most educational areas FEP EE.

⁸ *Rámcový vzdělávací program pro základní vzdělávání*. 1. vyd. Praha : VÚP 2005, s. 91.

Conclusion

Focused development of pupils' social competencies is an important condition for supporting social health of pupils in elemental schools. The following are considered key competencies: communication competency, cooperative competency, prevention and problem solving competency, and empathetic and pro-social behaviour competency. From the list of expected outcomes of particular educational areas related to the development of social assumptions, it is clear that all content areas of social health are covered in FEP EE. Among subjects in which the complex development of pupils' social assumptions are mostly covered in the expected outcomes, the following are mainly considered: Health Education, Drama Education, and Ethics Education. Nevertheless it is important to note that those subjects are primarily focused on development of pupil's language assumptions that have some space intended for purposeful development of pupil's social competencies.

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POŽADAVKY NA SOCIÁLNÍ ZDRAVÍ ŽÁKŮ Z POHLEDU SOUČASNÉHO KURIKULÁRNÍHO DOKUMENTU PRO ZÁKLADNÍ VZDĚLÁVÁNÍ

Abstrakt: Příspěvek je zaměřený na analýzu kurikulárního dokumentu z pohledu sociálního zdraví. Má charakter obsahové analýzy textového dokumentu, který je základem kurikulární reformy na primárním a nižším stupni sekundárního vzdělávání v ČR. Analyzovaným textovým dokumentem je Rámcový vzdělávací program pro základní vzdělávání. Příspěvek se nejprve soustřeďuje na definování sociálního zdraví a jeho kategorizaci. Obsah sociálního zdraví v kontextu školního vzdělávacího systému vychází z holistického pojetí zdraví jedince, je zaměřen na rozvoj osobnosti v oblasti mezilidských vztahů, sebepoznání, sebehodnocení a sebpřijetí. Sociální zdraví žáků je současnou prioritou, která je vyzdvížena v dokumentu Mezinárodní organizace zdraví WHO-Zdraví 21. Sociální zdraví pomáhá eliminovat sociálně patologické jevy, které se v současné době vyskytují u dětí a mládeže ve školním prostředí.

Klíčová slova: sociální zdraví, rámcový vzdělávací program pro základní vzdělávání, osobnostní a sociální rozvoj

A SPECIFICATION OF PUPILS' HEALTH SUPPORT THROUGH A CLASS TEACHER'S ACTIVITIES AT THE ELEMENTARY AND SECONDARY SCHOOLS

Stanislav STŘELEČEK, Jana KRÁTKÁ

Abstract: *A class teacher is an agent who can use a range of possibilities to support a healthy mental, physical and social development in individual pupils and a classroom as a whole. A class teacher's activities at each level of school education not only have their general reasons, but also specific features reflecting the educational and psychological characteristics of a pupil at a specific age and the level of their mental, physical and social maturity. In this sense the paper aims to define a framework of activities to support good health of elementary and secondary school pupils, it compares views of class teachers with regard to promoting their healthy development and specifies some other conditions for a class teacher's work at the aforementioned levels of school education. The study further explores the authors' earlier findings published from 2006–2010.*

Key words: *research findings, elementary school, secondary school, class teacher, health support, health risk, educational activities, respondents' views*

Basic considerations underlying the class teacher's work

Class teachers play a pivotal role in educational processes at school. The class teacher is a coordinating and integrating agent with many important tasks in relation to pupils in their class, their pupils' parents, other teachers in school, school management and in certain circumstances also to the larger public. The class teacher is expected to have the ability to judge the pupil's general educational level with regard to his / her capabilities and to gradually form an idea of their important personality traits and the potential of their future positive development. In his interaction with pupils the class teacher considers both development of individuals and a class as a whole. A class teacher's activities at each level of school education not only have their general reasons, but also specific features reflecting the educational and psychological characteristics of a pupil at a specific age and the level of their mental, physical and social maturity. Quite unique with regard to the school education level is the role of a class teacher in primary

schools. This position naturally combines and integrates activities relating to upbringing, education and usually also to culture and socialization. In a sense, this interaction can be understood as the basic model where specific educational conditions allow the class teacher to optimally promote and support the pupil's healthy development (see Střelec; Krátká, 2006).

How is the forming and development of pupils' health supported in documents crucial for the present development of Czech elementary and secondary schools?

The framework education programme for elementary education (hereinafter FEP EE) declares among the main elementary education objectives **the requirement to guide pupils towards an active development and protection of their physical, mental and social health**. The content, process and method related aspects of health education are mainly given attention in the FEP EE section entitled "Humans and Health". This education area brings some basic initiatives to promote good health (knowledge, activities, manners of behaviour) that pupils become familiar with, learn how to make use of them in their lives. The education in this area leads pupils to learning about themselves as live beings in the first place, to appreciating the value of health, the purpose of health prevention and the extent and depth of problems related to disease or other kinds of damage to health. Pupils become familiar with a range of dangers threatening health in common as well as unusual situations, acquire skills and behaviours (decision-making) that protect or improve health and develop the needed level of responsibility for their own and other people's health. Therefore, this for the large part involves exploration of fundamental life values, gradual forming of attitudes to them and active acting in accordance with them. The fulfilment of these aims needs to be based in elementary education on effective motivation and activities and situations encouraging the interest of pupils in problems relating to health.

Within the realization of the aforementioned tasks it is the practical skills and their usage in both model situations and everyday school life that need to be emphasized. Because of that it is very important that the whole school life is in harmony with what pupils learn about health and what they need to stay healthy. At the beginning, the education has to be strongly supported by the teacher's personal example, his versatile assistance and generally favourable atmosphere at school. Later, an emphasis is added on a greater amount of independence and responsibility in acting, decision-making and activities relating to health (FEP EE, 2005, p.72).

In terms of their conception, content and conclusions, the framework education programmes for secondary schools refer to the same-name sphere in elementary education ("Humans and Health" with the subjects "Health Education" and "Physical Training"). While elementary education was aimed at developing of a more individually perceived relation to health and learning about preventive protection of one's own health and safety, the secondary school education focuses more consistently on acquiring the ability to actively support and protect health within a broader community. As a result, a secondary school graduate should be prepared to follow, evaluate and within given possibilities resolve health and safety related situations that may relate to their future family, workplace or neighbourhood. An important role here is played by a greater ability of pupils to acquire information, analyze its content, verify (apply) the learned in practical activities, discuss problems arisen, their living, health effects on specific ac-

tivities. The realization of this education area, as compared with elementary education, draws much more on the independence of pupils, their active approach to problems in question, personal experience and views, but also on the conscious building of relationships with other people and the surrounding environment, greater responsibility for safety and health, organizational skills and suchlike.

The subject of “Health Education” should primarily have a practical and applicable content at the secondary school. In relation to education in natural and social sciences and using specific information about health it concentrates mainly on more in-depth learning about risk involving and risk-free behaviour (in partner relationships, parent roles, in contact with addictive and other harmful substances, under threat to safety) and on acquiring of practical steps suited for a versatile active support of personal as well as communal health.

The subject of “Physical Training” should aim for building a permanent relation of pupils to physical exercise and for optimum development of their physical, mental and social fitness. It is mainly based on a motivating atmosphere, pupils’ interest and their individual capabilities (possibilities). The educational process uses specific emotional experiences, social situations and bio-energetic loads in an individually created offer of physical activities (from wellness to competitive). From the life-long perspective, physical training focuses on giving pupils a better orientation as to the effects of exercise on health. It leads them to acquiring and regular practising of specific physical activities (fitness and compensatory programmes) suiting their physical exercise interests and health needs. The aspect of safety and accident prevention during exercise is always carefully considered. Great attention is given to the development of motor abilities as well as the correction of locomotory disadvantages (see the Framework education programme for grammar schools (FEP GS), 2007, pp. 56-62).

The aims and content of the elementary and secondary FEP education are further specified through profile topics and pupils’ key competences. Pupils’ health is particularly reflected in their social, personal and civic competences. The view of health problems should not be limited to just one subject, health support must permeate the whole education and a school regimen.

Apart from FEP EE and FEP GS programmes we also find other sources inspirational. While dealing with our partial topic we considered some relations between the class teacher’s activities and the tasks following from the ‘Healthy school - school supporting health’ project (hereinafter “Healthy school”). The basic conceptual and content related premises of “Healthy school” are called ‘three pillars’ (environmental well-being, healthy learning, open partnership) and further specified through nine principles (further below see Havlínová et al., 1998). Four of the aforementioned principles are very closely related to the social health aspects in the pupil education within the “Healthy school” project. The principle of social environment well-being consists in humanistic attitudes to one another, creating a positive climate in school, tolerance, patience and readiness to help. The well-being of organizational environment assumes that school activities are arranged in keeping with requirements of the daily regimen, i.e. alternation between work and rest, healthy diet and active physical exercise taken by children and their teacher. The principle of participation and cooperation anticipates the use of methods and forms of teaching that may bring democratic principles into play, as

well as effective cooperation and involvement of children, development of contacts with other social and professional partners - parents, representatives of public authorities and other institutions involved in education. The principle called School represents a model of democratic community anticipating the hierarchically arranged relationships to be transformed into the partnership ones that enable experiencing of democratic life within the school first, and later also outside of it.

We have given attention to several principles of the “Healthy School” project because a major part of the tasks relating to their implementation also has a close bearing on the class teacher work, which is not limited to just those involved in the project over long term. The comparison of the “Healthy School” premises with the FEP EE conception leads to the conclusion that both documents follow the same objectives, while each presents a specific education strategy. The “Healthy School” project defines health in its physical, psychological and social dimensions as the main and dominant goal. This is reflected in the mentoring and educational aspects of the whole project, while the mentoring considerations (accentuating personality and social development) have priority here. When comparing the “Healthy School” and the FEP EE programme, the latter presents a higher level of comprehensiveness (a good balance between the educational and the mentoring dimensions). FEP EE is an education programme implemented nationwide with a legislative and institutional support provided. The “Healthy School” project, seen at the time of its origin rather as one of the alternative educational possibilities, has in many ways been an inspiration to the authors of FEP EE and other framework educational programmes. Both these documents (“Healthy School” and FEP EE) reflect the global strategy of the World Health Organization which in its document ‘Health 21’ declared a long-term programme for a better health of people (hereinafter see Holčík, 2004).

What is the basic framework of the class teacher’s tasks regarding support of pupils’ health?

The Ministry of Education ((MEYS, CR) documents specify the basic educational activities that form the content of work of class teachers. According to these materials the class teacher

- motivates creation of the class internal rules that conform to the school rules and takes care that they are followed (creation of open secure atmosphere and positive social climate in class); supports development of positive social interactions between classmates,
- mediates communication with the other staff members and is a guarantor of a school’s cooperation with parents of pupils in his class,
- he becomes acquainted with special personality traits of his pupils, their development and family background,
- cooperates with an education – career counsellor within provision of counselling on a suitable choice of further education and profession by his pupils,
- cooperates with a school prevention methodologist on identification of warning

signals, participates in implementation of a minimum preventive programme, diagnoses relationships in class,

- cooperates with a school psychologist / specialized teacher / within activities focused on school underachievement prevention (remedy, guidance etc.), creating conditions for integration of pupils with special educational needs in class and based on headteacher instructions also in other areas of educational and counselling work with his class. (*Ministry of Education Bulletin, 7/2005*)

Further duties of the class teacher are included in *MEYS methodical instruction ref. 10 007/98-26 providing for occupational safety and health protection in the regional school system*, that assign the class teacher to a duty to familiarize pupils with standard rules of safe behaviour, school rules, behaviour on public roads, fire protection rules, warn them against harmful effects of alcohol, smoking, making acquaintances with strangers etc. In this context, some competences of the class teacher are also set out by *MEYS methodical instruction ref. 28 275/2000-22 to prevent and deal with victimization among pupils of schools and school facilities* and *MEYS methodical instruction ref. 10 194/2002-14 on the unified procedure when releasing and excusing pupils from classes, prevention of and punishment for truancy*.

A complete summary of the MEYS documents concerned with mentoring/educational activities of class teachers is included in our study *Conditions for the class teachers' work with regard to affecting healthy development of their pupils* (see Střelec- Krátká, 2010).

The class teacher's duties and authorities are further set out and specified in greater detail by internal documents in individual schools, which reflect special conditions, the style of educational work and ideas of school management. Considering all that, the role of a class teacher is indubitably one of the most demanding in the teaching vocation.

Some views of class teachers on the ways to positively influence their pupils' health

Given the limited space of the paper, we further only present a selection of the research results to illustrate with data the method application and its basic findings. At the same time we expect that those interested in more complete and detailed findings can use the studies referred to in the text and further publications that we are preparing in this field.

The pupils and students in Czech elementary and secondary schools are faced with a range of health risks, as already indicated by the aforementioned tasks and activities conducted by class teachers. **Our research study has set out to find out what level of importance respondents (class teachers and their pupils) attribute to the basic educational activities with regard to their influence on the pupils' physical, mental and social health.** Within the authors' (non-standardized) questionnaire the class teachers were asked a question: How can class teachers contribute to the physical, mental and social health of their pupils? The following variants of answers were offered:

- a) by individual solving of learning problems of pupils,
- b) by showing interest in their other problems, active involvement in their solution,

- c) by well-chosen communication,
- d) by recommending and creating opportunities for extracurricular activities of pupils,
- e) interest in social background of the pupil, communication with parents,
- f) by an example of the teacher's own lifestyle,
- g) creating a good social climate in class,
- h) keeping safety rules, discussing the danger of accidents.

Along with that a question was put to their pupils within another author's (non-standardized) questionnaire - What do you appreciate the most about your class teacher?

The following answer variants were offered for the question:

- a) suitable, friendly and straightforward behaviour,
- b) individual solution of your learning problems,
- c) showing interest in your other problems, active involvement in their solution,
- d) dedication with regard to extracurricular activities (e.g. educational trips, interest groups),
- e) interest in your family background, talking to parents,
- f) class teacher's way of life,
- g) takes care to create a good atmosphere in your class.

A system of scaling with a five-point numerical scale was used for each answer, from the value 1 (least important) to the value 5 (most important).

Research cohort, data processing and analysis

The first cohort comprised altogether 240 (100 %) respondents, teachers of elementary and secondary schools. Of that 65 (27 %) were class teachers, who worked in this position at the 1st. level of elementary schools (ES) and 65 (27 %) class teachers at the 2nd ES level. Respondents from secondary schools were represented by 74 (46 %) class teachers at the grammar schools, vocational schools and industrial schools. Regarding the cohort's age groups, 4 % of class teachers were under the age of 25, 23 % at the age range 26 - 35, 60 % were aged 36 – 55 and 14 % were 56 and older. The study involved 56 (23 %) male class teachers and 184 (77 %) female class teachers.

The second cohort comprised altogether 248 (100 %) respondents, (elementary and secondary school students). The study involved 169 female pupils/students (69 %) and 79 male pupils/students (31 %). 141 (57 %) respondents attended elementary school and 107 (43 %) were secondary/industrial school students.

Results are presented mainly in relation to one specific independent variable, i.e. the type of school where the respondent is a class teacher. The collected data then can be interpreted in correlation with school type (ES: 1st. + 2nd. levels; SS (secondary schools): G+SŠ+SOU, where G = grammar school, SOU = industrial school), where the respondent was a class teacher. The above correlation has been followed as we expected some differences in views on the importance of a class teacher's activities at the elementary and secondary schools. The questions and answers in the questionnai-

re-based exploration have been adapted both in form and content to make them fully understandable for respondents and at the same time for the collected data to be possibly comparable.

Potential methodological difficulties included the rather small number of respondents, especially their non-representative selection, and further the structure of the scales used, whose comparison, though they were ordinal, was made using mean values. For purposes of analysis we treated these variables as quasi cardinal values, as this considerably simplifies the presentation of results and substantively does not involve a significant distortion. In our case, where we chose to select respondents based on availability, the reason for verification of statistical relevance is the comparison of a variance between cohorts and variability within cohorts according to independent variable categories, not the establishment of reliability in relation to general application to the target population. In order to enable processing it was necessary to operationalize the factual hypotheses as statistical hypotheses. Still we did not even verify the statistical hypothesis directly, we did so against a zero hypothesis instead, i.e. a supposition which employing statistical terms asserts that there is no relationships between the variables explored. Based on an appropriate test of relevance we have further decided that a specific research result is statistically significant, i.e. it is highly unlikely it could merely result from a coincidence. A frequent reason for verification of a result's statistical relevance is that it may enable a general application of findings to the complete basic cohort. In our case, where we chose to select respondents based on availability, the reason for verification of statistical relevance was to identify the variance between cohorts and variability within cohorts (for more details refer to Krátká, 2007; Krátká; Střelec, 2009).

Results and discussion

Respondents answered the question concerning the relevance class teachers put down to individual educational processes through which they can enhance physical, mental and social health of their pupils, by using five-level scales from the lowest (1 – the least important) to the highest (5 – the most important) to assess (based on their experience as class teachers) the individual means and methods of educational influencing of pupils.

Individual solving of learning problems of pupils,

Less than 1 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health through individual dealing with their learning problems, 7 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 20 % only see a medium potential in this educational means (they checked the mean level 3); 37 % assume they can enhance their pupils' health to a large enough degree in this way (level 4) and 34 % of the respondents view class teachers' participation in individual dealing with pupils' problems as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 3.97.

Showing interest in their pupils' other problems, active involvement in their solution

Less than 2 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health by their interest in their other (non-learning) problems, 6 % assume their possibilities of enhancing pupils' health in this way are rather small, 26 % only see a medium potential in this educational means (they checked the mean level 3); 38 % assume they can enhance their pupils' health in this way to a large enough degree (level 4) and 27 % of the respondents view class teachers' interest in the other problems of pupils and their own involvement in their solving as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 3.81.

Suitable communication

Less than 1 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health through suitable communication, 2 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 10 % only see a medium potential in this educational means (they checked the mean level 3); 34 % assume they can enhance their pupils' health to a large enough degree by this (level 4) and 53 % of the respondents view class teachers' ability to aptly communicate with pupils as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 4.37.

Recommending and creating opportunities for extracurricular activities of pupils

Less than 3 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health by their recommending and creating opportunities for pupils' extracurricular activities, 16 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 39 % only see a medium potential in this educational means (they checked the mean level 3); 25 % assume they can enhance their pupils' health to a large enough degree by this (level 4) and 17 % of the respondents view recommending and creating opportunities for pupils' extracurricular activities as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 3.36.

Interest in social background of the pupil, communication with parents

1 % of the overall number of respondents assume they only can very slightly enhance pupils' good healths by showing interest in pupils' social background and by communication with parents. 7 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 24 % only see a medium potential in this educational means (they checked the mean level 3); 39 % assume they can enhance their pupils' health to a large enough degree by this (level 4) and 29 % respondents view their interest in pupils' social background and communication with parents as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 3.88.

By Example of the teacher's own lifestyle

1 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health by providing their own lifestyles as examples, 9 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 26 % only see a medium potential in this educational means (they checked the mean level 3); 29 % assume they can enhance their pupils' health to a large enough degree by this (level 4) and 35 % of the respondents view the providing of their own lifestyles as examples as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 3.86.

Creating a good social climate in class,

Less than 1 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health through creating a good social climate in class, 2 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 8 % only see a medium potential in this educational means (they checked the mean level 3); 27 % assume they can enhance their pupils' health to a large enough degree by doing that (level 4) and 63 % of the respondents attribute a great importance (level 5) to creating a good social climate in class with regard to influencing pupils' healthy development. The mean value on the scale equals 4.5.

Keeping safety rules, discussing the danger of accidents.

1 % of the overall number of respondents assume that they only can very slightly enhance pupils' good health by keeping the safety rules and discussing the danger of accidents, 7 % of the respondents assume their possibilities of enhancing pupils' health in this way are rather small, 22 % only see a medium potential in this educational means (they checked the mean level 3); 21 % assume they can enhance their pupils' health to a large enough degree by this (level 4) and 49 % of the respondents view the keeping of safety rules and discussing the danger of accidents as a very important (level 5) means of influencing pupils' healthy development. The mean value on the scale equals 4.1.

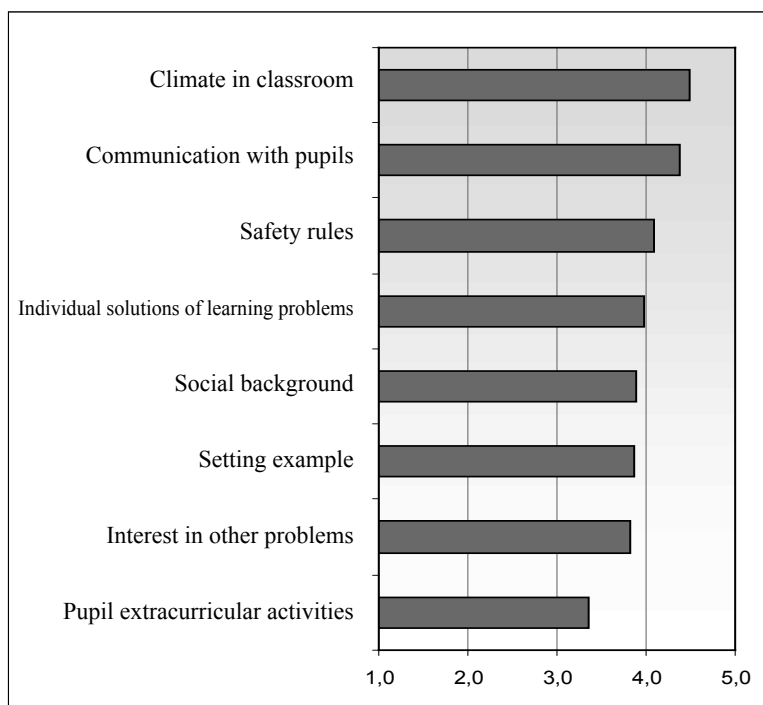


Diagram no.1 - By means of the mean values on the scale the spheres are compared in which, as respondents believe, class teachers can enhance their pupils' health:

It follows from the results of the first study the respondents (class teachers) value the creating of a good social climate in class as the most powerful means within their activities as class teachers and their share in enhancing pupils' health (mean value 4.5 on the five-point scale). The second most important means is a suitable communication with pupils (4.37), followed by keeping the safety rules, discussing the danger of accidents (4,1), individual solving of pupils' learning problems (3.97), interest in pupils' social background and communication with parents (3,88), providing the teacher's lifestyle as an example (3.86), showing interest in pupils' other problems, active involvement in their solution (3.81), and finally recommending and creating opportunities for extracurricular activities of pupils (3.36) closes the list. The above results essentially correspond with our expectations and testify to some extent to the predominant methods of the frontal educational influencing of a school class as a whole and, on the other hand, the less frequently used individual educational contacts with individual pupils. This tendency goes back, in our opinion, to the traditions of Czech schooling and is also encouraged by the present conditions for class teachers' work at the elementary and secondary schools.

Relationship between the type of school and the views of respondents (class teachers) on how they can enhance their pupils' health

H1 Class teachers from the different types of school attach different degrees of importance to the spheres in which they can contribute to their pupils' health.

There have been zero and alternative hypotheses formulated of the relationship between the class teachers' views on the ways to enhance pupils' health and the types of school where they work as class teachers:

H_0 = no relationship between the frequency of class teachers' answers to particular questions and the type of school where they work as class teachers.

H_0 = there is a relationship between the frequency of class teachers' answers to given questions and the type of school where they work as class teachers.

A partial rejection of the zero hypothesis of non-existence of differences between the answers to a particular question and the type of school where a class teacher works, is due to the following results of the non-parametric analysis of variance, comparing multiple mean values (Kruskal-Wallis) which have shown that statistically significant differences exist between the answers of respondents from individual types of schools, namely between the recommending and creating opportunities for pupils' extracurricular activities, the keeping of safety rules and discussing the danger of accidents, creating a good social climate in class and a suitable communication.

Table no.1 There is a statistically significant relationship between the type of school and the views of class teachers on the spheres (marked in bold) where they can enhance their pupils' health:

Test of significance of differences based on type of school		
	KRUSKAL - WALLIS TEST	
extracurricular	sig. H0	0.003
interest in problems	sig. H0	0.232
provide one's own example	sig. H0	0.585
social background	sig. H0	0.125
individual	sig. H0	0.072
safety rules	sig. H0	0.001
communication	sig. H0	0.019
climate in class	sig. H0	0.002

(A significance value lower than 0.05 causes the zero hypothesis of the same mean values to be ruled out.)

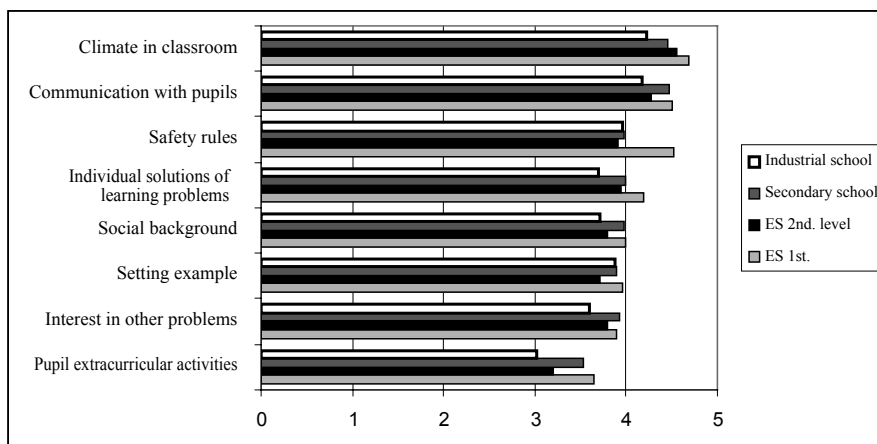


Diagram no.2 - Relationship between the type of school and the views of respondents (class teachers) on how they can enhance their pupils' health is compared by means of the mean values on the scale

(see Střelec- Krátká, 2006).

Respondents' answers in relation to the type of school where they teach show statistically significant differences. The results of the non-parametric analysis of variance (Kruskal-Wallis Test) shows among other things that a positive social climate in the classroom (in relation to healthy development of children) is valued the highest by the class teachers at the primary level of elementary schools and then its assessed value gradually decreases at elementary schools, secondary schools and finally industrial schools with the lowest value attached. Also this correlation indirectly reflects pupils' ages (levels of their physical, mental and social maturity). This is shown e.g. in relation to pupils' assessment of a class teacher's activities associated with recommending and creating opportunities for extracurricular activities of pupils, when assessing a class teacher's interest in a pupil's social background and his/her communication with pupils' parents.

The class teacher's activities as seen by pupils

How pupils evaluate a suitable, friendly and straightforward behaviour of their class teacher

The pupils' answers show that 14 % of them assess a suitable, friendly and straightforward behaviour of their class teacher with the lowest value (1); the same number of pupils (14 %) assigned the second lowest value (2) to the aforementioned activities. 29 % of pupils use a medium value to assess a suitable, friendly and straightforward behaviour of their class teacher; 18 % selected a value of 4 and 26 % used the highest value of 5 to assess such behaviour. The mean value on the scale equals 3.28.

How pupils evaluate their class teacher's endeavour to individually solve their learning problems

The pupils' answers show that 13 % of them assess their class teacher's endeavour to individually solve their learning problems with the lowest value (1); 18 % assigned the second lowest value (2) to the aforementioned activities. 30 % of pupils use a medium value to assess their class teacher's endeavour to individually solve their learning problems; 24 % selected a value of 4 and 15 % used the highest value of 5 to assess such behaviour. The mean value on the scale equals 3.10.

How pupils evaluate their class teacher's interest in their other problems, active involvement in their solution

The pupils' answers show that 23 % of them assess their class teacher's interest in their other problems, active involvement in their solution with the lowest value (1); 21 % assigned the second lowest value (2) to the aforementioned activities. 29 % of pupils use a medium value to assess their class teacher's interest in their other problems, active involvement in their solution; 17 % selected a value of 4 and 10 % used the highest value of 5 to assess such behaviour. The mean value on the scale equals 2.69.

How pupils evaluate their class teacher's dedication with regard to extracurricular activities (e.g. trips, interest groups)

The pupils' answers show that 23 % of them assess their class teacher's dedication to extracurricular activities with the lowest value (1); 18 % assigned the second lowest value (2) to the aforementioned activities. 22% of pupils use a medium value to assess their class teacher's dedication to extracurricular activities; 16 % selected a value of 4 and 22 % used the highest value of 5 to assess such behaviour. The mean value on the scale equals 2.96.

How pupils evaluate their class teacher's interest in their family background, talking to parents

The pupils' answers show that 32 % of them assess their class teacher's interest in their family background, talking to parents with the lowest value (1); 28 % assigned the second lowest value (2) to the aforementioned activities. 19 % of pupils use a medium value to assess their class teacher's interest in their family background, talking to parents; 14 % selected a value of 4 and 8 % used the highest value of 5 to assess such behaviour. The mean value on the scale equals 2.38.

How pupils evaluate their class teacher's way of life (class teacher as an example)

The pupils' answers show that 25 % of them assess their class teacher as setting an example with the lowest value (1); 13 % assigned the second lowest value (2) to the aforementioned qualities. 15 % of pupils use a medium value to assess their class teacher's way of life; 15 % selected a value of 4 and 22 % used the highest value of 5 to assess this quality in their teacher. The mean value on the scale equals 2.96.

How pupils evaluate their class teacher's endeavour to create a good climate in the classroom

The pupils' answers show that 10 % of them assess their class teacher's endeavour to create a good climate with the lowest value (1); 12 % assigned the second lowest value (2) to the aforementioned endeavour. 25% of pupils use a medium value to assess their class teacher's endeavour to create a good climate in the classroom; 16 % selected a value of 4 and 37 % used the highest value of 5 to assess this quality in their teacher. The mean value on the scale equals 3.59.

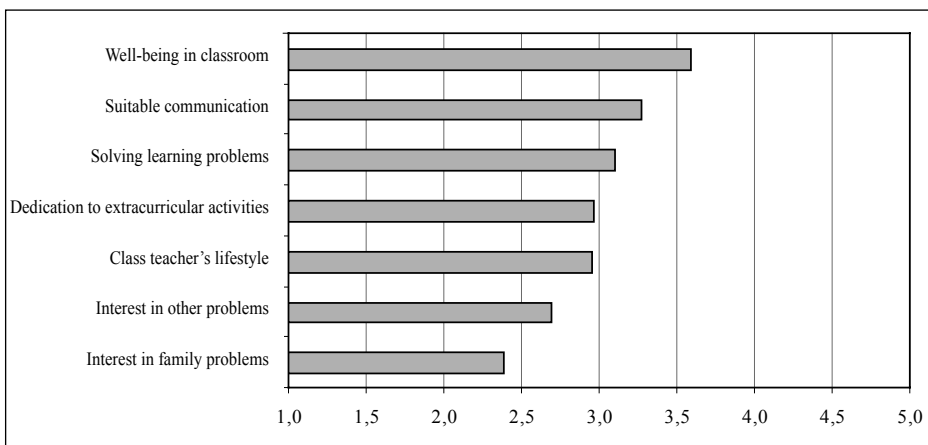


Diagram no. 3 Using the mean values on the scale it is illustrated how pupils evaluate their class teacher's qualities (activities) involved in enhancing their health:

It follows from the results of the second study the respondents (elementary and secondary school students) considering the qualities, abilities and skills of their class teachers value the most their endeavour to create a good climate in the classroom (mean value of 3.59 on the five-point scale). The other examined aspects were assessed as follows: suitable, friendly and straightforward behaviour (3.28), Individual solving of learning problems (3.10), class teacher's dedication to extracurricular activities and his/her lifestyle (both 2.96), interest in pupils' other problems (2.69) and interest in their family background including communication with parents (2.38).

Relationship between characteristics and activities that pupils appreciate about their class teacher and the type of school they attend

H1 Students from different types of schools appreciate different characteristics and activities about their class teachers.

There have been zero and alternative hypotheses formulated as regards differences in evaluating the class teacher's characteristics and activities in relation to type of school:
 $H_0 =$ no relationship between the frequency of students' answers to particular questions

and the type of school they attend

H_0 = there is a relationship between the frequency of students' answers to particular questions and the type of school they attend

A zero hypothesis, i.e. non-existence of differences between the answers to a specific question in relation to the type of school the pupil attends, was ruled out based on the following results of a non-parametric test comparing two mean values (Mann-Whitney Test U) which have shown that statistically significant differences exist between the answers by respondents from different types of schools to all the characteristics of a class teacher having to do with influencing pupils' health.

Table no.2 - There is a statistically significant relationship between the type of school and the spheres assessed (highlighted in bold), that pupils value in connection with their class teacher:

Test of significance of differences based on type of school		
	MANN-WHITNEY TEST U	
you evaluate: suitable behaviour	sig. H_0	0.001
you evaluate: solving of learning problems	sig. H_0	0.034
you evaluate: interest in other problems	sig. H_0	0.012
you evaluate: dedication to extracur. activities	sig. H_0	0.000
you evaluate: interest in family problems	sig. H_0	0.000
you evaluate: lifestyle	sig. H_0	0.000
you evaluate: well-being in classroom	sig. H_0	0.000

(see Střelec- Krátká, 2008).

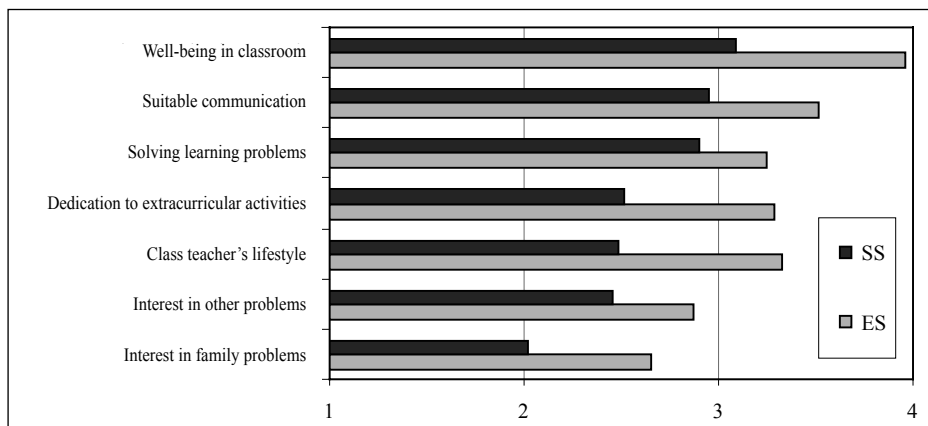


Diagram no. 4 shows mean values of relationship between characteristics and activities that pupils appreciate about their class teacher and type of school they attend

Respondents' answers in relation to the type of school they attend show statistically significant differences. The results of the non-parametric variance analysis (Kruskal-Wallis Test) show among other things that ES pupils appreciate all the offered characteristics of a class teacher to a significantly larger degree than SS students. In this sense also the second hypothesis has been adopted.

Conclusion:

The presented (illustrative) empirical findings do not lay claim to the general validity and the data selected rather provides orienting evidence (through respondent views - class teachers and students') of a significant role of the class teacher in supporting the healthy development of elementary and secondary pupils/students. Still the above facts testify to the important role of a class teacher in the present-day Czech school system.

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SPECIFIKACE PODPORY ZDRAVÍ ŽÁKŮ PŘI ČINNOSTECH TŘÍDNÍHO UČITELE NA ZÁKLADNÍ A STŘEDNÍ ŠKOLE

Abstrakt: Třídní učitel je činitel, který disponuje možnostmi pro ovlivňování zdravého duševního, tělesného i sociálního vývoje jednotlivých žáků a školní třídy. Činnosti třídního učitele mají na každém stupni školního vzdělávání nejen své opodstatnění, ale také zvláštnosti vyplývající z pedagogicko-psychologických charakteristik žáka určitého věku a úrovně jeho psychické, fyzické a sociální zralosti. V tomto smyslu se příspěvek zabývá vymezením rámce činností podporujících zdraví žáků na základní a střední škole, srovnává názory třídních učitelů na ovlivňování zdravého vývoje žáků a specifikuje některé další podmínky pro práci třídních učitelů na těchto stupních školního vzdělávání. Studie navazuje na výzkumná zjištění autorů publikovaná v období 2006–2010.

Klíčová slova: výzkumné poznatky, základní škola, střední škola, třídní učitel, podpora zdraví, výchovné činnosti, názory respondentů

OPINIONS OF THE CITIZENS OF THE CZECH REPUBLIC ON HEALTH AND HEALTHY LIFESTYLE EDUCATION IN CONNECTION WITH THE TEACHING PROFESSION

Evžen ŘEHULKA

***Abstract:** In the study, data collected in a representative sociological survey based on submitted questions and conducted by the INRES-SONES company are interpreted. Questions sought to elicit opinions of the citizens of the Czech Republic on health and healthy lifestyle education, and its connection with the teaching profession. Citizens of the Czech Republic think that the most important source of health information for children and young people is the family, followed in second place by the school. Teachers are considered as more-or-less trained to teach health education to their pupils, but CR citizens also think that teachers do not set a particularly good example for their pupils in healthy lifestyles, although care for their healthy lifestyle is, as a rule, considered as the teachers' duty.*

***Key words:** health education, health education and teachers, teachers' lifestyle, teachers' preparedness to teach health education, responsibility for pupils' lifestyles*

Introduction

Health and healthy lifestyle education remain topical issues discussed at various scientific as well as popularization levels. The need for such education is clear: the maintenance and enhancement of health are among the most important tasks of both individuals and the society, and health is one of the basic starting points for happy and good-quality life.

From a certain point of view, health has both an objective and a subjective aspect. Objectively, health is the primary subject-matter of health-care disciplines, although nowadays when health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”, the care for health goes beyond the boundary of medical science. Objectively, health can be relatively easily understood and defined in its determinants, from which principles of health and healthy lifestyle education can be defined. Health, however, can also be viewed subjectively, and not only as an individual experience but also as a state which can be arrived at or

influenced by factors that emanate from implicit ideas and opinions of people, and are created by individuals' experiences or information randomly received from a variety of sources.

It is a major task for teachers and educators to harmonize such implicit and often-times semi-scientific information, opinions and advice with genuine scientific findings and promote good and healthy lifestyles through health education.

Lifestyle issues have been given much theoretical attention recently. According to J. Machová (2009, p. 16) a lifestyle “comprises types of voluntary behaviour in given life situations that are based on individual choices from various alternatives. We can decide to choose healthy alternatives out of possible alternatives on offer, and reject those that are injurious to health. A lifestyle is therefore characterized by an interplay between voluntary behaviour (choices) and the life situation (possible alternatives).” A similar definition of a lifestyle comes from J. Holčík (2010, p. 287), who says that “a lifestyle, a lifestyle conducive to health, is based on ascertainable types of behaviour that are determined by individual personal characteristics, social conditions and parameters of the environment. A lifestyle conducive to health is a sum of behaviour and other activities and circumstances that contribute towards the protection and enhancement of, and recovery to, health.” It follows that a lifestyle is a complex of behaviour and conditions that people can influence and shape to a considerable extent according to their wishes and objectives. From a certain point of view, we can say that a healthy lifestyle is the result of upbringing under certain material and social conditions. This is what is done in health education which, according to J. Holčík (2010, p 286), “is a sum of upbringing and educational activities aimed at mental, physical and social development of people designed to help improve the health of individuals, groups and the entire society. It is usually divided into patient education, warning against health risks, and on health education. It contains more than only information on usual diseases, the components and functions of the human body, and how to take care of it. It should also explain the structure and activities of the health care system and, last but not least, inform about health policies and both local and nation-wide health activities.”

Because we focused on mutual cooperation between the school and the health care in our research, we were mainly interested in health education. It is a comprehensive field of pedagogy which uses findings of pedagogy, psychology and sociology of health, and public health care. According to J. Machová and D. Kubátová et al. (2009), the focus of health education is on prevention, i.e. on an effort to prevent diseases and to promote health. The authors define it as a “set of political, economic, technological and educational activities whose aim is to protect health, extend active life and provide for healthy development of new generations”. The important aspect of health promotion is its active focus on health, while prevention is conceived as an activity against diseases.

Health education is becoming a topical issue for the contemporary system of education. This has been greatly enhanced by *Framework Education Programmes* (FEP), which feature “health education” as an independent educational area. The FEP states that “the primary aim of education in this educational area is to lead pupils to get to know themselves as living beings, to understand the value of health, the meaning of health care prevention, and the extent of problems associated with diseases or other health impairments” ... “it teaches pupils to actively develop and protect their health as

a combination of all of its components (social, mental and physical), and to be responsible for it". We believe that we must welcome these new trends in the Czech system of education, which are fully in line with the current development of our school policies and health care, and are in harmony with the thinking of the World Health Organization, in particular with its *Health21* policy framework. *Health21 – Health for all in the 21st century* has been answered by our political and social life, namely in the documents "Long-term Program of Health Improvements of Czech Population" and the "Action Plan for Health and Environment in the Czech Republic" that have been adopted by the Czech government.

Schools may implement a number of tasks set in those documents because health education of the young generation must be among the basic tasks of the school. In this respect, schools have also other advantages, namely that instruction there is organized on a professional basis, it is under supervision of the society, and is based on scientific data; moreover, it affects pupils in their most formative period of their lives.

Teachers should be given special training in health education, which is being gradually introduced at teacher-training schools. Successful health education at schools should, however, accomplish one more task, namely to make sure that the educator himself is as much as possible a role model for healthy behaviour and a healthy lifestyle. A teacher who smokes can hardly be a successful proponent of non-smoking. A healthy lifestyle is a very personal thing and it has a profound effect on one's individual behavioural values; that is why it is so difficult to teach it and why it is often reduced to declaratory statements of certain principles. The teacher's role is very demanding and difficult, and teachers very often show their own privately-held beliefs more openly than they think they do. Our research has shown that teachers suffer from various physical and mental conditions that they could alleviate by observing the principles of a healthy lifestyle; in many both male and female teachers we observe increased levels of neuroticism, excessive stress, health complaints, social conflicts, poor emotional control, ineffective resting, incorrect work habits, etc. (E. Řehulka, O. Řehulková 1998a; E. Řehulka, O. Řehulková 1998b; E. Řehulka 1999; E. Řehulka 2006 ad.).

It is interesting to conduct surveys of opinions of the general public about health and healthy lifestyles at schools. The public often adopts an informed and critical stance on the situation in schools. We believe it is very important to investigate public opinions on schools because those opinions make up a social consciousness framework about schools within which teachers have to work. Opinions that the public has about schools do not, as a rule, correspond to reality but may be very important for work at schools because they may highlight some mistakes or untapped reserves in education processes. In the case of health and healthy lifestyle education, such reminders are of particular importance. How schools are judged by the public is very closely connected with the perception of the teaching profession. The public places considerable and rigorous requirements on teachers but, at the same time, holds their work in high regard. It is therefore important to know to what extent the expected success of health education is conditioned by the assessment of teachers' qualifications for that area of education.

Survey objectives

The survey contained *questions on health and healthy lifestyle education, and some aspects connected with the teaching profession*. We wanted to find out where children and young people got their information on health, and what information source they considered the most important. In the survey, great attention was paid to the *role of teachers in health education*. People were asked whether they think that teachers are sufficiently trained to teach their pupils about health, and whether they are a role model for a healthy lifestyle for their pupils.

Another survey objective was to find out how the teaching profession is perceived by the public. Respondents were asked what, in their opinion, is the major stress factor in the teaching profession, who can become a teacher, and whether teachers have a bigger professional obligation to look after their physical and mental health than people in other positions.

Research methodology

Research was designed as a sociological survey according to the project and used research instruments prepared by the client and amended by fully-qualified workers of the research organizer. In the field survey, standardized technique of a structured interview between the interviewer and the interviewee was used. The text of the questionnaire was finalized based on the results of a pre-survey.

Data were collected in different parts of the Czech Republic by the staff of 360 professional interviewers of the INRES - SONES company. The staff of INRES – SONES were also responsible for visual, logic control, encoding and entering data into the computer, tabulation and interpretation of results.

For statistical processing, the SASD 1.3.4 (statistical analysis of social data) software was used. The first-degree interaction and contingency tables of selected indicators of the second-degree interaction were prepared. The degree of dependence of selected parameters was determined on the basis of chi-square and other testing criteria applied according to the character of the parameters. On the basis of this analysis, interpretation of data was conducted and tables and graphs were generated.

Respondent selection and selection set properties

The data analyzed in this paper were received from a set of 1,795 respondents selected randomly using quotas. The set is a representative sample of the Czech Republic population over 15 years of age. The representativeness was derived from the basic set of the Czech Republic population aged 15 or older.

The respondent composition of the set as defined by the basic demographic characteristics is as follows. From the *gender* point of view, there were 48.5 % of men and 51.5 % of women in the set, which corresponds to the gender composition of the CR population aged 15 and over. From the relative frequency point of view, the deviation of the selection set from the basic set is 0.1 %, which makes our survey representative for Czech population over the age of 15 from the gender point of view.

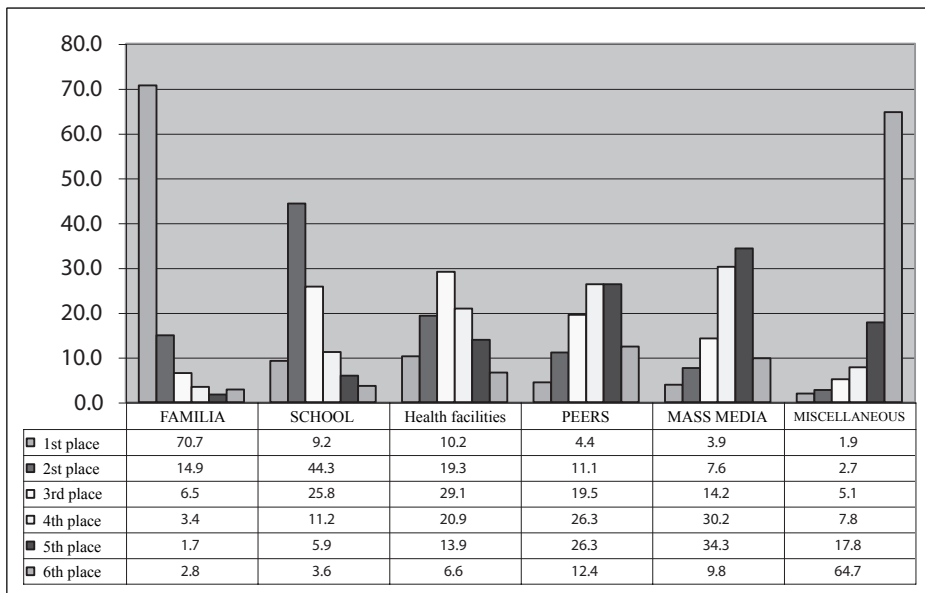


Fig.1 question (N = 1,790): Sources of health information used by children and adolescents

The above diagram shows very clearly that the public believes that the most important source of health information for children and adolescents is the family, which is a place where young people traditionally learn about health, and how to protect and care for it. Other sources of information trail behind. In order to unambiguously evaluate their respective shares, a weighed arithmetic mean was calculated of each information source ranking that was determined by the respondents in the survey. The higher the ranking determined by respondents in the survey, i.e. the more important they considered the source to be, the lower the value of the weighed arithmetic mean.

Table 1: Sources of health information for children and adolescents (N = 1,790)

INFORMATION SOURCE	MEAN
1. FAMILY	1.588
2. SCHOOL	2.710
3. HEALTH CARE FACILITIES	3.289
4. PEERS, CLASSMATES	3.962
5. MASS MEDIA	4.130
6. MISCELLANEOUS	5.310

From the importance ranking point of view, Czech Republic citizens consider the family to be the source from which children and adolescents get most of their information on health. The school and health care facilities (physicians, hospitals, etc.) rank second and third, respectively. Peers, classmates and friends and the mass media were

ranked the 4th and 5th most important sources, respectively. Also important as a source of health information for children and adolescents are miscellaneous sources and pieces of information of a random character.

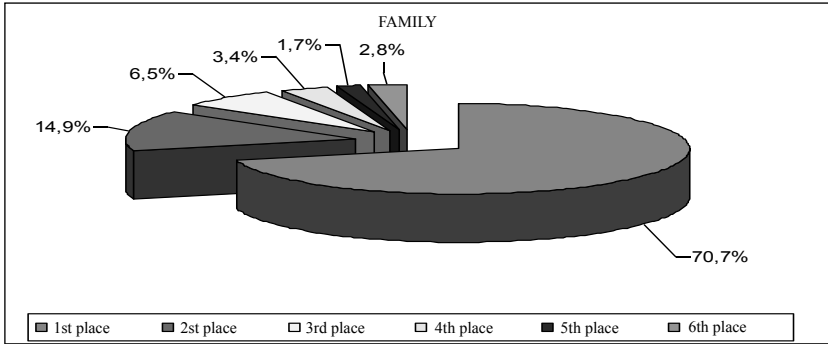


Fig. 2: Sources of health information for children and adolescents - family (N = 1,790)

More than 7/10 of respondents (70.7 %) ranked the family first among sources of health information for children and adolescents. Another about 15 % ranked it second, and the remaining 14.4 % put the family on a lower place. *From this point of view, the family plays a decisive role among information sources according to the opinion of Czech Republic citizens.*

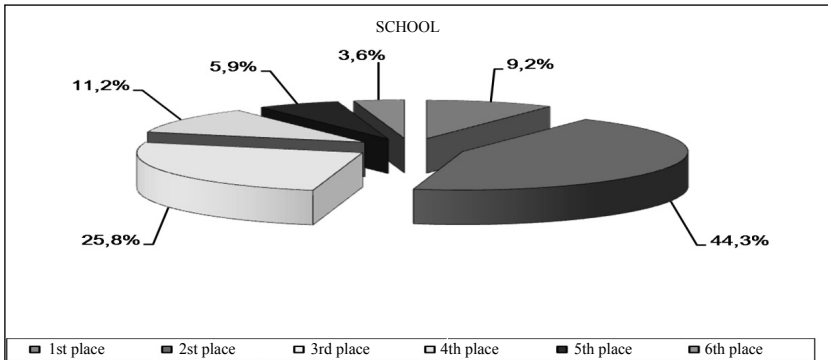


Fig. 3: Sources of health information for children and adolescents - school (N = 1,790)

Most frequently, the school ranked second after the family from the point of view of health information importance for children and adolescents. It was *ranked second and third* by 44.3 % and about 1/4 of respondents (25.8 %), respectively. These were the most frequent places where the school appeared.

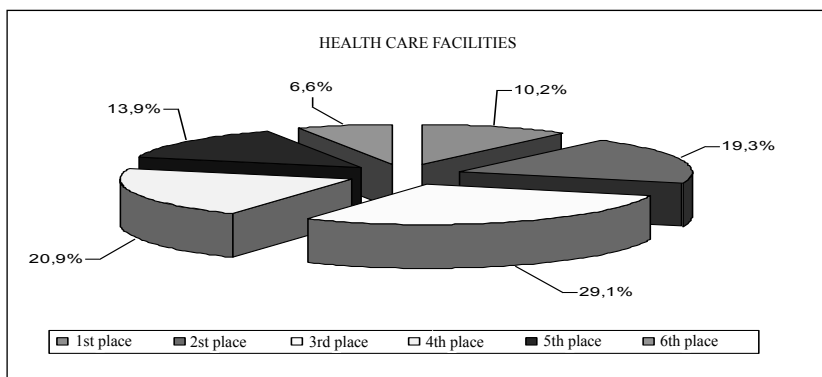


Fig. 4: Sources of health information for children and adolescents - health care facilities (N = 1,790)

Health care facilities were most frequently ranked fourth by Czech Republic citizens from the point of view of how important they are in informing children and adolescents about health issues. It was the decision of almost 3/10 (29.1 %) of citizens. We should, however, add that public opinion in this matter is relatively well-balanced, and health care facilities are put in every place over the entire range of possible answers – from the first place (1/10 of respondents) through the second (1/5 of respondents) and fourth (1/5 of respondents) to the fifth and the sixth places (1/5 of respondents each). The conclusion we may draw from it is that people in the CR do not hold strong opinions about the role of health-care facilities in providing health information for children and adolescents, and health-care facilities are put in all the places in our scale.

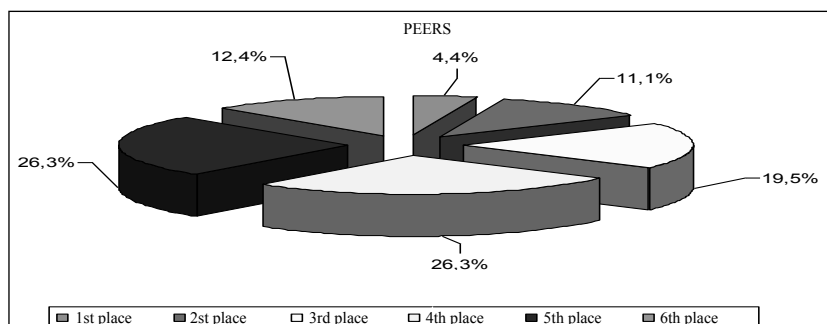


Fig. 5: Sources of health information for children and adolescents - peers (N = 1,790)

Peers, classmates and friends are most frequently ranked 4th or 5th from the point of view of their importance in health information (they tie with 26.3 % of responses). It was the decision of more than half of respondents (52,6 %). A considerable number of respondents put peers in the third place (less than 1/5 or 19.5 %), and the least frequent was the first place (only 6.4 % of respondents).

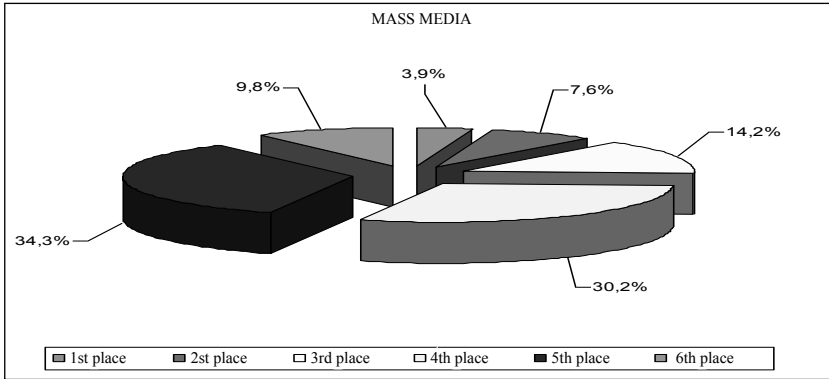


Fig. 6: Sources of health information for children and adolescents - mass media (N = 1,790)

Mass media were most frequently put in the 5th place with respect to their importance in providing health information for children and adolescents (34.3%), and the 4th place was also fairly frequent. Other places were chosen significantly less frequently. As far as their information importance is concerned, they are comparable with the peers. The importance of the two information sources is considered similar by the Czech population.

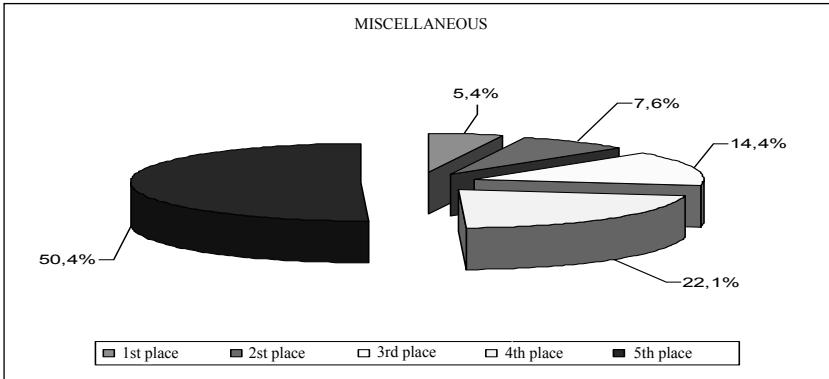


Fig. 7: Sources of health information for children and adolescents - miscellaneous sources, randomly acquired information (N = 1,790)

CR citizens do not attach particular importance to information sources other than those specifically mentioned above and “miscellaneous” sources are most frequently put in the last place. That place was chosen by almost ½ (50.4 %) of respondents. No statistically significant links between the ranking and demographic and social characteristics were found, which means that people in the CR hold the same opinions on this issue, and attach the least importance to miscellaneous sources or randomly acquired information when it comes to health information for children and adolescents.

We have already mentioned the important role played by teachers in health education. In the survey, CR citizens were asked to give their opinion on whether our teachers are trained to teach health education to their pupils, whether it was their responsibility to look after a healthy lifestyle of their pupils and whether, in their opinion, teachers are role models for a healthy lifestyle for their pupils.

The following closed questions were asked about the opinions on the teachers' preparedness to teach health education:

“Do you think that our teachers are trained to teach health education to their pupils?” The respondents were to choose one of the following standard range of answers: *“1) completely prepared; 2) quite prepared; 3) 50/50; 4) rather unprepared; 5) completely unprepared”*.

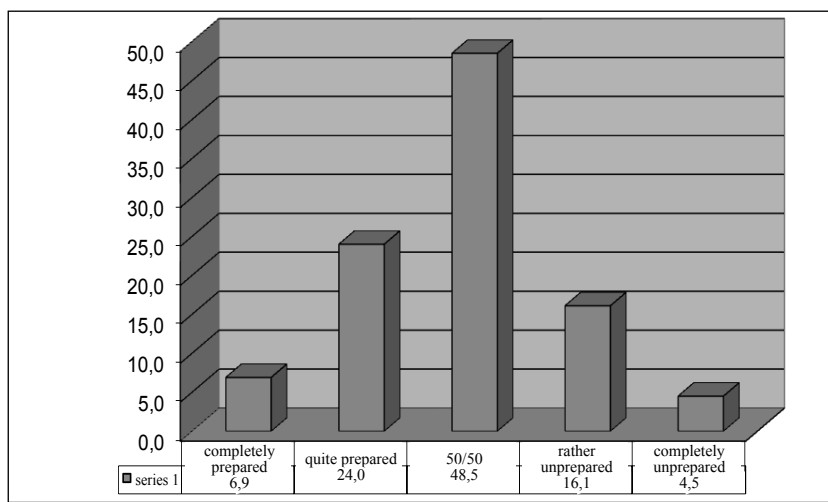


Fig. 8: Opinions about teachers' preparedness to teach health education (N = 1,782)

We can conclude that almost half of the population of the CR believes that teachers are only “half prepared” to teach health education to their pupils. In the remaining answers, positive assessments slightly predominate over negative ones. About 3/10 of citizens are inclined to think that teachers are completely or quite prepared, about 2/10 hold an opposite opinion and think that teachers are rather or completely unprepared. The public opinion to this issue is not influenced by any of the monitored demographic or social characteristics.

A different angle of view on the role of teachers in health and healthy lifestyle education is expressed in the question of whether or not teachers are role models for a healthy lifestyle for their pupils. Opinions of Czech Republic citizens on this issue were investigated using the following closed question: *“Do you think that our teachers are role models for a healthy lifestyle for their pupils?”* Like in the previous case, respondents were to choose one answer of the following standard range of answers: *“1) they certainly are; 2) they probably are; 3) 50/50; 4) they probably aren't; 5) they certainly aren't”*.

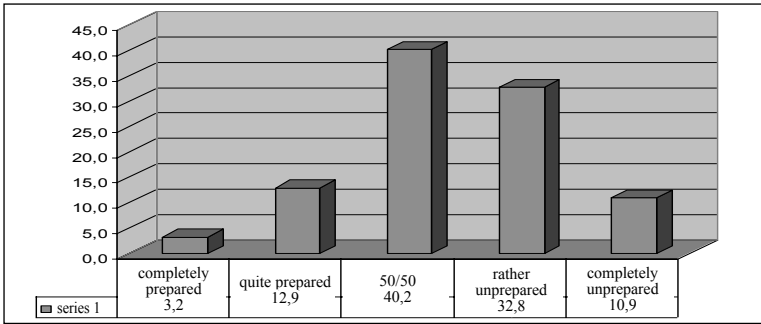


Fig. 9: “Are our teachers role models for a healthy lifestyle for their pupils?”
(N = 1,793)

Negative answers predominate among opinions of Czech Republic citizens on whether our teachers are role models for a healthy lifestyle for their pupils. A total of 43.7 % of citizens are inclined to think that our teachers probably or certainly are not role models for a healthy lifestyle for their pupils. Almost the same number (40.2 %) of people are undecided, and only 16.1 % of citizens think that teachers probably or certainly are role models for a healthy lifestyle for their pupils.

The teachers’ role in health and healthy lifestyle education was also evaluated from the point of view of whether or not teachers should actively influence the lifestyles for their pupils. This issue and citizens’ opinions on it were investigated using the following closed question: “Do you think that it is the teachers’ duty to concern themselves with their pupils’ lifestyle?” The respondents were again asked to choose one of the following standard range of answers: “1) completely agree; 2) quite agree; 3) 50/50; 4) rather disagree; 5) completely disagree”.

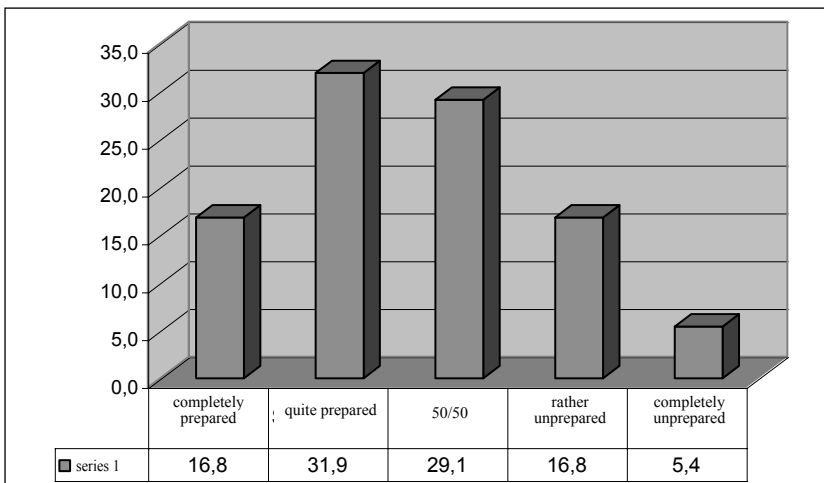


Fig. 10: Is it the teachers’ duty to concern themselves with their pupils’ lifestyle?
(N = 1,792)

Almost half (48.7 %) of Czech citizens are inclined to think that teachers' duties should include the care for a healthy lifestyle of their pupils (the sum of "completely agree" and "quite agree" answers). Another 29.1 % are undecided on the issue, and the remaining 22.2 % think that teachers should not have that duty (the sum of "rather disagree" and "completely disagree" answers).

Opinions on the relationship between health prevention and school education

Respondents were asked to respond to a statement about the relationship between health prevention and education at school. The aim of the survey was to find out how that relationship is perceived by the citizens of the Czech Republic, and where they believe is its focal point. The exact wording of the statement the respondents were to respond to was: *Now please consider what relationship there should be between health prevention consisting in trying to avoid falling ill and education at school. In your own words, describe briefly what form that relationship in your opinion should ideally take.*

As in the case of the previous open question, it was first necessary to conduct a contextual analysis of individual statements, because the variability of opinions was considerable and their range was from 1 to 1182, i.e. 1182 expressions or their variants. On the basis of that contextual analysis, the following categorization of responses that express the ideal form of relationship between health prevention and education at school was construed.

- 1) Positive relationship, an emphasis on cooperation, connectivity, connection between health prevention and education at school. (This category included expressions e.g. positive attitude, strong, near, balanced, equivalent, important relationship, mutual interconnection, connection, harmony, mutual support, continuity, intermingling, complementation, unity, equilibrium, communicativeness, obliging.).
- 2) An emphasis on the need for more information about health prevention in school education, efforts to define the content of health prevention, ideas for topics. (Statements pointing out the need for sufficient information, health prevention promotion, information on diseases, teachers should give enough information about the risk of various diseases to their pupils and lead them to good hygiene and prevention of those diseases, prevention instruction not only at a theoretical level, re-introduction of preventive medical check-ups in cooperation with schools (dentists, general practitioners for children and adolescents), vaccination in schools, teachers should set a good example by not going out to school when they are ill because otherwise risk losing credibility, information on recommended water intake, residential ventilation, prevention of AIDS, hepatitis, etc.).
- 3) Emphasis on introduction of various types of health prevention to school education. (To invite expert lecturers, organize discussion, seminars, workshops, training sessions, cooperation between health care facilities and schools, physicians to come to classes, cooperation with the family, etc.).
- 4) Other opinions. (The most frequently mentioned here was the family as the most

- important place for health prevention, and requests for more PT lessons, emphasis on observing principles of cleanliness at schools, a topic for civics, etc.).
- 5) Negatively worded opinions. (Nonsense, no relationship, serves no useful purpose, etc.).
 - 6) Does not know, does not understand the statement, has no idea, unable to judge.

Opinions in the first three categories are positive in their assessment of the relationship between health prevention and education at school, and some present ideas for its extension or define the content more accurately. Opinions in the fourth category are unrelated to the relationship between health prevention and education at school, or put it at a different level. Opinions in the fifth category are negative with respect to the relationship between health prevention and education at school. Opinions in the sixth category are neutral (respondents do not know, are unable to judge).

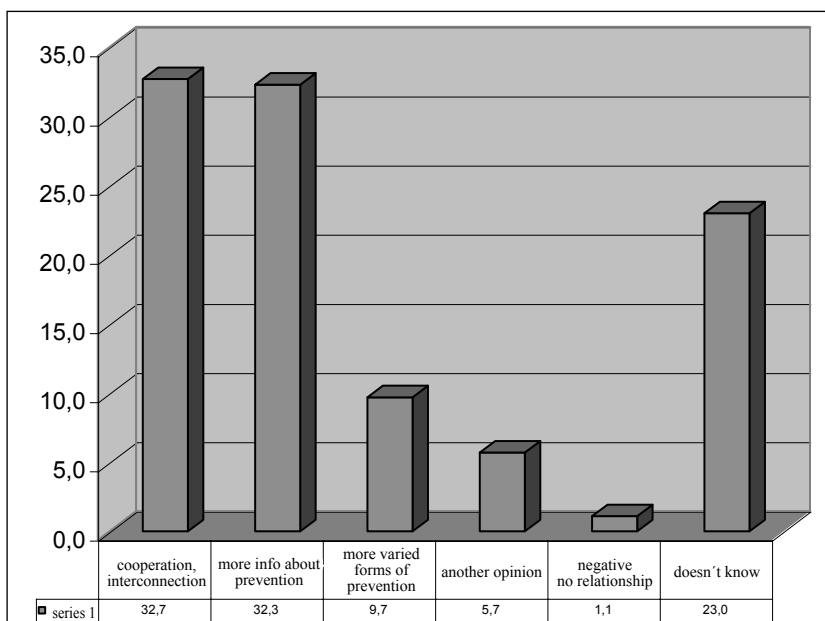


Fig. 11: Perception of the relationship between health prevention and education at school (N = 1,721)

Note - the sum of relative frequencies exceeds 100 % because some respondents mentioned several types of relationship between health prevention and education.

Less than 1/3 (32.7 %) of the population of the Czech Republic see the focus of the relationship between health prevention and education in schools in their interconnection complementation or networking. According to these respondents, health prevention and education in schools are closely connected, influence each other and cannot be separated.

Another 1/3 (32.3 %) of the population wants more space to be given to health prevention in school education, and pupils to be given more information about it. Another frequent comment was the request for re-introduction of preventive medical check-ups in schools, or vaccination of pupils.

The third group of less than 1/10 of citizens (9.7 %) would like to see the introduction of various forms of health prevention to schools, including a closer cooperation between schools and physicians and health care facilities.

It means that three quarters (74.7 %) of the citizens of the Czech Republic (the sum of Categories 1, 2 and 3) believe that health education rightly has a place in schools, and that health prevention and school education should be closely linked and mutually interconnected. This group also recommends that schools provide more information on health prevention, and implement it in a variety of ways.

The group of citizens holding a different opinion makes up 5.7% of respondents. Basically, they mainly believe that health prevention should primarily be done in families, and that, possibly, some attention might be given to it in subjects already taught in school. Only 1% of respondents think that there is no relationship between health prevention and education in schools.

The remaining 23 % of citizens were unable to define the relationship between health prevention and education in schools, and their responses were “I don’t know”, “I don’t understand it” or “I have no opinion about it”.

It follows from an analysis conducted on the basis of the second-order interaction that there is a slight tendency among men to choose the “I don’t know” answer more frequently, and the same is true about the youngest age group (15 to 19-year olds). The connection between this issue and education is more pronounced. While respondents with apprenticeship training were more frequently unable to perceive any relationship between health prevention and school education ($\alpha = 0.001$), secondary school graduates and particularly university graduates put more emphasis on providing more information on health prevention as part of school education ($\alpha = 0.01$). The X^2 in the case of education is 58.347 with 15 degrees of freedom. No statistically significant links with other demographic or social parameters were found.

It means that three quarters of Czech Republic citizens believe that health prevention belongs to education in school, that there is a very close connection between them, and that they mutually influence each other. These citizens also recommend that more information on health prevention be provided by schools, and that more varied forms of presentation be used. Citizens’ opinions on the relationship between health prevention and education depends on their level of education.

Conclusions

Representative research into opinions of Czech Republic citizens about health and healthy lifestyle education and its relationship with the teacher’s profession showed that unequivocally the most important source of information on health for children and adolescents is the family, followed in the second and third places by the school and health care facilities (physicians, hospitals, etc.), respectively. Mass media and peers are considered less important.

Almost half of the population of the Czech Republic believes that teachers are only “half prepared” to teach health education to their pupils. In the remaining answers, positive assessment slightly predominates over negative assessment. About 3/10 of citizens are inclined to think that teachers are completely or quite prepared, about 2/10 hold an opposite opinion and think that teachers are rather or completely unprepared.

For the most part, Czech Republic citizens think that our teachers are not role models for healthy lifestyles for their pupils, or they are to some extent only, and they are inclined to think that it is the teacher’s duty to concern himself with a healthy lifestyle of his pupils. This opinion is held by almost half of the population, about 1/5 of respondents does not agree with it, and the rest half agrees.

It means that three quarters of Czech Republic citizens believe that health prevention belongs to education in school, that there is a very close connection between the two, and that they mutually influence each other. These citizens also recommend that more information on health prevention be provided by schools, and that more varied forms be used for its presentation.

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NÁZORY OBČANŮ ČR NA VÝCHOVU KE ZDRAVÍ A ZDRAVÉMU ŽIVOTNÍMU STYLU V SOUVISLOSTI S POVOLÁNÍM UČITELE

Abstrakt: Ve studii jsou interpretována data reprezentativního sociologického výzkumu, který byl na základě zadaných otázek proveden agenturou INRES-SON. Otázky byly zaměřeny na názory občanů České republiky na výchovu ke zdraví a zdravému životnímu stylu a jejich souvislost s povoláním učitele. Občané ČR považují za nejdůležitější zdroj informací o zdraví v případě dětí a mladých lidí rodinu, na druhém místě školu. Učitelé jsou posuzováni jako více-méně připraveni vychovávat své žáky ke zdraví, ovšem současně se občané ČR domnívají, že učitelé spíše nejsou vzorem zdravého životního stylu pro své žáky, přičemž starat se o jejich zdravý životní styl je zpravidla chápáno jako povinnost učitelů.

Klíčová slova: výchova ke zdraví, výchova ke zdraví a učitelé, životní styl učitelů, připravenost učitelů k výchově ke zdraví, odpovědnost za životní styl žáků

LONGITUDINAL PROFESSIONAL ORIENTATION PROGRAM AS A MEANS OF SUPPORTING MENTAL HEALTH

Petr HLAĐO

***Abstract:** Career choice represents an important phase in the life-long process of career development, as it directs an individual in a significant manner, affects the individual's close as well as more distant professional perspective and thus is one of the most important steps in a person's life. The objective of the theoretically oriented report is to assess career readiness and risks of career choice on the part of pupils. This will be the basis for a discussion of the concept of a longitudinal professional orientation program as a means of supporting the mental health of pupils.*

***Key words:** career choice, secondary school choice, professional orientation, career development, career maturity, career readiness, career education, preparation for the choice of profession*

1. Introduction

According to Super (1990), the choice of profession can be considered one of the most important developmental tasks of adolescence. Career choice is a multi-criteria decision-making process that involves the choice of study or vocational training, as well as a specific profession and a person's whole career path (cf. Průcha, Walterová, Mareš, 2009).

When making their first directional choice at the end of compulsory education, primary school pupils most often make decisions about the type of secondary school, branch of study and educational institution they would like attend to receive a secondary education. For some of them it means, at the same time, considering their general professional orientation or choice of a specific profession. Only a tiny number of pupils that have just completed their compulsory education enter the labor market (cf. Highlights, 2010).

Psychologists agree that pupils are not, due to the developmental aspects of adolescence, mature enough to make a responsible choice over their profession (cf. Hořánková et al., 1995; Vágnerová, 2005 and others). They often get into situations in which they are not able choose a direction on their own and feel helpless to various extents. As

demonstrated by the research, students in the above instances often make these decisions at a time not considered to be adequate (cf. Trhlíková, Eliášová, 2009). Pattonová and Porfeli (2007) therefore emphasize the necessity of including career education into the formal curriculum of elementary schools so that the entire primary school population undergoes systematic preparation for their career choice.

The objective of the paper is to assess the career development and career maturity of adolescents and to specify the risks of career choice on the part of pupils at primary schools. This will be the basis for a discussion of the concept of a longitudinal professional orientation program as a means of supporting the mental health of pupils.

2. Career development of pupils

The theoretical basis of a dynamic understanding of career development was first elaborated by *E. Ginzberg* and his associates. On the basis of their research, they expressed the belief that career choice is a not one-time act, but a developmental process lasting from the prepubescent period until the age of about twenty (Zunker, 1997 in Nilsson, Akerblom, 2001). During this process, all individuals pass through three periods which, to some extent, correspond to their biological age (cf. Ginzberg et al., 1951):

1. **A period of imaginative choice** (*fantasy stage*) lasts from early childhood to the age of 11. During this period a child fantasizes about what they will be based on various social impulses and their own needs. Their image of their future profession is formed without having sufficient knowledge of what that particular profession requires of them and without having relevant knowledge about their own qualifications to practice such a profession. This is done primarily on the basis of play. Children in this period are convinced that they can choose any profession. During this fantasy period, they still ignore reality, their own skills and time perspective: three important components of the career choice process.
2. **A period of tentative choice** (*tentative stage*) runs from 11 to 16-17 years of age. This period is characterized by familiarization with the requirements of professions. The individual attempts to make a career choice based on self-cognizance and self-image. They still do not take sufficient account of the objective requirements of society and the world of work. The deciding factors are their interests (11-12 years of age), personality prerequisites for the exercise of the profession (13-14) and values (15-16).
3. **A period of realistic choice** (*realistic stage*) lasts from 17 years of age to early adulthood. During the period of realistic choice the person is able to consider subjective factors (interests, abilities and values) and objective factors (occupational requirements, the situation of the labor market, and social needs) while deciding on a career choice and make a reasonable compromise between them.

The most structured theory of career development was advanced by the American psychologist *D.E. Super*. According to Super (1979) career development is a com-

plex multi-factorial conditional process that does not appear in isolation, but takes place throughout a person's life.

In Super's career development theory, it is the **self-concept of a person** which plays an important role and which he considers to be a result of the phenomenal experience of a self-identity. Self-concept or a perspective of one's self is what a person thinks of himself, an image he has about himself. Such an image is the result of physical, mental and social maturation, interaction with adults and observation of their work behavior. The aforementioned facts have a significant impact on the career aspirations, choice of profession and further career path of an individual (Štikar et al., 2003). Self-concept is a driving force that forms a career pattern people follow throughout their whole lives (cf.. Nilsson, Akerblom, 2001).

Super understands career development as a part of an individual's general developmental process, which is in progress throughout their entire life (Bubelini, 1981). On this basis he identified and characterized a total of five developmental periods: *growth*, *exploration*, *establishment*, *maintenance*, and *disengagement*. The heading of each developmental period outlines the main tasks to be achieved during the course of each of them. At first, Super considered these stages to be successive, i.e. following in order in a constant sequence of time (Vendel, 2008). He later admitted that not everyone goes through all the stages chronologically.

Pupils go through the first two stages while making their choice over their future profession while still at primary school:

- 1. Growth stage** - the growth stage is usually passed through between the ages of 4 and 13. In this period it is play and imagination activities that predominate. Later it is social activity that gradually grows and the importance of hobbies and skills increases (Štikar et al., 2003). According to Vendel (2008), the main tasks of the developmental stage of growth are crystallization, definition, specification and implementation of a career choice. It is the individual that assesses their skills, values, and determines their general range of choices, narrows their preliminary choices down to a specific field and then undertakes the necessary steps to make it happen.

In the period of growth, according to Super (1957), people begin to develop a self-concept, and the development of this self-concept is determined by identifying with persons who are close to them. Studies have shown that this leads to the adoption of many stereotypes about professions. During their school years, people acquire attitudes towards occupations that reflect traditional gender stereotypes.

In the growth stage, ideas are formed about occupations on the basis of personal experience, militated by family, friends, and the mass media. The first notions about occupations are usually formed during this period by direct contact with the professions of everyday life. A second source influencing ideas about occupations and their requirements is the information obtained from the social surroundings of the individual, primarily from their parents and teachers. These influences affect notions about occupations as well as professional aspirations. They also affect how pupils perceive professional requirements and how they

assess their own qualifications to practice a profession. Also affecting the individual just as much is information provided by mass media (e.g. newspapers, magazines, advertisements, commercials, TV series, TV shows and movies) that show important aspects of the world of work and create professional stereotypes. Krátká (2010) states that identification with characters of the audiovisual world significantly affects professional orientation. As Giannantonio and Hurley-Hanson (2006) have stressed, notions of jobs created during the growth stage may have long-term effects on career decision-making, especially during later stages of development.

- 2. The exploration stage** – the exploration stage is characteristic for the ages 14–24. Individuals in this period often change their interests. They become interested in a large number of different disciplines, directions and activities without managing to set any main priorities. According to Štikar et al. (2003), the search for a profession prevails in the exploration stage (during which the choice of professions is narrowed), but does not stop there. Individuals begin to collect specific information about themselves and about the world of work. They use this information as a foundation while adjusting their interests and skills, and when trying to apply their self-concept at work and other life roles (Super, 1957). Stereotypes obtained during the growth stage are transformed under the influence of new knowledge about the world of work and more precise information about the individual professions. During the exploration stage, notions of professions are largely based on direct contact with persons working within a given profession and from their initial work experience. Professions are assessed with regard to individual abilities and skills, but a huge influence is also played by self-concept and self-evaluation.

In his work, Super has provided many constructs and explanations for career behavior in the various stages of life. It is also important to stress the importance of the concept of *career maturity* as a prerequisite for the adequate, successful building of a career.

3. Career maturity of pupils

Studies carried out have repeatedly confirmed that career maturity is important for a successful choice of profession, or career readiness. Career maturity reflects a person's readiness to take an informed role in the age appropriate decision over the choice of profession and also cope with the career's developmental tasks (cf. Super, 1990; Vendel, 2008). A low degree of career maturity, on the other hand, manifests as indecision while choosing a profession.

A model of career maturity contains both *a cognitive dimension* (i.e. ability to choose occupations), and *an affective dimension* (i.e. approach to choosing a profession). While determining a person's career maturity, their level of career decisiveness, career planning, career awareness and professional identity are also tested and evaluated.

Knowledge and understanding of career maturity in primary school pupils is important both for systematic career education, and effective career advice. In the Czech

environment, however, this topic has not yet been empirically addressed. We therefore refer to foreign sources, which have synthesized the theoretical and empirical knowledge of career maturity and readiness (e.g. Crites, 1978; Super, 1990; Herr, Cramer, Niles, 2003).

3.1 The taxonomy of difficulties to choosing a profession

While assessing the career maturity of American adolescents, Gati, Krausz and Osipow (1996) created and empirically verified a *taxonomy of difficulties in career decision-making*. This taxonomy includes three main categories: lack of readiness in career decision-making, lack of information, and inconsistent career information (fig. 1).

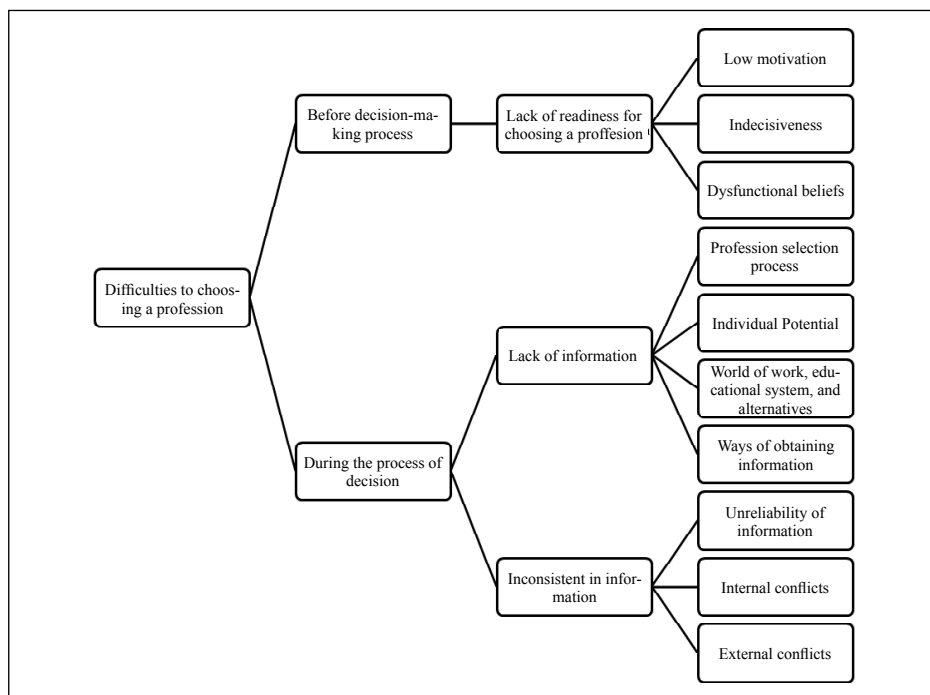


Fig. 1 Taxonomy of difficulties to choosing a profession. Source: Gati, Krausz, Osipow (1996, p. 512)

1. **A lack of readiness for choosing a profession** is the result of three types of difficulties which occur before the start of the decision-making process. This concerns *low motivation* to choose a profession, because education and work are not perceived by pupils as an important part of life, or because of the subjective sense that the events in one’s life lead to a correct choice on their own, so it is not necessary to systematically involve one’s self in the decision-making. Manuel-Adkins (1992 in Vendel, 2008) says that the most frequent problems encountered by career advisers are inaction of pupils and the postponing of decision-making.

A second cause for a lack of readiness is *indecisiveness*, due to, for example, an inability or the refusal to make any decisions at all, the need to support and confirm their own decisions, a tendency to avoid commitments, or a fear of failure. A third cause may be a lack of readiness due to *dysfunctional beliefs* (i.e. irrational expectations of the individual). An example irrational expectations is the belief that there is an ideal choice of profession that will meet all individual requirements and criteria.

The other two categories (lack of information and inconsistent information) specify categories of obstacles which may arise in the course of the decision-making process.

2. Most pupils know relatively little about how to obtain career information. **A lack of information** includes insufficient knowledge about the profession selection process, individual potential, the world of work, the education system, available alternatives, and about ways of obtaining information.
3. **Inconsistent information** may be due to *the unreliability of information* about one's own abilities, personality characteristics, preferred alternatives, professional interests, the educational system, possibilities, the characteristics of the world of work, etc. Another reason for inconsistent information may be *internal conflicts within the individual*, for example an unwillingness to compromise, several similarly attractive options, dissatisfaction with the available options, conflicting interests, or lack of ability. Inconsistent information may also occur as a result of *external conflicts*, primarily due to disagreements between the person making the decision and the social social environment connected to the choice of profession. Noeth et al. (1984 in Vendel, 2008) point out that conflicts between a pupil's own decision and the wishes of those around them are a frequent result of the unrealistic expectations of parents and teachers.

3.2 The risk of career choice for Czech pupils

The main risk of career choice for Czech pupils results from their lack of preparedness for such an important decision (cf. Hlad'o, 2008). Adverse factors can be considered as:

1. *little awareness about the world of work and individual professions*, i.e. about necessary health conditions, required knowledge, skills and, above all, about the actual performing of the profession and their prospects on the labor market;
2. *ignorance of the education system*, i.e. its structure, offers, demands of the individual types and levels of schools, formal and informal curricula, etc.;
3. *insufficient level of self-knowledge*, i.e. a summary of one's abilities, talents, aptitudes, and physical and psychological assumptions;
4. *short-term perspective orientation*, i.e. focusing primarily on immediate objectives;
5. *unclear vision of their future*, i.e. absence of a life plan.

According to Gajdošová, the results of research carried out in the Czech Republic aimed at ascertaining the level of technical information in the career choice process for pupils point to the fact that many of them have “non-complex, incomplete, very sketchy information about secondary school study, instructional or educational fields they can study, and on their relationship to a future profession. Young people almost never know their personal qualifications for further studies, nor do they know what general and special abilities, interests, attitudes and personal characteristics they have for the individual studies and professional disciplines, and are therefore unable to take advantage of them when choosing a profession they would be successful in (2006, p. 140).

4. Longitudinal program of professional orientation

The question under debate is the role primary schools play on a pupil’s career choice. Pupils usually rank the influence of teachers on career choice behind family or peers, and they evaluate their assistance as less beneficial (cf. Hlad’o, 2010b). An explanation for this can be found in the empirical knowledge that the support provided by primary schools is focused on the final stage of school selection, rather than on the path leading up to it, on which most pupils blunder about (Smetáčková, 2009). Because pupils spend a large amount of time in school, teachers have a considerable amount of potential to become a key source of career information, advice and assistance during the choosing of a career.

Primary school has traditionally been considered an institution which may affect student decisions over career choice. Through various types of educational strategies and tools, a school can successfully shape attitudes towards work, professions and responsible career choice, help pupils in forming a real professional goal and perspectives, equip them with the skills necessary for introspection and information about the world of work and the educational system. It may also develop the capabilities and skills that make life changes, the transitions between educational levels, and the transition from school work easier (cf. Hansenová, 2007).

So that intervention on the part of primary schools is effective, it is necessary to structure the preparation of pupils toward a comprehensive program that will include the systematic development of all the skills necessary for a rational career choice. On the basis of the analysis and synthesis of the research findings (Hlad’o, 2009; Hlad’o, 2010a) and the learning points of the thematic heading of the World of Work (Jeřábek, Tupý, 2005), we compiled a *proposal for a longitudinal professional orientation program*, including the division of the educational content into individual stages:

1. *The first stage*, whose requirements must be met no later than the end of the 1st semester of the 8th year, should be aimed in particular at attracting pupils’ interest toward career choice and toward motivating them to have an active and individual approach. The motivation of pupils while choosing a career is an important phenomenon, as it sets in motion a pupil’s psychological processes and leads them toward a more responsible and more active approach. In addition to motivating pupils, education should be focused on developing the primary skills associated with self-knowledge, decision-making, action planning, communication, cooperation, and coping with stressful situations.

2. In the *second stage*, whose requirements must be met no later than the end of the 2nd semester of the 8th year, the focus should be placed on deepening the skills the pupils learned in the first stage. The main emphasis must be placed on molding and practicing those skills connected with searching for, categorizing, evaluating and using information from the sphere of education and the world of work. This stage should mainly be about acquiring appropriate techniques and strategies related to the application of a variety of information when deciding on the type of secondary school and the field of education, so that it corresponds with the principles of responsible career choice and reflect the abilities, skills, characteristics and interests of the pupil.
3. *The third phase*, whose requirements must be met no later than the end of the 1st quarter of the 9th year, should be focused on the comprehensive development of skills related to information literacy and on creating the individual realistic perspectives of the individual pupils. Activities should lead toward a deepening of pupils' experience with categorizing and applying information to a career choice, planning the decision-making steps, toward the systematization of knowledge and the integration of all the knowledge and skills associated with this decision-making. It is necessary to pay special attention to methods of information gathering and to the choice of criteria for evaluating specific educational institutions. Pupils should also be more systematically acquainted with the mechanisms of the functioning of the labor market.
4. In the *fourth stage*, which is appropriate to implement from the end of the 1st quarter of the 9th year till the period of the first round of the acceptance process, should entail preparation aimed at developing the knowledge and skills acquired in previous stages, as well as on the issue of the entrance exams, and the preparation of alternative measures should the pupil not be accepted to the high school of their choice. Special attention should be paid to the issue of coping with stressful situations and practicing elements of autogenous training.
5. In the *fifth stage*, in the period after the admission process, when pupils' interest in career choice decreases, schools can include the teaching of entrepreneurship and self-expression in the labor market to their lessons. This includes communication with potential employers, writing a CV, responding to job listings, the selection of appropriate clothing, etc.

We agree with Gajdošová that during the course of the longitudinal program of professional orientation (in addition to providing a system of education-career information) the primary school should:

- monitor and evaluate the physical, psychological and social development of its pupils and their individual characteristics that are significant from the point of view of their future profession;
- develop general and special skills in pupils, shape their study and extracurricular interests and enhance interests significant in relation to the choice of profession, shape their positive attitudes towards working and self-education;
- create conditions for correcting pupils' breakdowns and troubles in learning and behavior that affect their professional development;

- systematically and over the long-term provide pupils with individual assistance in the creation and clarification of professional ambitions and life plans, and in their confrontation with the needs of society, assist them in the assessment and evaluation of the prerequisites for further study or occupation, and assist them through counseling in deciding on the goals they wish to accomplish upon completing compulsory education (2006, p. 137).

In connection with preparing pupils to choose an occupation, it is necessary to draw attention to the invaluable role of career advisers, but also to class teachers and to educators teaching all subjects. We agree with Friedmann (2006) that the teaching of subjects provides sufficient space for quality work on the part of teachers, since they can systematically develop the pupils' interest in the field, provide qualified information about fields of study, content and the prospects of the individual professions on the labor market, etc.

5. Conclusion

Career choice represents an important phase in the life-long process of career development, as it directs pupils in a significant manner, affects their close as well as more distant professional perspective and thus is among the most important steps in a person's life.

According to Münich and Mysliveček (2006), it determines the attitude towards further education and specialization, career and, consequently, the social and economic status of the individual. It thus forms the socio-economic differences within the future adult population. Whether the choice corresponds to a person's capabilities and interests is also important from the perspective of healthy development of their personality, individual satisfaction, success and use of their social potential. Inappropriate decisions can carry potential risks, which may be reflected in the mental health of the individual (e.g. long-term unemployment, loss of self-confidence and self-esteem, social isolation, exclusion from certain social groups, the falling into socio-pathological phenomena, etc.).

The requirements of career choice are evaluated and experienced subjectively by pupils. To a large extent, students are aware of the importance and long-term impact of career choice on the further direction of their lives (cf. Hlad'o, 2009). As a result of concerns relating to the need to make important life decisions, to bear full responsibility for them, and to the demanding requirements that are imposed upon them, pupils develop emotional fluctuations. In addition to emotional tension, uncertainty and fear, pupils also evaluate as problematic the obscurity of their own interests, unclear notions about their further educational course and professional future and the associated doubts over carrying out their decisions. Negative emotions during the choice of profession indicate that this is a stressful situation that individuals perceive as unpleasant and threatening.

On the basis of a synthesis of theoretical and empirical knowledge, it can be stated that pupils really need intensive preparation and systematic guidance before making their first directional choice. A key role in the preparation of pupils in the choice of occupation is the school. School preparation should precede their own decision-making process and should lead to gaining motivation, self-knowledge, a range of sufficient

information and awareness of essential aspects and criteria. One of the options for fulfilling these objectives is to develop a longitudinal program of professional orientation that would provide pupils with the required skills for independent and responsible decision-making within the framework of the formal curriculum.

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LONGITUDINÁLNÍ PROGRAM PROFESNÍ ORIENTACE JAKO PROSTŘEDEK PODPORY DUŠEVNÍHO ZDRAVÍ

Abstrakt: Volba povolání představuje závažnou etapu v celoživotním procesu kariérového vývoje, neboť jedince významným způsobem směřuje, ovlivňuje jeho blízkou i vzdálenější profesní perspektivu a řadí se tak mezi nejdůležitější kroky v lidském životě. Cílem teoreticky orientovaného příspěvku je zhodnotit kariérovou zralost a rizika volby povolání žáků. Na tomto základě bude navržena koncepce longitudinálního programu profesní orientace jako prostředku podpory duševního zdraví žáků.

Klíčová slova: volba povolání, volba střední školy, profesní orientace, kariérový vývoj, kariérová zralost, kariérová připravenost, kariérová výchova, výchova k volbě povolání

IMPORTANCE OF COMMUNITY FEATURES IN THE EDUCATION FOR HEALTHY NUTRITION AND HEALTHY LIFESTYLE IN PRIMARY SCHOOLS

Jana FIALOVÁ

Abstract: *Intervention prevention programmes aimed at health promotion highlight the necessity of cohesion and cooperation of schools with their surroundings as one of the main conditions for their successful functioning. Also in the programme Nutrition Friendly School Initiative - NFSI, community features constitute an integral part of programme criteria. The paper presents the results of research, during which questionnaire survey was carried out at primary schools in the district of Brno-City and Brno-Province using the methodology of the World Health Organization (WHO); qualitative analysis at selected schools was made. The results show how schools cooperate with parents, wider social environment and specialists, educating children for healthy nutrition and healthy lifestyle. The ability of schools to provide quality education in this area is also closely related to the level of knowledge of teaching and other staff and to the possibilities of their further education in the field of health and nutrition.*

Key words: *community features, Nutrition Friendly School Initiative - (NFSI), health education, school cooperation with families and experts*

Introduction

Given the ever-increasing problem of obesity of children and the development of the so-called civilization diseases related to lifestyle, education on healthy nutrition and healthy lifestyle should be part of health education not only as a school subject in higher classes of primary schools, but also as comprehensive education of children throughout their school attendance. In their efforts to fulfil this aspect of education, the schools are bound by the Framework Educational Programme; but according to various experiences as well as research it is obvious that they are not always able to do it at desirable levels. In these situations, the schools are offered a variety of prevention programmes, which may facilitate their task; some are highly specialized, others are more general. In order for the involvement of the schools in the prevention programme to really meet its objectives and help improve the education in a particular area, it is

imperative that schools are able to choose well from the programmes offered. Generally speaking, it is more likely that programmes and projects with a trusted supervisor, be it state, public or private institutions, will operate more reliably and efficiently. An important role is also played by duration; long-term programmes prove to be demonstrably more effective.

International organizations, such as the World Health Organization or UNICEF, offer - among others - extensive (global) intervention programmes based on initiatives to promote health, healthy lifestyle or healthy nutrition, such as FRESH - Focusing Resources on Effective School Health; Child – Friendly Schools; HPS - Health Promoting Schools; or NFSI - Nutrition Friendly Schools Initiative. In these prevention programmes designed for implementation through schools, community cooperation is strongly emphasized as a key element which the success of the programme is directly dependent on. The community cooperation of the school and its surroundings is based on the principle of openness to parents, former pupils and local residents, who wish to participate in school activities. In this respect the school should be the centre strengthening mutual ties within families and in the community, offering further educational as well as cultural, recreational and health-promoting potential to the wide community. From the perspective of education for healthy nutrition and healthy lifestyle, partners of the schools could be - in addition to committed parents and the school founding authority - also local businesses, organizations providing health or other services, but also local producers and food retailers.

In order for the school to be able to fulfil its role of a mediator in the community and also its educational function, it is necessary that its employees have adequate knowledge and education. Only a minimum of teachers are qualified for health education; the school should therefore provide additional training at least to those teachers who are directly involved in teaching this topic. Ideally, such training should be gradually delivered to all employees, including people working in food services (canteens and other food facilities) because of their educational and community activities.

In the prevention of childhood obesity and diseases related to obesity, providing contacts to children and families who have a need or interest in receiving care of specialists should constitute an integral part of community life of the school. In the context of healthy nutrition and healthy lifestyle, this area most often includes nutritional counselling, guidance in the sphere of physical activities and the care of medical specialists.

Research objectives and methodology:

Results published in this paper are part of a wider research conducted in six primary schools in the South-Moravian Region; the schools were selected on the basis of the required characteristics according to the methodology criteria of the prevention programme Nutrition Friendly School Initiative of the World Health Organization. The objective of a qualitative study of education for healthy nutrition and healthy lifestyle was to get to know in detail the current situation in schools, to analyze school curricula and the attitude to teaching the research topics, to identify differences between the schools already involved in prevention programmes (especially Health Promoting Schools) and schools without prevention programmes, and at the same time to examine

the conditions and prerequisites for the application of prevention programmes and the reasons, obstacles and problems that prevent the schools from meeting the requirements of intervention programmes or even from participating in these projects.

In the part devoted to community features, research focused on: the issues of cooperation with parents, founders and surrounding community; specific situations where this cooperation is reflected; how it touches the topics of healthy lifestyle and healthy nutrition; whether these activities are supported by the founders or other school associates (specialists - physicians, nurses, dieticians, or local businessmen or civic initiatives, etc.) and how. Education and insight into the issue is closely related to the ability of the school to promote community features; the research therefore included the question whether (and how) schools promote further education of its employees.

In the community cooperation in the sphere of health and healthy nutrition, an important element is the so-called area of support health services - the direct cooperation of the school with health professionals; and this was another topic of the research.

Basic parameters for selecting schools included the involvement/non-involvement of the school in the intervention programme, size and location of the school in conurbations - for example, a large urban school in a traditional built-up area and a school in a newly-developed area; a small school in a small town; a small rural school; etc. - and combinations of these parameters.

In addition to studying available materials (SVP, information and documents on the websites of schools), the following was used as the main source of information: semi-structured interviews with the school headmaster or his/her deputy; local surveys in schools; the information was also supplemented from teachers involved. Evaluation of the interviews and materials was conducted using qualitative methods of analysis and interpretation.

Questionnaire survey at state primary schools in Brno was performed to supplement the qualitative research; in processing the results, schools in Brno-City were evaluated separately from schools in Brno-Province for us to have an opportunity to compare the situation in urban and rural schools. Schools from Brno-City were addressed by the Department of Education of the Brno City Municipality; of 65 schools approached, 43 filled in the questionnaire. The schools from Brno-Province were addressed individually, electronically or by phone; of 37 approached, 19 responded.

In the following text, I do not distinguish quotations from individual schools to preserve their anonymity; the statements should only serve as an illustration from a general perspective.

Analysis of community features according to the criteria of the Nutrition Friendly School Initiative prevention programme

The research focused on the functions and application of community features, their importance for education for healthy nutrition and healthy lifestyle and on the situation in the Czech Republic in exploiting community cooperation in primary schools as a tool of education for healthy lifestyle. Individual areas of community cooperation

were analyzed, as well as possibilities and problems of its functioning at the Czech primary schools.

COOPERATION WITH PARENTS

This narrower area of community cooperation at schools undoubtedly exists at least formally through basic contacts and information which, however, are more often directed from the school to parents. This means that all schools inform the parents of their activities by holding regular class meetings, discussion meetings and individual consultations, on notice boards, school web sites, and mostly also by using local media. In the framework of self-evaluation, schools that are involved in the network of Health Promoting Schools send to parents feedback questionnaires to be filled in. The headmasters of all schools surveyed consider the interest of the parents in the education and results of children as sufficient; but according to them, it decreases with the age of the children: *“Cooperation with parents works well, but not in the same way with everyone; some parents do not want to hear that their child has a problem that should be dealt with. But these are individual cases. Then there is a more general phenomenon - which probably applies to all schools - the higher the grade, the lower the interest of parents, except when a child wants to proceed to a secondary school”*. The situation is different when parents are interested in issues and activities outside the official lessons. The parents do not want to engage in any common after-school activities themselves; they are more interested in a possibility of placing children in different hobby groups - besides the usual after-school care centres. Headmasters of large schools in the City say that the parental interest in after-school activities in general is very low; parents themselves do not wish to be engaged: *“We are a school in the centre of a large City, many things are anonymous; if the school organizes an event, some parents come - but this concerns only the parents of the youngest children; otherwise it is unrealistic”*. In smaller schools headmasters gave a better evaluation of the situation: *“Parents of younger children are involved a lot; I see it as optimal. In terms of older children, parents get involved less. They do not come up with any initiatives themselves, but when the school requests, they all help”*. Only one village school of all those monitored had a network of relationships, but it was almost exclusively with parents (mothers) of young children, and it was not for reasons of organizing events to promote healthy lifestyle: *“We have established very good relationships with parents of the children; there are many mothers who are trying to engage. They have set up a civic association; we cooperate with parents both via the kindergarten and via the school. Other mothers of young children have established a Family Centre for children of young children aged up to 3 to 4. We organize joint events with all these mothers: Christmas workshops, Earth Days, or autumn events for children; we try to do everything together so that people do not do things just for themselves. For example, we united the Children’s Day to avoid simultaneous organization of the same event.”*

None of the schools surveyed gave the information that the parents would be directly engaged in activities promoting healthy nutrition; in some cases schools reported that the parents had expressed their negative attitude towards the range of food (or rather snacks) and drinks sold in the school cafeteria or in vending machines: *“We used to have a vending machine for snacks - sweets, crisps, chewing gum, etc.; I was very happy to*

remove it - also following the pressure from parents. In this we were in full agreement with the parents: we did not want children to gorge on crisps and wash them down with Coca-cola during breaks”.

COOPERATION WITH WIDER SURROUNDINGS

In prevention programmes of international organizations, the term community cooperation is defined not only as a cooperation of the school with parents of the children who attend it, but also as a wider cooperation aimed at both close and more distant surroundings. This includes the cooperation with people and institutions the child comes into a frequent contact with, who have an educational influence on the child or shape the way how the children behave or what they produce. In addition to family, friends and classmates, this category also includes companies, state institutions or civic associations based or operating in the same location. From the perspective of prevention programmes, extensive involvement of schools and their ability to engage parents and the wider environment in active cooperation is very important. Headmasters at schools surveyed speak about reluctance of parents to engage in cooperation; they are even surprised - and regard it as extremely positive - if at least some parents get involved in some voluntary work to improve the school environment or help to organize some school events: *“We reconstructed the school garden; we wanted to convert it into a multi-purpose ‘classroom’ in the nature, we did not want it to remain just for some digging or sowing. We contacted the parents from the whole school with request for physical help; my colleagues warned me that nowadays the parents would be hardly willing to do anything like that, but many parents came and we did a lot of work. Some parents even gave financial gifts, so we had funds for the reconstruction. It was a very pleasant surprise”.*

In health and healthy lifestyle education, the school can effectively operate mainly through cooperation with relevant practitioners and dentists, be in contact with them and if necessary, cooperate with them not only when children already have health problems, but especially in the field of prevention. In this context, prevention programmes recommend - in accordance with local conditions - to involve also other medical professionals in the cooperation, to organize talks or project days with them and mediate counselling for children, their parents as well as school employees. In terms of healthy nutrition and healthy lifestyle, the experts include nutritionists and food professionals and specialists in the area of physical activities, sports, physiotherapy, etc. This form of cooperation has not yet been developed in any school surveyed. Another suitable activity is to agree with companies that near schools or even at schools they avoid advertising alcohol, tobacco products and high-energy, sweet and salty foods and drinks. It is also possible to try to arrange with local sellers and food producers that in their shops, restaurants, canteens and bars near schools they avoid using marketing strategies (such as placing a certain type of goods near the cash register or to the most visible places) promoting unhealthy foodstuffs and drinks and observe the ban on the sale of alcoholic and tobacco products to adolescents. The compliance with these principles should be quite obvious on the premises of the schools, but as it showed during the survey, even this basic principle is not fulfilled: *“A snack bar is operated by the school caretaker; we have had a long struggle with an offer there. Some time ago a wave of resistance came from parents concerning the range of products available. We wanted the parents to tell us what they did not want to*

be sold there and to suggest what they wanted. The parents agreed on not wanting puffs and crisps, but did not know what they wanted. So puffs and crisps were removed, but jelly snakes and sweets remained. Children do not buy one snake, but even ten of them instead of their snack; they have the money and the parents do not care. There are also sweet drinks available; the parents only wanted water there, but the shopkeeper said that nobody would buy it. It just was not followed through to the successful end”.

1. Health promoting activities

Broadly focused cooperation can be supported by regular common activities, which may include a variety of events such as a Healthy Nutrition Day, Sports Day and other thematic projects, involving as many persons as possible, participating in various forms: the school, parents and grandparents, businesses and organizations, the school founding authority, etc. In the NFSI programme, the requirement for organizing such events is highlighted as one of the community features: ***The school should at least once a year organize or co-organize an event for health and promoting healthy nutrition, designed for both families and the wider public.***

But the research results in selected schools suggest that schools are more concerned with teaching for health within the meaning of following the school curriculum, and virtually do not organize recreational or educational events to promote health that would go beyond the curriculum. The exception is sports days that are accessible also to the wider public; but nobody but the pupils currently attending the school and their parents participate in such days. The involvement of the parents in these activities is rather low; most of them are the parents of the youngest pupils. According to the school managements, the reason is not only the lack of funding from the school founding authority and the absence of sponsors, but also the unwillingness of school employees to engage beyond the workload required (especially for financial reasons; teachers feel inadequately remunerated, and many have an extra job); this even applies to the schools involved in prevention programmes: *“... here individualism and selfishness are obvious... This is not to offend anyone or complain, it is just a statement; there are multiple causes, it is again more widespread in large cities; there is lack of money, people, time, energy, enthusiasm...”*

Cooperation with school founding authorities seems to be better in the country; all schools, however, talk mainly about the cooperation in the form of financial support or publishing information in the local press and radio if the school requests. The community cooperation between the schools involved in the Health Promoting School network works only to a certain extent; headmasters complain that central coordination of the programme does not work very well and the cooperation is rather on an individual level: *“This project unfortunately does not work too well on the national level; it is not that people who are in charge of it would not work well, but Mrs. Havlinová, who established the project in the CR, died, and her successors have not worked so well so far. We actually handle it a little bit our way; we wrote a programme for next year and sent it to Prague, but there has been no response.”*

In the questionnaire survey supplementing the qualitative study, more than one third of urban schools and almost one fourth of rural schools (see diagram 1, 2) indicate

that they do organize events to promote health and nutrition or participate in their organization. However, the interviews with the management of the schools surveyed show that these events are almost exclusively sports events, which undoubtedly contribute to raising awareness of children and adults about the importance of exercise for healthy lifestyle, but the aspect of proper nutrition is not taken into account. The majority of school headmasters were unable to describe the form of an event that would focus on healthy nutrition.

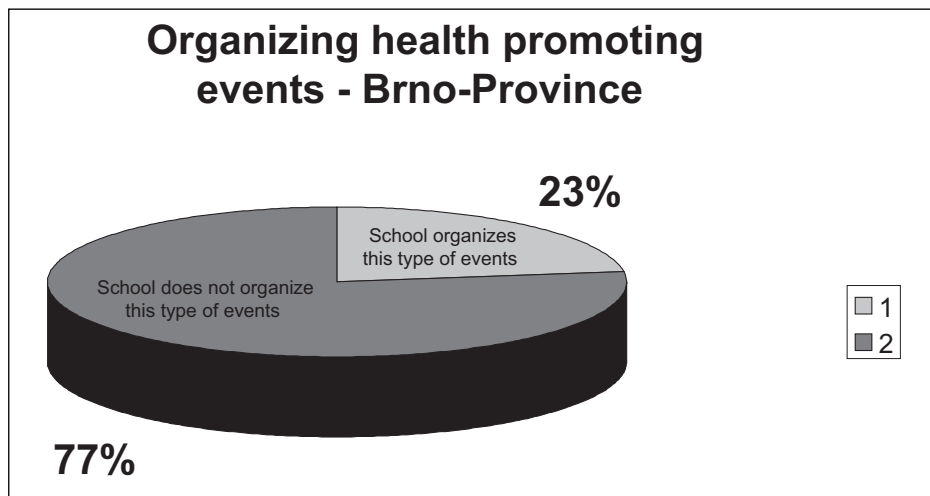
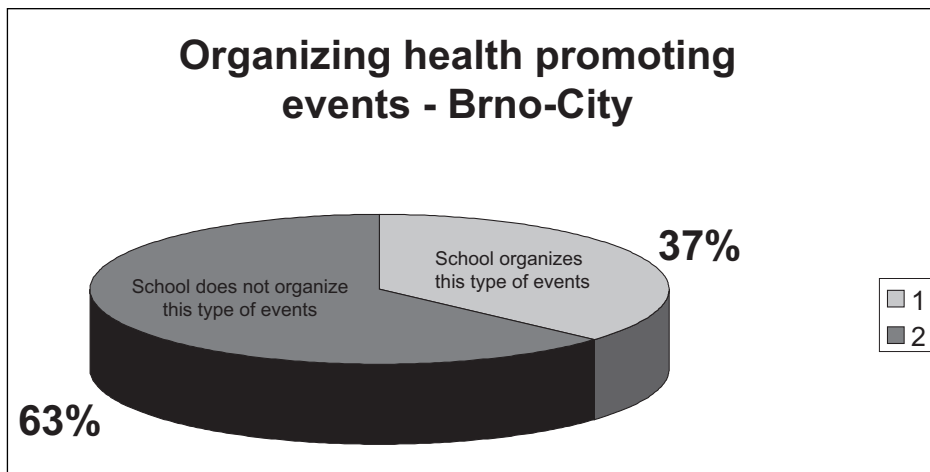


Diagram 1, 2:

2. Further education of school staff

Another criterion of the NFSI programme - Nutrition Friendly School, is to provide education to teachers and other staff in the field of nutrition and healthy lifestyle.

The opinion of the World Health Organization is that only educated school staff may well and responsibly participate in the upbringing of children for health and healthy lifestyle, and one of the main requirements of the intervention programmes (including the Nutrition Friendly School programme) therefore is to ensure further education of employees.

NFSI Criterion: The school should at least once a year provide educational courses or seminars on healthy nutrition and related topics to its employees (teachers as well as non-teaching staff working in food services).

Schools themselves are aware of shortcomings in this area and indicate problems with qualification and competence of teachers. Despite this, the schools surveyed - with a few exceptions - do not send their employees on the courses of further education; they justify it by little time capacity of teachers and by a low offer of courses on the topic of proper nutrition and healthy lifestyle. *“Further education of teaching staff is subject to accreditation by the Ministry of Education; its providers must have projects, courses and seminars approved. There is, for example, the School Service Centre, the NIFE - National Institute for Further Education, where individual projects can be found if you try, but - as far as I know - there is nothing in the field of nutrition!”*

In contrast, in the supplementing questionnaire survey the majority of schools (80 % of urban and 73 % of rural schools) stated that they did send their employees on courses (Diagram 3, 4).

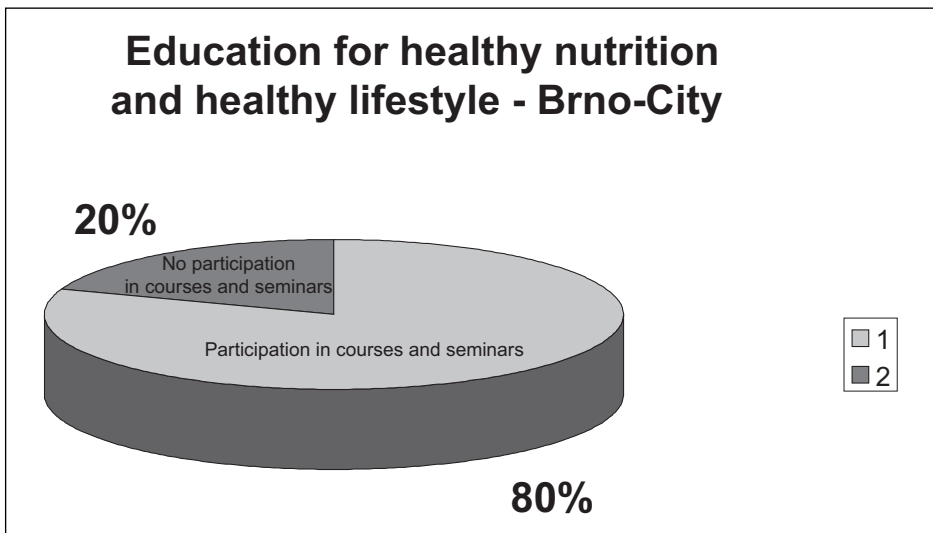


Diagram 3

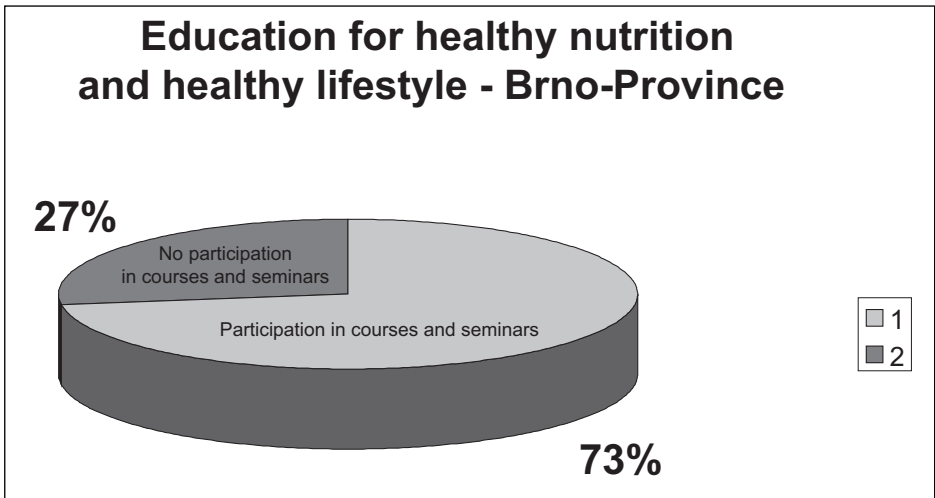


Diagram 4

3. Securing the so-called supportive health services on the basis of monitoring children’s growth and development

Preventive health promotion programmes assume that currently the school must fulfil also the formative function in addition to its educational function. In the case of globally increasing problems with obesity, it is necessary - according to the World Health Organization - that the schools provide the children and their families basic health service in addition to the theoretical teaching for health. The schools should provide this service on the basis of the evaluation of information on health, growth and development of the children acquired by regular measuring and weighing or by supplementing tests.

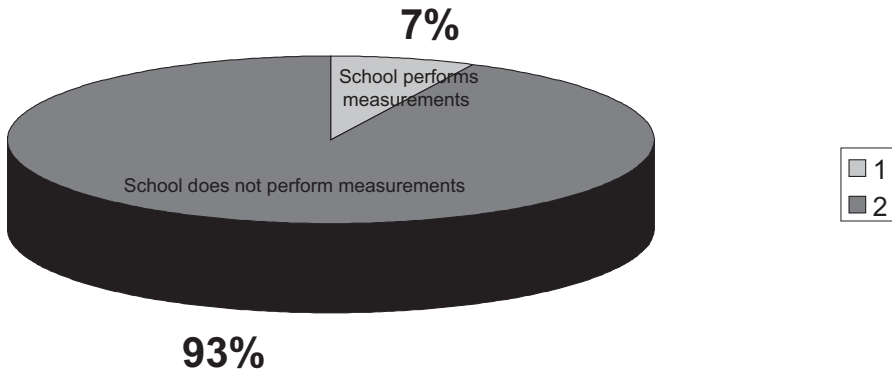
NFSI Criterion: The school should ensure at least once a year regular monitoring of growth and development of children by measuring height and weight of children, and perhaps by monitoring other indicators (blood pressure, blood fat levels, etc.), and to provide the results to the children and their parents, if they so request.

The schools surveyed do not perform the monitoring of growth and development of children except for one school, which - however - does not do it for all the children, but only in the framework of the subject Health Education in higher classes of the primary school. Overall and regular measurement of height, weight and possibly other parameters is refused by the schools due to the necessity of consent from the parents, time workload of teachers and due to the fact that according to them, such acts are within the competence of doctors. *“These things very much depend on the attitude of parents, and we must respect it. We also need to be careful to avoid forcing obese children and their parents in an inappropriate way to deal somehow with the situation; this should be left to doctors. We can raise awareness and teach the children prevention, but nothing more.”*. In the Czech healthcare system, preventive examination of children is performed by a registering practitioner for children and adolescents; the contents and frequency of these examinations are laid down by Decree No. 3/2010 Sb. (Coll.) of Ministry of Health of the CR. In the framework of preventive

examination, data are collected, needed to assess health condition and health risk to people. An integral part is a detailed clinical examination, including necessary laboratory tests. It means that during regular preventive examinations, doctors also measure and weigh the children, and only then - based on an overall examination and interview with parents - consider the need for additional care. In terms of schools, they usually proceed individually; in cases of evident obesity of a child, they offer consultation with the school educational counsellor to the parents.

In the supplementing questionnaire survey, 7 % of urban and 32 % of rural schools stated that they did monitor the growth and development of children. (Diagram 5, 6)

Monitoring of growth and development of children by schools - Brno-City



Monitoring of growth and development of children by schools - Brno-Province

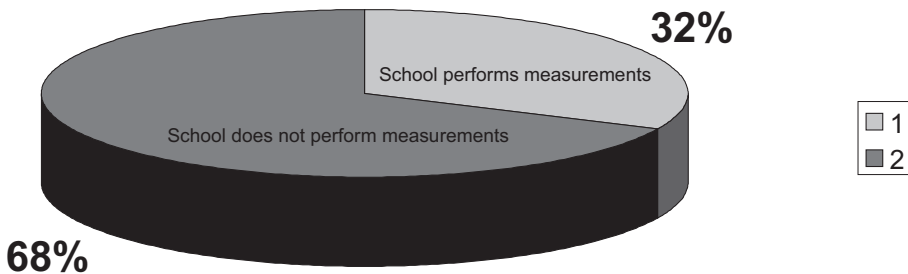


Diagram 5, 6

4. Possibilities of school cooperation with specialists (doctors, consulting services):

In the framework of community work, schools should have links to health services, which they would recommend and refer to the families of the children according to the needs and on the basis of the knowledge of problems faced by individual pupils.

NFSI Criterion: In the event of identifying health problems of children (based on regular monitoring), schools should provide a contact to a specialist; i.e. to make recommendation or arrange a visit of a doctor or other specialists (nutritional counselling, educational and psychological counselling, etc.).

All schools surveyed indicated a possibility of providing contacts to a general practitioner, dentist and pedagogical-psychological counselling. They were directly asked whether they considered it appropriate that the school would have a possibility to also provide contacts to specialists in nutrition counselling or in physical activities; they replied yes, but did not know of anyone, had no contacts in this respect, and did not refer to other types of advice or specialists. As with the previous issue, the reason for it is the belief that it is the responsibility of the practitioner, dentist or psychologist to refer the children-patients to other specialists, so the schools do not have the knowledge of where to direct children and their parents.

In the questionnaire research, 61 % to 64 % (Diagram 7, 8) schools indicate that they do provide contacts to health specialists if needed.

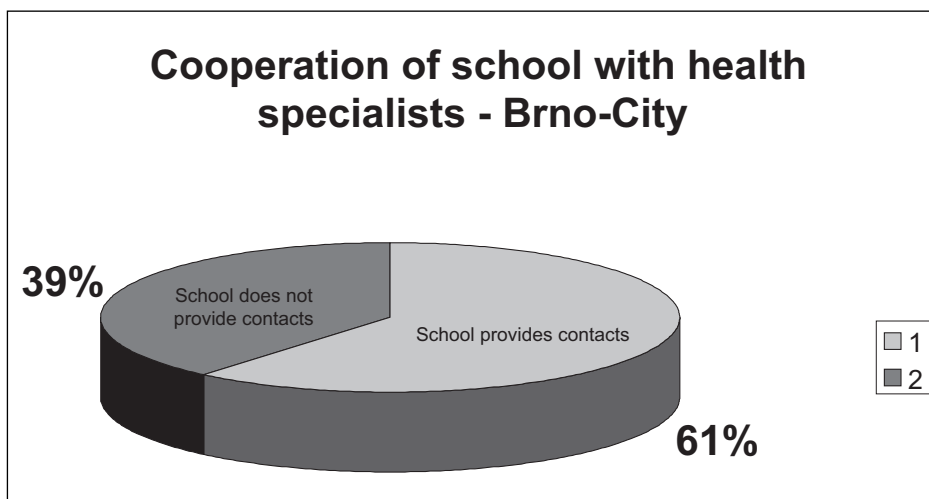


Diagram 7

Cooperation of school with health specialists - Brno-Province

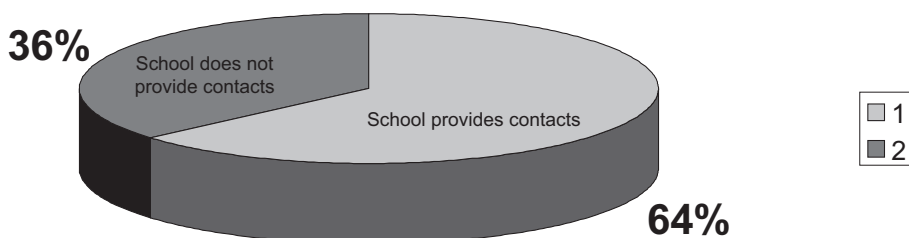


Diagram 8

Conclusion

In the Czech Republic, as in other EU countries, the support of community education exists, as well as “the promotion of the school transformation into cultural and educational centres of municipalities, able to respond to the needs of local people, ... which will access education as a lifelong process and actively involve members of local communities in the decision making process about local issues.”. However, the problem is the prevalent tendency to distinguish (both in a positive and negative sense) between the community school, taken as an “alternative” school, and between the so-called “normal” schools. But in order for schools to effectively fulfil their educational role in prevention programmes and beyond, it would be desirable to strengthen community features wherever it is needed.

Schools are trying to develop mutual communication with parents of the pupils in the framework of the **cooperation with parents**; it is, however, still more on an individual level. The fact that schools consider it unusual if at least some parents get involved, leads to the shyness in approaching the parents and the wider surroundings with requests for their engagement in the school life, and to the feeling of pressure imposed on the parents, which the schools tend to avoid and which results in the lack of initiative for the formation of desirable community contacts.

In cases of **cooperation with wider surroundings**, the schools have developed hardly any ties to health professionals; they are usually only able to provide the families of the children with contacts to general practitioners for children and adolescents, to dentists and pedagogical-psychological counsellors. It would be desirable to add contacts to specialists in the field of nutritional education and physical activities guidance. The offer in the Czech Republic is limited; there are private companies, which, however, are mostly unavailable to schools for financial reasons (here sponsorship would have to be used). Also, there are few civic associations and non-governmental organizations that

would deal with such activities, and those that exist are fully utilized. Schools do not organize events promoting healthy nutrition and healthy lifestyle accessible to the public. They justify it by the lack of interest of parents and other members of the community and by the impossibility of their own involvement due to extensive workload of the school staff and their insufficient financial reward. In many cases, however, they do not know what exactly they should do; in such situations, the schools would undoubtedly benefit from information, guides and manuals for prevention programmes. At present, schools are at least beginning to realize the importance of physical activities of children as one of the prevention factors influencing the healthy development of children and the occurrence of obesity and diseases associated with obesity. Sports days, which from a more general point of view could be included among the actions that promote health, are mostly organized only for pupils, sometimes also for parents, but other participants are not invited. Schools are not able or willing to stop marketing or selling unhealthy food and beverages at school and in the proximity of the school. If they do so, they do it to satisfy the pressure of active parents. They justify this approach by the demand of children for these products, sometimes by the financial benefit for the school, and by the reluctance or inability to negotiate the range of the products with the sellers. Schools participating in the network of Health Promoting Schools are not satisfied with the coordination of the project, even though they see it as an asset; they rely more on themselves. On the contrary, they regard the community cooperation between schools as functioning. The schools surveyed do not meet even another criterion: the education of the school staff. They do not send their employees to courses specialized in healthy nutrition, mostly due to lack of time and insufficient offer of the courses. In contrast, however, in the global survey it was ascertained that the majority of schools meet the criterion of the prevention programme; but it is rather by misunderstanding of what the schools imagine under the topics of healthy lifestyle. It is very often possible to come across the conviction that this field includes, for example, first aid courses or the environmental education. The schools mostly refuse to monitor the growth and development of the children by their measurement and weighing; some justify this attitude by lack of time and employees who would perform the measurement; some assume that they need parental consent to measure and weigh children and that such consent would be withheld. In addition, they quite legitimately refer to the Czech health system, where children visit their general practitioner in regular two-year intervals; in the framework of their preventive check, the above measurements are performed. The GP makes records and assesses them, and on the basis of this assessment recommendation is made in terms of further examinations and treatment procedures for undernourished or obese children. Rather than performing the measurements, schools should therefore appeal to parents and the surroundings not to neglect preventive checks of children, and to familiarize the children as well as parents with the importance of prevention for all areas of health by providing them overall education and raising their awareness.

In conclusion it can be added that the majority of schools underestimate the community features and do not utilize all possibilities of involving the wider community in raising the children. The research showed that there was no major difference between urban and rural schools, or between the schools engaged in the prevention programme and those not engaged in it. This suggests that the influence of prevention programmes

on the community and the impact on building the relationships between the school and its surroundings are still rather low. However, a quality and well-established prevention programme could help schools deal with many problems they face.

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Rozhovory s vedením zkoumaných škol

VÝZNAM KOMUNITNÍCH PRVKŮ PŘI VÝCHOVĚ KE ZDRAVÉ VÝŽIVĚ A ZDRAVÉMU ŽIVOTNÍMU STYLU NA ZÁKLADNÍCH ŠKOLÁCH

Abstrakt: V intervenčních preventivních programech zaměřených na podporu zdraví je zdůrazněna nutnost provázanosti a spolupráce školy s okolím jako jedna z hlavních podmínek jejich úspěšného fungování. Také v programu Škola zdravé výživy (Nutrition Friendly School Initiative - NFSI) jsou komunitní prvky nedílnou součástí programových kritérií. Příspěvek představuje výsledky výzkumu, při němž bylo s použitím metodiky Světové zdravotnické organizace (WHO) uskutečněno dotazníkové šetření na základních školách v okrese Brno-město a Brno-venkov a byla provedena kvalitativní analýza na vybraných školách. Výsledky ukazují, jak školy spolupracují s rodiči, širším sociálním okolím a s odborníky při výchově dětí ke zdravé výživě a zdravému životnímu stylu. Schopnost školy zajistit kvalitní výchovu v této oblasti také úzce souvisí se znalostmi učitelských i ostatních pracovníků a s možnostmi jejich dalšího vzdělávání v oblasti zdraví a zdravé výživy.

Klíčová slova: komunitní prvky, škola zdravé výživy (NFSI), výchova ke zdraví, spolupráce školy s rodinou a odborníky

A NEW CONCEPT OF EDUCATION TO HEALTHY EATING HABITS IN PRIMARY SCHOOL

Eva MARÁDOVÁ

Abstract: *The paper is focused on the role of schools in shaping the nutritional behaviour of children of primary school age and the current educational reality in health education in primary schools. It presents the results of research studies dealt with at the health education department at Charles University in Prague - Faculty of Education, which surveyed nutritional preferences of primary school pupils and their knowledge about nutrition and healthy lifestyle. In response to detected problems (unhealthy eating habits leading to obesity, risk of eating disorders) it makes recommendations on how primary school teachers can improve their work in promoting healthy nutrition habits through school education programmes. The research pays attention to the need to modify the content of health education module in the primary school teaching programme at pedagogical faculties.*

Key words: *healthy nutrition, school curriculum, health education, teacher training*

1. Nutrition habits in childhood

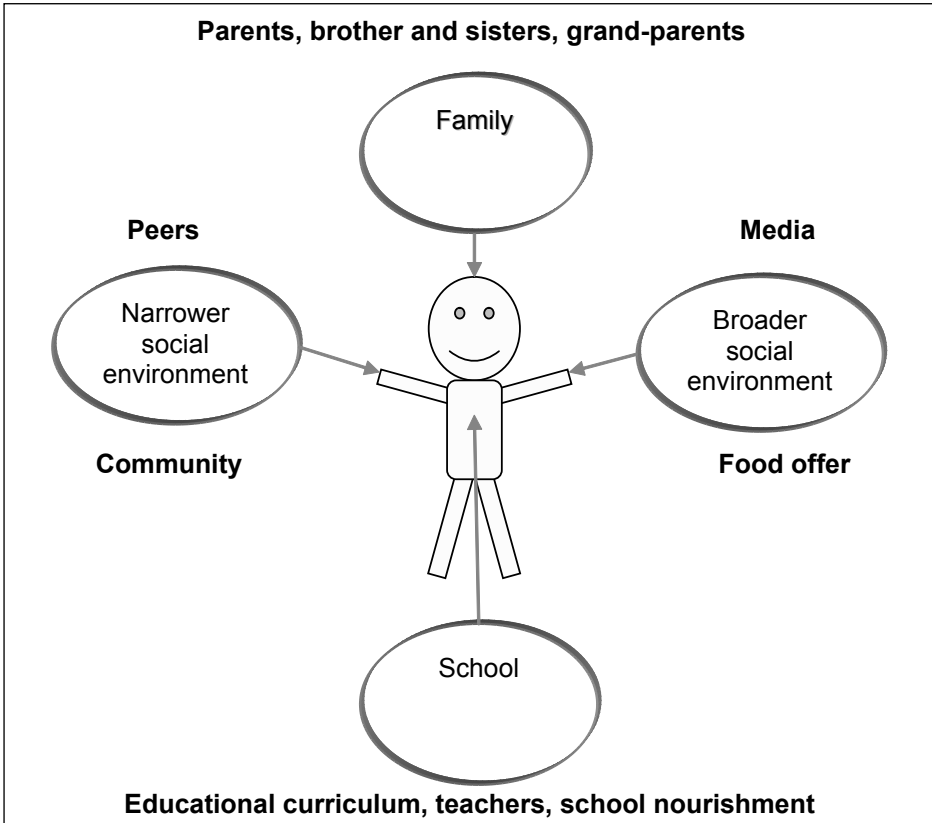
Attitudes to food and nutrition behaviour are formed from early childhood. Family background is an irreplaceable influence, i.e. the lifestyle of the family in which children grow up. Influence of family on the child's attitude to food and nutritional habits is based on multiple sources. It includes genetic factors, personality characteristics of parents, their interests, parents' educational methods, the influence of siblings, family economic situation, its cultural and social backgrounds.

Adults can influence children's relationship to food in different ways:

- a) verbally at the time of meals or other times,
- b) non-verbally presenting offered dishes to taste or allowing to observe food preparation,
- c) through their own nutritional behaviour
- d) using food for other than nutritional reasons (food as a reward).

Other social factors are beginning to apply in this regard as early as in preschool age. Influence of peers and other persons whom the child encounters is also considerable. Also food products offered on the market and particularly the much-discussed pressure advertising campaigns aimed at the children are an issue. The wide variety of influences extends to intentional learning topically focused on the acquisition of proper nutrition and healthy eating habits when children begin with school attendance.

Factors affecting nutrition behaviour of a child



Children come to school with eating habits that have developed in the family and kindergarten. They are used to a daily food and drink regime. Their eating preferences and aversions are already fairly settled. They are mostly accustomed to not being forced eat and having free access to drinks or sweets. If they attended kindergarten, their parents did not have to worry about when and what the children will eat or drink during the day, until this time. With the entry into primary school, children are receiving knowledge about proper nutrition. The school regime and meals in the school cafeteria bring new experiences associated with food. In any case, the formation of proper nutritional habits at school is demanding and cannot happen without close cooperation between the school and family.

2. Nutritional disorders in childhood

Lack of certain nutrients or their significant surplus can adversely affect the child's long-term health and physical and mental development. Health-supporting nutrition for primary school children should be based on the following recommendations:

- Regular diet (5 to 6 meals a day, energetically adequate),
- Adequate intake of fluids (milk, fruit teas, juices)
- Adequate intake of protein (meat 3–4 times a week, eggs 2 to 3 pieces per week, milk in quantities of 1/3 litre of milk per day)
- Daily consumption of vegetables and fruits (3x daily),
- Inclusion of wholemeal bread, cereals, legumes, incl. soybean,
- Composition of fats in favour of unsaturated fats,
- Reducing the consumption of sausages, canned foods, fatty, salty, spicy dishes and sweets, incl. sweet drinks,
- Developing desirable eating habits.

Knowledge about proper nutrition allows children to evaluate their own current diet compared with the views and recommendations of experts and to assess the risks of inappropriate eating. The older children are, the more often and especially more precisely they are able to influence and control their food intake. They distinguish the taste aspects of food much more. They associate food with new adventures and experiences that can be positive but also negative. Based on this linking, a child begins to create their own menu, learns how to behave when eating, masters basic hygiene habits associated with food. Nevertheless, at this stage of life the child is still dependent on its surroundings (especially family), i.e. on what the family provides and what is available to the family.

In recent years, paediatricians have been warning about the trend of increasing overweight and obesity incidence in childhood. For example, surveys carried out in 2000 revealed 7 % of overweight children and obesity in 6 % of children of school age. Current representative data on the prevalence of overweight and obesity in the Czech Republic in the adult and paediatric population is contained in a study, "Lifestyle and obesity 2005". According to published results, every fifth child in the Czech Republic aged 6 to 12 years suffered from excessive weight at the time of the survey, specifically 10 % of children were overweight and 10 % obese. These numbers are certainly alarming. A finding that the highest proportion of children with obesity is found among children aged seven years, a period of fundamental changes in their lifestyle related to entering elementary school certainly calls for consideration.

It appears that the proportion of individuals with excessive weight decreases with age (for adolescents aged 13 to 17 years it is approximately 11 %). In terms of the health of children and adolescents, however, this trend can not be assessed as positive, because the opposite extreme often occurs at this age - the rising number of children underweight. For girls, underweight reaches even 10 % and is associated with increasing incidence of anorexia nervosa and bulimia.

The main cause of overweight and obesity among children is their declining lifestyle, which is accompanied by an imbalance between energy intake and output, usually

a superfluous carbohydrate intake with lack of exercise. A great role is played by the occurrence of excessive weight in the family, caused partly by genetic factors, particularly however by the composition of the diet and overall lifestyle. Overweight parents significantly increase the risk of overweight children. It is proven that in families where both parents are obese, it is more than twice as likely that a child aged 6 to 12 years will also be obese. This fact should be reflected in preventive measures. Obese parents should pay close attention to healthy lifestyle of their children due to an increased risk of their overweight and obesity. They should realize that excessive body weight of children is not just a “cosmetic” issue, but has serious negative effects on the metabolism, burdens the bone, joint and vascular systems. Unfortunately, these families often (approx. 13 %) hold the view that their pupil has normal weight, although in fact he / she falls into the category of children with excessive weight.

Long-term clinical studies have shown that regular sporting activity reduces morbidity in children, maintains body weight in norm and has a positive impact on the psyche of the child. The recommended duration of physical activities for school children is 7 hours per week. It was found that school age children engaged in more demanding physical activities for 6 hours and 20 minutes on average in their free time during the week. For older pupils of school age, the average time devoted to challenging physical activities decreased to less than 5 hours a week. Children spend the vast majority of their free time in front of a computer or television. Passive leisure activities and lack of exercise together with a supply of energy dense foods reflects negatively on the health of the child population.

3. Schools’ influence on children’s nutrition behaviour

The requirement to implement systematic education to a healthy lifestyle and health in schools is based on long-term strategy of the European health promotion programme and is embedded in the existing school documents. Promoting a healthy lifestyle in school education means not only to provide students with information about the principles of good nutrition, but also educate them so that everyone could choose such a way of eating that is good for their health. A new concept of education to healthy eating habits in primary school should systematically address all children, throughout their school education, appropriately to their age, interests and needs.

Education in primary school (according to the Framework Programme for Basic Education) under the heading “Man and Health” leads students to become aware of what is appropriate and inappropriate for humans in terms of daily routine, hygiene and nutrition, and motivates to children’s active involvement in health-enhancing activities.

In direct relation to the content of educational curricula, the educational programme should influence nutritional behaviour of children by ensuring their meals and drinks during the time which students spend in school. A key role is played by the school cafeteria, or an offer of other catering services.

We can discuss a number of fundamental questions in this context: To what extent the current school education fulfils its educational and training goals of health promotion? How does it influence pupils’ nutritional habits? Can it also contribute to preventing childhood obesity?

4. Monitoring the nutritional habits of primary school children

In 2007, Charles University in Prague - Faculty of Education, carried out a survey intended to get a picture of primary school children's orientation in healthy eating and of their current eating habits.

The **aim** of the survey was to monitor eating habits and attitudes to food among children aged 10-12:

- food and drink,
- preferences in selecting food and drinks,
- use of school meals and satisfaction with this service,
- children's knowledge of good nutrition.

Research questions also concerned parents and teachers:

- What importance parents attach to their children's nutrition?
- How parents assess the quality of food in the family and school?
- How do teachers pay attention to primary school education to healthy eating habits?
- What is the primary school teachers' level of knowledge in the area?

Research used a questionnaire survey method. The survey involved a eight primary schools. Schools were approached randomly and selected based on their interest, in order to collect and summarise information on the nutritional habits of children from different backgrounds (city, small town, village). The schools willing to cooperate also included 3 schools participating in the "Health Promoting Schools" programme.

Number of respondents:

Primary school pupils (aged 10 to 12)	624
Pupils' parents	294
Primary school teachers	46

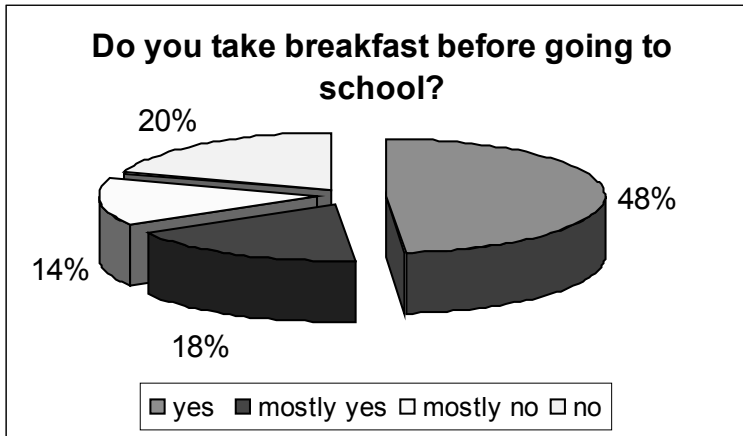
Each group of respondents had a special version of the questionnaire prepared for them. Pupils were asked to complete questionnaires during school hours. Through them, a questionnaire was distributed to parents. As is evident from the list above, returnability from the parents was only 47 %. Teachers' questionnaire was filled out by teachers of those pupils who participated in the survey.

5. Selected results of the survey

Due to the extent of the survey, the following summary describes just some interesting results.

a) Do you eat breakfast before going to school?

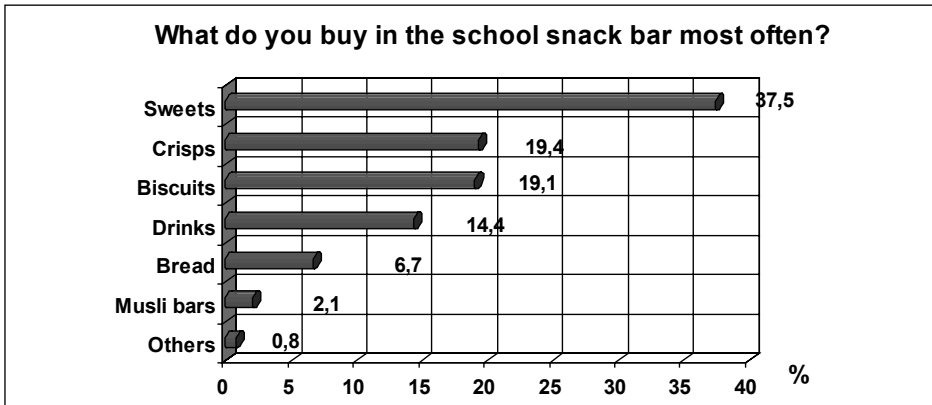
Irregular meals are discussed in connection with the prevention of obesity, especially skipping breakfast.



The graph shows that only 66 % of surveyed children eat breakfast at home. Children who do not eat at home before going to school, reported reluctance to eat in the morning or the lack of time as the reasons. Comparisons revealed that 14 children from the monitored file even did not eat any snack in the morning. It also showed that boys eat breakfast at home more often than girls.

b) What do you buy in the school snack bar (vending machine) most often?

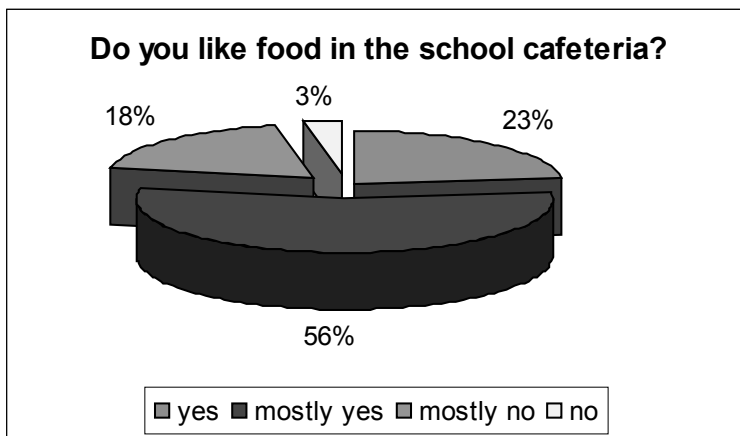
All the surveyed schools had a school snack bar. To illustrate the nutritional preferences of primary school children, which can be directly related to the issue of childhood obesity, a presented summary shows answers to the question what children usually buy in the school snack bar.



The answers show not only that primary school children mostly eat sweets, biscuits or salty crisps at school in the morning, but also the fact, how the children spend snack money from their parents. The chart also indicates what range of products is offered in school snack bars in those schools where research was conducted. To what extent can school influence this reality through education to proper nutritional habits?

c) Do you eat in the school cafeteria and, if so, how satisfied are you?

Several questions followed the use of school catering and measured respondents' views on its quality. Of the total number of respondents, 88 % of children eat in the school cafeteria. The question, how satisfied they were with the quality of food is evaluated and shown in the following graph.



It is gratifying that children mostly liked the meals in the school cafeteria. 87 % of children expressed full satisfaction with the school cafeteria setting. Children are able to form free answers indicate what they believed was in boarding school improvement. Interestingly, there are the most frequent responses were evaluated in order of decreasing frequency as follows:

Children were able to add comments indicating what they believed should be improved in the school catering. The most frequent responses which were evaluated in the order of decreasing frequency are shown as follows:

- Extend the range of served meals,
- Wash dishes better, especially trays,
- Give larger portions,
- Offer more fruits and vegetables,
- Prepare less fatty food
- Serve cold drinks for lunch,
- Replace cooks (they scream and communicate inappropriately with children),
- Not to prepare mashed potatoes out of stock.

d) How often do you eat the selected types of food?

The results of monitoring dietary composition are shown in the following table:

How often do you eat the selected types of food (dishes) (shown in %)?

	daily	3 times a week	once a week	very scarcely	never
meat	36,9	36,9	16,5	9,7	0
smoked goods	19,3	32,5	21,0	27,2	0
fish	0	11,4	19,3	51,8	17,5
fast-food	7,0	33,3	25,4	27,3	7,0
fruit	57,9	25,4	7,0	9,7	0
vegetables	36,9	33,3	11,4	16,8	1,6

The table shows that for example eating **fruits** generally outweighs the consumption of vegetables. It is pleasing that more than half of the respondents consume fruit daily. Children identified apple as the most popular type of fruit (probably because they are readily available to us), then oranges, tangerines, bananas, strawberries, grapes and more.

As for **vegetables**, we can say that about 70 % of children eat vegetables at least 3 times a week. Compared with nutritional advice, this is a condition we can not be satisfied with. Regarding popularity, the children reported mostly carrots, cucumbers, tomatoes, peppers, lettuce.

The results also show that most respondents consume **meat** daily or 3 times a week. The answer “never” was not checked by anyone, which means that there was no child vegetarian among the respondents.

Fish consumption is traditionally low. The diet of an absolute majority of children includes fish less frequently than once a week, many children even chose the answer “never”. This finding is certainly a challenge for educators in the classroom to motivate children to include fish in their diet.

Unfortunately, the consumption of **smoked goods** was found almost at the opposite extreme. A fifth of respondents ticked the answer of consuming sausages every day. This condition is also a major problem in the eating habits of children.

e) Other nutrition preferences

The image of nutritional preferences of school age children is completed by the following findings: 68 % of respondents get sweets whenever they ask for them. Children are mainly attracted by their sweet taste (95 %). Only 13 % of children decide based on the product packaging. 91 % of children said that they buy sweets themselves. When asked what the children would buy to eat if they were given money, they replied: chocolate (32 %), biscuits (18 %), sweets (18 %).

f) From the parents' observations

Parents were asked, among other things, whether they thought their child had enough knowledge of proper nutrition. Almost three quarters of parents were convinced of sufficient awareness of their children (74 %), conveyed to them by themselves. The fact that only half of them mentioned school as the source of the instruction, suggests that many parents do not care too much about the current contents of school education.

Interesting findings were brought by the question: **Are you a good role model**

for your child in eating habits? Only 58 % of parents thought themselves a good example for their children in terms of nutrition. All others (less than half of respondents) admitted that they do not follow the principles of proper diet in life and are not a good role model for their children. This may of course complicate teachers' efforts to lead pupils to correct nutritional habits.

g) From the teachers' statements

One questionnaire was designed for primary school teachers. Research survey was attended only by women. They were also asked a similar question: ***Are you a good role model to your students in eating habits?*** The evaluated responses are alarming. Only 18 teachers (40 %) believe that their nutritional behaviour is an example for their students. The same number admits quite opposite reality, i.e. the full 40 % of respondents admitted that with their attitude to nutrition, they are not good role model for their pupils and the remaining 20 % failed to assess.

Educating children to healthy eating habits should be a systematic process, with awareness of the importance of health protection, and especially by own example. Teachers of primary school children are important as an authority and role model. They have a great opportunity to influence pupils also in the field of nutrition and obesity prevention. Just a small example: If the teacher consumes fruit, vegetables, dairy products, etc. (in front of his pupils), it is a powerful and positive example for children (they feel like eating just the food they see in someone else). If the teacher succeeds to encourage healthy lifestyle (healthy eating and active leisure) with primary school children, it will be easier for them to resist the negative influences of consumer society in adolescence, which can damage their health.

6. Recommendations for the creation of school curriculum

It turns out that if the teacher has an overview of pupils' obtained knowledge and their eating habits during the preparation and implementation of the programme focused on nutrition, he / she is able to effectively develop these skills and also possibly change the forming attitudes of children to food and manners of its presentation.

The results of the survey findings may help primary school teachers in raising children to eat in a healthy way. If similar investigations are performed by teachers at their school, they will get valuable information that will enable them to positively influence the eating habits of their pupils.

Based on the research described above, it is possible to formulate basic recommendations for the implementation of educating for correct nutrition in the school curriculum:

- **Education on proper eating habits** should take place spontaneously, naturally and as part of everyday life.
- **Curriculum on healthy eating** should be included in topical programmes in all grades of primary school as part of health education.
- **Education on proper eating habits** should be implemented through interactive methods, strengthening pupils' confidence and social competences.

- Ensure the conditions for effective physical education targeted at the **development of health oriented fitness**.
- **Monitor nutritional habits of children** – ensure maintenance of eating and drinking regime (organisation of breaks).
- **Secure pupils’ drinking regime** - ‘school milk’ events, range of quality drinks, watch the products provided in vending machines.
- **Motivate** parents and pupils **to make use of** nutritionally balanced **school meals**.
- Create a **calm and cultured environment** for dining in the school cafeteria (“school restaurant”).
- Promote a positive social climate during lunch distribution through good organization.
- Offer students engaging **physical activities for leisure time**.
- Work with parents of children at risk of obesity, sensitively and with erudition.
- Provide support to children in coping with **problems associated with eating disorders**.
- Implement **long-term school projects** aimed at promoting health and healthy eating together with family and community.
- Ensure the **promotion** of everything that a school does for healthy nutrition and the education for right eating habits.

The effectiveness of fulfilling the objectives of school education on correct nutrition is undoubtedly in the hands of educators. It is a challenging educational activity, it is therefore necessary to allow primary school teachers to be systematically educated in promoting health. The issue of healthy lifestyles, including formation of nutritional behaviour, should be implemented in full-time study programmes and combined studies at all faculties of education.

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K NOVÉMU POJETÍ VÝCHOVY KE ZDRAVÝM STRAVOVACÍM NÁVYKŮM V PRIMÁRNÍ ŠKOLE

Abstrakt: Příspěvek je zaměřen na úlohu školy při formování nutričního chování dětí mladšího školního věku a současnou edukační realitu v oblasti výchovy ke zdraví v primární škole. Předkládá výsledky výzkumných studií řešených oddělením výchovy ke zdraví na Univerzitě Karlově v Praze – Pedagogické fakultě, v nichž byly sledovány nutriční preference žáků 1. st. ZŠ a jejich znalosti o výživě a zdravém životním stylu. V návaznosti na odhalené problémy (nezdravé stravovací návyky vedoucí k obezitě, ohrožení poruchami příjmu potravy) obsahuje doporučení, jak mohou učitelé primární školy prostřednictvím školních vzdělávacích programů zkvalitnit své působení v oblasti podpory zdravých nutričních návyků. Věnuje se pozornost nutné úpravě obsahové náplně modulu výchovy ke zdraví ve studijním programu učitelství pro 1. st. ZŠ na pedagogických fakultách.

Klíčová slova: zdravá výživa, školní vzdělávací program, výchova ke zdraví, vzdělávání učitelů.

THE LIFE STYLE OF TODAY'S ADOLESCENTS AND THEIR EATING HABITS

Miroslav JANDA, Jitka ŠAFÁŘOVÁ, Gabriela VĚCHTOVÁ

Abstract: *This thesis provides a perspective on the health of a target age group whose approach to health values is being formed and is stabilizing. It is an important lifestyle factor and a factor in establishing one's self within the ranks of society. This paper provides information about the nutritional needs of a balanced quality diet and presents the results of a sub-research study whose aim was to analyze the position of adolescents towards factors affecting their health.*

Key words: *health, lifestyle, adolescent, healthy nutrition, immunity, habits, attitudes, being active*

Introduction

Healthy nutrition is an important constant for health maintenance at school facilities and is one of the basic requirements of the formal curriculum of educational institutions satisfying the „Health-Promoting School“ program (hereinafter referred to as HPS). This program has had considerable popularity in our schools, yielding many effective results that are strengthening the health of pupils and students. „The mission of HPS is to achieve a situation in which every child in the Czech Republic has the opportunity to receive an education at a school which encourages health in all its activities.“ The intention of those carrying out the program is to positively influence children's healthy nutrition and diet with a secondary impact in the area of physical, mental, spiritual and healthy well-being. One's well-being is thus formed into subjective qualitative levels, which concededly contribute both to an individual's instant and prospective (future) healthy state as well as of „society's“. Quality (healthy) nutrition inherently contributes to the support of one's immunity and the entire body. We can positively strengthen and even protect our health by affecting all of a person's personality components. Our health is reflected in our lifestyle and it needs to be structured and reinforced by acquiring specific attitudes toward life.

There is no doubt that the most crucial period for what is being discussed is the age at which a child forms their eating habits, as well as when they later apply those habits. That means in the period of most significant proportional change in the organism, as well as possible changes in rational nutrition. A balance of rational nutrition is assumed

to be in terms of quality of food as well as their quantitative energy values. The easiest way to create such a balance is through children's spontaneous and straightforward experience. This means that children see examples of healthy behavior as well as learn through their own experience of living in health-friendly environment.

It is parents (together with the school) who especially play an important role in affecting their children in this respect. To be more precise, it is parents as (the most important) guarantors who have an enormous interest in making sure their children's development is both trouble-free and healthy, as well as the school, which should meet some limiting regulations, decisions and standards closely linked with the issue of school hygiene and the health of children.

Where adolescents are concerned, however, neither legal standards and tools nor parents' influence on their children's eating habits, hygiene habits and lifestyle have a broad effect with respect to the natural developmental element of becoming independent. And the generational group of adolescents will be our primary interest in this empirical study. How are individual lifestyles, attitudes towards living a healthy life and healthy values of life spread? „A proper dining and hygienic environment leads to cultural and hygienic habits. It establishes and forms proper eating habits that promote health and break down prejudices“.

Nowadays, schools, without exception, offer an ideal environment for combining organized and targeted education with a professionalized active and strategic attitude towards health aimed at guiding individuals toward being responsible for their health. „The philosophy of health promotion is based on the scientific knowledge that the health of each individual (whether or not we are aware of it) is the result of the mutual interaction of all aspects of one's being and their relationship with the world around them. It is not possible to preserve one's own health nor the health of the world without being aware of the necessary internal and external harmony. The health of a human being is not just the absence of disease. It is the result of mutual interactions of the whole person, all of his systems and components at the biological, psychological, social, spiritual and environmental level.

According to J. Holčík, we should systematically motivate people to take care of their own health. In this respect, he also states that „to summarize, the elementary determiner of health is people themselves. This means individuals as well as groups, institutions and organizations formed of them. What they do for their own health primarily depends on them. In many cases, people demonstrably damage their health; mostly unnecessarily and at high costs (e.g. smoking, alcoholism, risky driving, dangerous sexual behavior, excessive and inappropriate diet). „

V. Smékal puts it very aptly when talking about health: „The principles of a healthy school are often viewed as merely a formal campaign that is limited to health care institutions, but far less as something that creates a climate of social well-being and reciprocity“.

This thesis deals with the lifestyle of high school students. In regards to the changes in our life style with its less demanding way of life, the current problem of our society lies not a shortage of food-stuffs, but rather in a surplus, which has resulted in obesity and other serious diseases. It is therefore necessary to deal with this issue more intensively. After all, the behavior of a population and its current lifestyle significantly affect the mass occurrence of some diseases within a stratified society.

The Nutrients We Need

Carbohydrates are an important source of energy. The main representatives of monosaccharides are glucose (grape sugar) and fructose (fruit sugar). Oligosaccharides and polysaccharides are complex carbohydrates. Polysaccharides are the basic elements of fiber. Fiber is found in cereals, legumes, fruit and vegetables. It significantly affects the digestive processes within the organism and is important for the prevention of certain health problems (constipation, diverticulitis, cancer and others). There are studies that prove the relationship between the intake of fiber and serum lipid levels. Hyperlipidemia is less common in people whose diet is rich in fiber.

Proteins are necessary for the creation and regeneration of tissues, are a part of enzymes and hormones, ensure the transport of substances throughout the body, and are also a source of energy. Proteins are received in both animal and vegetable form. Animal proteins are Grade I proteins for human nutrition because they contain all of the essential amino acids. Among the main representatives of animal proteins are milk and dairy products, eggs and meat. On the other hand, vegetable proteins do not contain all of the essential amino acids, which is why they are not Grade I. Among these are proteins from cereals, legumes, fruit and vegetables. An insufficient intake of protein by adolescents can lead to disorders in mental and physical development and reduced immunity. Teenagers on weight reduction diets, vegans and individuals coming from families of poor socioeconomic status are all threatened by a lack of proteins. During a long starvation period, proteins are used as an emergency source of energy, which is disadvantageous for the organism. On the other hand, a surplus of protein causes kidney and liver diseases; excessive accumulation of metabolic products of protein may even threaten one's life.

The presence of fats in the diet is necessary for the proper progress of the metabolic processes. The composition of their fatty acids significantly affects the health of the one who consumes them. Saturated fatty acids are found predominantly in fats of animal origin, whereas among vegetable fats it is mainly to be found in coconut oil. Unsaturated fatty acids are either monoenoic (with one double bond) or polyenoic (with more double bonds). The body is not able to create polyenoic acids on its own. They are therefore essential and have to be taken in through food. Among the most important ones are linoleic acid (n-6) and alpha-linolenic acid (n-3). Linoleic acid is converted within the organism into arachidonic acid, while linolenic acid is converted into eicosapentaen acid (EPA) and dokosahexaen acid (DHA). Many substances of a number of various purposes are derived within the organism from these acids. Linoleic acid is contained in nuts, vegetable oils (sunflower, corn, poppy seed, sesame seed, etc.) and in most margarines. Alpha-linolenic acid is found in oils such as soy, rapeseed and linseed, as well as in some margarines. EPA and DHA acids are contained mainly in the fat of sea fish (e.g. salmon, mackerel, cod). A lack of lipids leads to a breakdown of certain physiological functions, for example Beta oxidation of fatty acids in the mitochondria of muscle cells and myocardium leads to a disruption in the creation of certain hormones and the intake of essential fatty acids and lipophilic vitamins is reduced. A low intake also leads one being underweight and problems related to this, such as an irregular menstrual cycle. An excess of lipids is stored in the body as supplies, which in the long run

leads to one becoming overweight or obese. An increased intake of lipids also leads to cardiovascular diseases and cancer.

The Food Pyramid

Everyone has heard of the food pyramid. But not everyone knows as much about it as they think they do. The food pyramid is not a strictly given set of instructions on when to eat, how to prepare one's food, etc. It merely lets us know how to roughly create a diet and in what amounts we should consume the individual portions. In other words, what should constitute the basis of a diet and what we should avoid or eat in only small amounts. And that's where its charm can be seen. In its unenforceability. No one tells us that we have to eat each of the representatives from one food group (e.g. cereals) during one day, but that we can consume bread one day and on the next substitute oatmeal. Of course, we also need to use common sense, for example by not constantly filling ourselves up with bread.

The food pyramid is a graphical representation of nutritional recommendations that indicates the frequency with which one should consume the various food groups (expressed by a defined number of portions). It takes the form of a triangle showing a decline in the frequency of consumption, which starts at the base (cereals) and continues up the pyramid through fruits and vegetables, dairy products and meat, all the way up to processed foods whose intake we are recommended to reduce (fats, oils, sweeteners, salt).

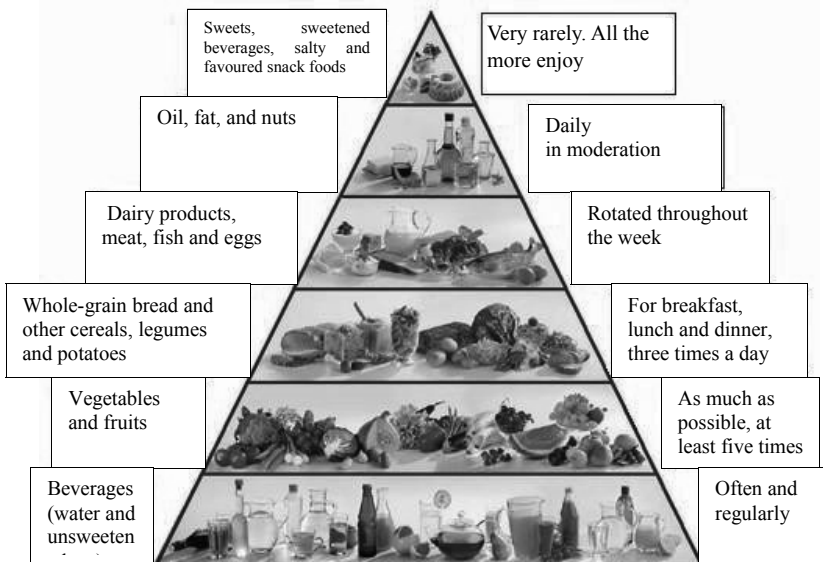


Figure 1: The pyramid of food that a person should eat daily as much as possible and also those one should rather avoid.

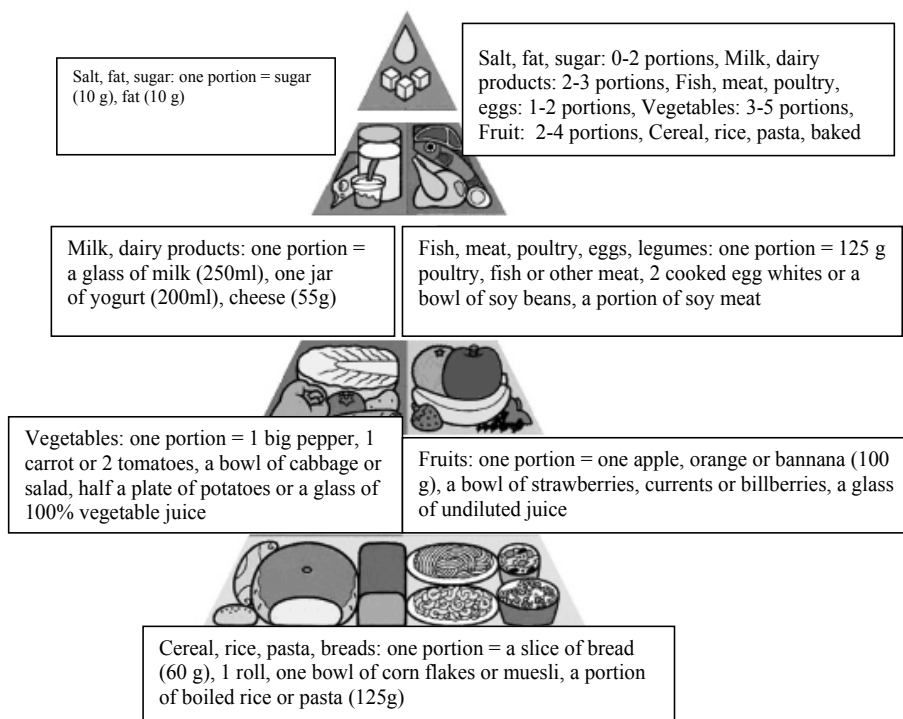


Figure 2: The pyramid clearly explains the composition, recommended quantity and ratio of the food types in a properly composed diet.

The food pyramid was created by experts as an aid in nutritional recommendations and consists of the 6 food groups. Each food group is accompanied by a written recommended number of servings that a person should eat in a day. The size of the servings is clearly defined.

In other words, the pyramid shows what should form the basis of a person's diet, as well as what we should avoid or eat in only in small amounts. The closer a food group is to the base of the pyramid, the more it should be a basic food that we ought to eat daily. As we get closer to the top of the pyramid, we gradually come upon foods we should not consume in large quantities (i.e. once a day or even once a week).

Adolescent eating habits

The diet of adolescents is not that different than that of adults. If adolescents are provided with the principles of good nutrition while in early childhood, it is not difficult for them to maintain these principles. Many children and adults, unfortunately, are not guided by these requirements. In many cases their diet is one-sided, nutritionally poor, but energy-rich. Parents of adolescents find it difficult to make any fundamental changes in their diet. They eat at their own discretion or according to patterns learned from their surroundings.

A frequent problem of adolescents is that they do not eat breakfast nor have snacks between meals. Breakfast should be the first meal of the day, as it provides the body with necessary energy. A snack ensures that one has sufficient energy during the morning so that the body does not have to suffer until lunchtime or till the person gets home from school. Eating regularly also prevents people from becoming overweight or obese. If a teenager eats only twice a day, their body gets used to storing some extra energy, which causes an increase in body weight. Adolescents often eat in fast food restaurants. Food prepared in these restaurants often has unnecessarily high energy values, is too fatty, salty and unhealthy, which can lead to many health problems. (4)

The other extreme to excessive energy intake is insufficient energy intake in the form of anorexia and bulimia. Anorexia is a disease which is characterized by restricting food intake in order to reduce body weight. These tendencies are most often found in girls going through puberty or during their subsequent adolescent years. Bulimia nervosa manifests mainly as bouts of uncontrollable overeating and consequent vomiting. Girls suffering from this disease admit to fears of becoming fat and dissatisfaction with their bodies. We should take into account that this disease is not a problem only of girls, but of boys as well, and starts at a very young age (2).

A proper drinking regimen is also a problem among adolescents. Students usually choose sweet soft drinks, which contain large amounts of energy, sugar, artificial colors and other undesirable substances. The foundation of a proper drinking regimen should be natural bottled water and fruit tea. The consumption of alcohol and other addictive substances is typical at this age, which can cause disorders of the nervous system and endanger one's proper development and overall health (4).

Why drink at all? „On average, a person loses about 2.5 liters of water per day through their urine, stool, breathing and skin. However, the body must maintain its balance of water, and to make up for these losses it must take in water. About a third liter of „new“ water per day facilitates metabolic activity in the body, and we take in about 900 ml of water that is bound up in our food. This means we have to deliver the rest (about 1.5 liters) directly into our bodies in the form of liquids. Every day, throughout our lives. Over 70 years this represents 40 thousand liters of water (fluids). The quality of these fluids and their regular intake in proper amounts are an important precondition for maintaining a person's health, well-being and work performance. This article should help people who are interested in their own health or the health of those closest to them or employees in understanding how to manage a proper drinking regimen and how to look at ubiquitous advertisements for the „best“, „tastiest“, „healthiest“ or „most natural“ beverages and bottled water that we should (according to the advertisement) enjoy every single day in the greatest possible amounts.

A sufficient amount of fluids ensures a smooth metabolism and the proper functioning of the kidneys. In other words, the excretion of wastes from the body. In addition, it also enables the proper functioning of virtually all of the other organs, as well as one's physical and mental functions and, last but not least, it contributes to skin having a normal appearance. On the other hand, a lack of water in the organism (dehydration) leads to problems of an acute and chronic nature. Among the acute symptoms of mild dehydration are headache, fatigue and torpidity, a decline of physical and mental performance including decreased concentration. The loss of 2% of one's body weight in fluids

means a loss of up to 20% in performance. As for children, this results in a reduced ability to stay alert during lessons, which may negatively affect their school results. Only 5% dehydration puts a person in danger of overheating, circulation failure and shock. A mild but long-term lack of fluids, which we do not sometimes even realize due to the daily hustle, may later result in serious health disorders. In addition to repetitive headaches and constipation, this may also lead to failures of kidney function and the occurrence of kidney and urinary stones. Dehydration also increases the risk of urinary infection, appendix inflammation, certain types of cancer (e.g. rectal and bladder) and cardiovascular diseases. Furthermore, it is assumed that a number of other so-called diseases of civilization are the consequence of improper diet (including a lack of fluids). In other words, that some diseases of civilization are either first symptoms or a result of mild but permanent dehydration.“(13)

Research Objective

The objective of the empirical part of the seminar thesis is to obtain information about the lifestyles of high school students. In addition, the aim is also to define problem areas and suggest some possible solutions. The focus of the questionnaire will be to determine how often students consume fruits, vegetables, dairy products, meat, legumes and fish, how many times a day they eat, how much fluid they drink per day and how they evaluate their physical activity.

Methodology

A questionnaire was used for collecting the data. High school students were the focus of this research. A total of 70 students were addressed; 35 boys and 35 girls. After the data was compiled, it was evaluated with the aid of charts. Each chart was then provided with commentary. The most important findings obtained by the questionnaire have been summarized in the conclusion.

Table 1: Characteristics of the population according to age

Age (in years)	Number of students
15	17
16	24
17	19
18	10
19	0

Table 2: Characteristics of the population according to the type of high school

High school	Number of students
Grammar School	19
Secondary pedagogical school	27
Vocational schools	24

Hypotheses

Hypothesis 1 – One quarter of respondents do some physical activity every day.

Hypothesis 2 – An absolute majority of high school students have a normal body weight.

Hypothesis 3 – Girls smoke less than boys.

Evaluation of the questionnaire findings

Chart 1: Evaluation of Question 1 - How often do you consume vegetables?

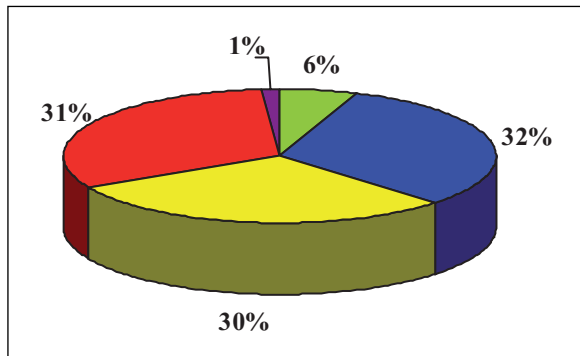
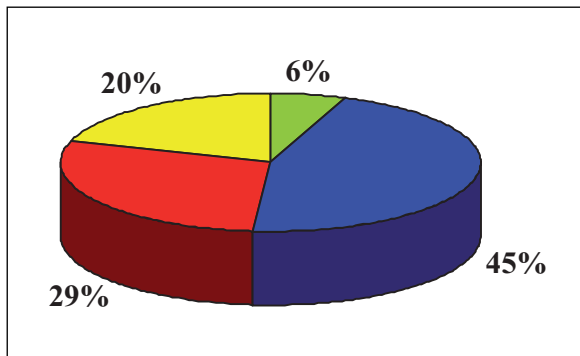


Chart 1 shows that most respondents (i.e. 32 %) answered 2 times a day (option 1). Thirty-one percent of the students indicated that they eat vegetables once a week (option 2), and 30 % of them 3 times a week (option 6). Only 6 % of the respondents chose option 3, which is that they take in vegetables 5 times a day. According to the food pyramid, we should eat 5 portions of vegetables (option 3) on a daily basis. Only 6 % of the surveyed students eat according to the recommended daily portions of the food pyramid, which, of course, is not a positive discovery.

Chart 2: Evaluation of Question 1 - How often do you consume fruits?



From Chart 2 it can be shown that almost half of the students (i.e. 45 %) said that they eat fruit twice a day (option 2). The second most common students' answer was option 6, which amounts to 3 times a week. Twenty percent of the respondents responded that they eat fruits once a week (option 2). Only 6 % of the students eat fruits 5 times a day (option 6). According to the food pyramid we should eat 4 portions of fruit every day (option 4).

Chart 3: Evaluation of Question 1 - How often do you consume dairy products?

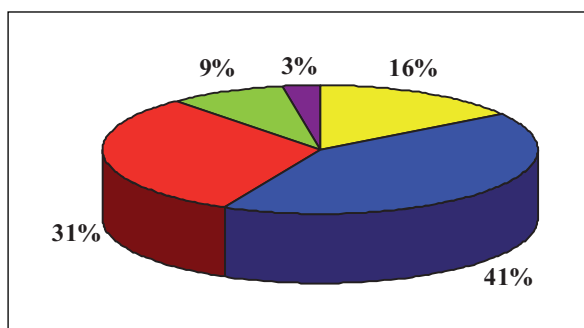
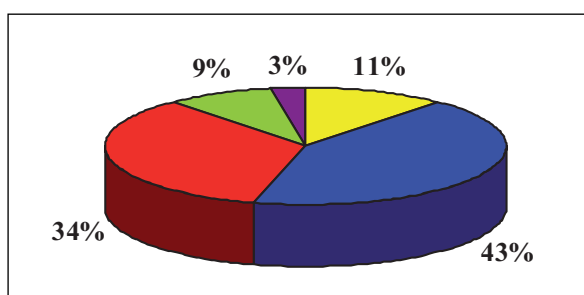


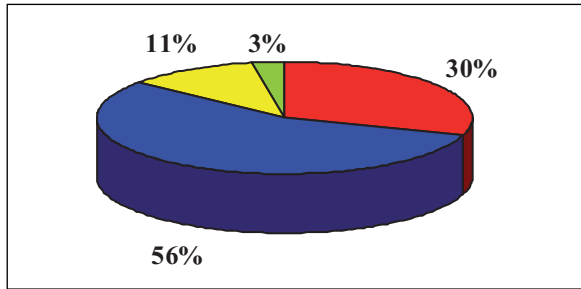
Chart 3 shows that most students (i.e. in 41 % of the cases) consume dairy products 2 times a day (option 1). Thirty-one percent of the respondents stated that they consume dairy products 3 times a week (option 6). Sixteen percent of the respondents eat dairy products 5 times a day (option 3). Only 9 % of the students chose option 2 – once a week. According to the food pyramid we should have 2-3 portions of dairy products on a daily basis.

Chart No. 4: Evaluation of Question 1 - How often do you consume legumes?



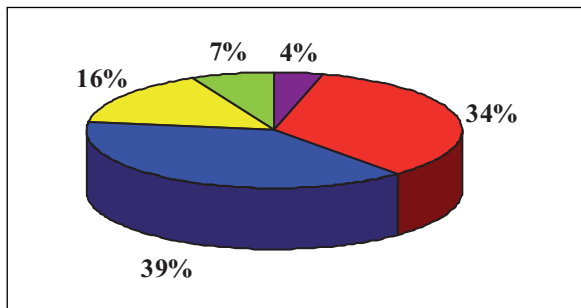
From Chart 4 it is apparent that students most often (i.e. in 43 % of cases) eat legumes once a week (option 2). Thirty-four percent of respondents identified twice a month (option 3). Eleven percent of respondents eat legumes three times a week (option 6). Legumes are eaten less than once a month among 9 %. It is recommended that legumes be consumed at least once a week. Fifty-four percent of interviewed students said that they meet recommended allowances, which I consider to be positive findings.

Chart 5: Evaluation of Question 1 - How often do you consume meat?



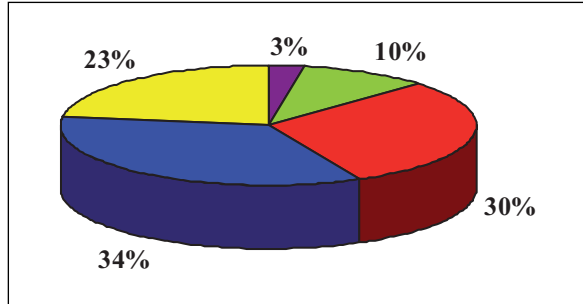
It can be shown from Chart 5 that an absolute majority (i.e. 56 % of students) consume meat three times a week (option 6). Thirty percent of respondents eat meat every day. Eleven percent of students stated that they consume meat once a week (option 2). Twice a month (option 3) was chosen by 3 % of respondents. We should take in meat daily. The recommended allowance of meat is met by 30 % of interviewed students, which, in our opinion, is not entirely satisfactory. But this result is not as alarming as, for example, the results from vegetable consumption.

Chart 6: Evaluation of Question 1 - How often do you consume fish?



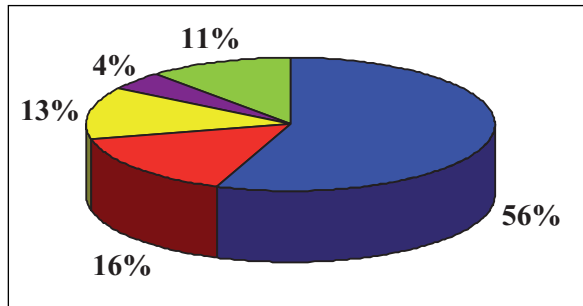
From Chart 6 it is clear that 39 % of respondents eat fish twice a month (option 3). Thirty-four percent of students take in fish once a week (option 2). Of the surveyed students, 16 % eat fish less than once a month and 7 % of respondents stated that they did not eat fish at all. The recommended amount is at least 1 serving of fish a week. Thirty-eight percent of surveyed students meet the recommended allowance, but even in this case we do not believe that this is a satisfactory percentage. But not even this result is as alarming as, for example, the results from vegetable consumption.

Chart 7: Evaluation of Question 2 – How many times a day do you eat?



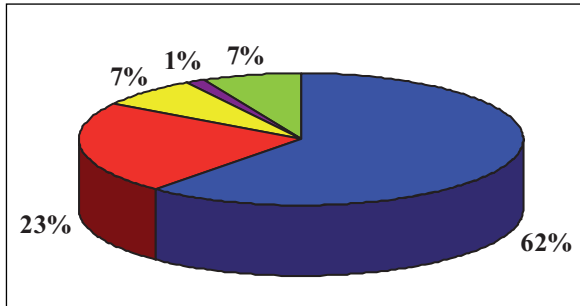
From Chart 7 it is clear that 34 % of surveyed students eat five times a day. Thirty percent of the respondents eat four times a day. More than 5 times a day was chosen by 23 % of respondents, while 3 % of surveyed students stated that they only eat three times a day. Thirty percent of respondents eat only twice a day. It is recommended that a person eat five times a day, while the results of the survey show that this is met by only 34 % of the respondents. In the context of today’s fast-paced period, this finding is not that surprising.

Chart 8: Evaluation Question 3 – Please mark how often breakfast is part of your diet.



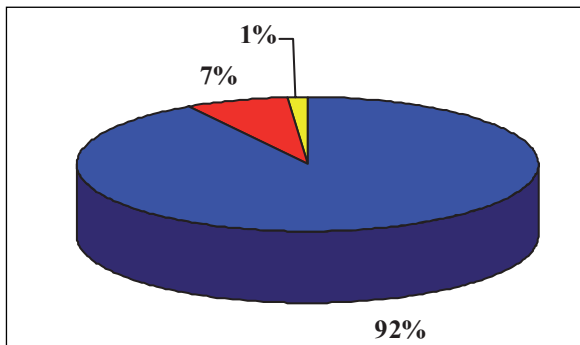
From Chart 8 it can be seen that most respondents (i.e. 56 %) have breakfast every day. Sixteen percent of surveyed students have breakfast 4 to 6 times a week, while 13 % of respondents said that they eat breakfast 2 to 3 times a week. Eleven percent of respondents do not eat breakfast at all and 4 % of respondents eat breakfast less than once a month. Breakfast should, however, be the first meal of the day. It has been found that people who have breakfast regularly and manage to split the day’s intake of food energy into five meals are better able to maintain their body weight. Breakfast is also important for memory, learning, and good physical condition.

Chart 9: Evaluation of Question 3 – Please mark how often you add a morning snack to your diet.



From Chart 9 it is clear that an absolute majority of surveyed students (i.e. 62 %) have a morning snack every day. Twenty-three percent of respondents indicated that they have a morning snack 6 times a week (option 4). Seven percent of surveyed students have a morning snack 3 times a week (option 2), and the same percentage does not have a morning snack at all. One percent of respondents have a morning snack less than once per month.

Chart 10: Evaluation of Question 3 – Please mark how often you have lunch as part of your daily diet.



From Chart 10 it is apparent that most of the surveyed students (i.e. 92 %) have lunch every day. Seven percent of respondents eat lunch 6 times per week (option 4), while 1 % of students answered 3 times per week (option 2). The inclusion of lunch to their diet by 92 % of respondents is favorable news.

Chart 11: Evaluation of Question 3 – Please mark how often you add an afternoon snack to your diet.

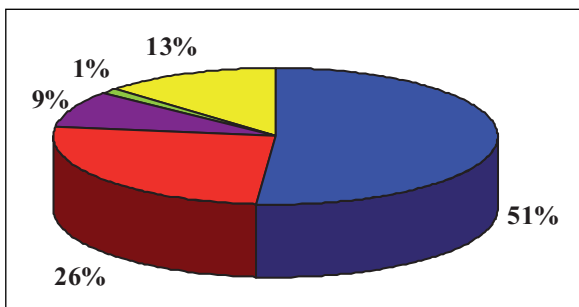
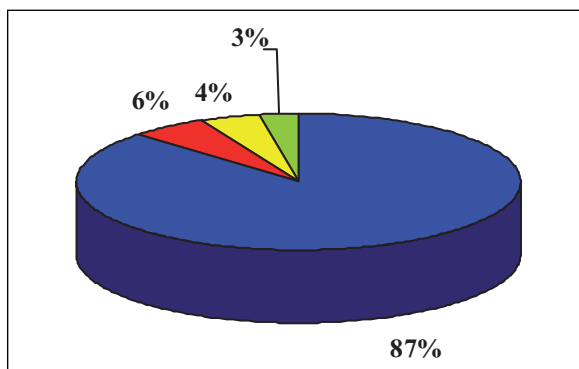


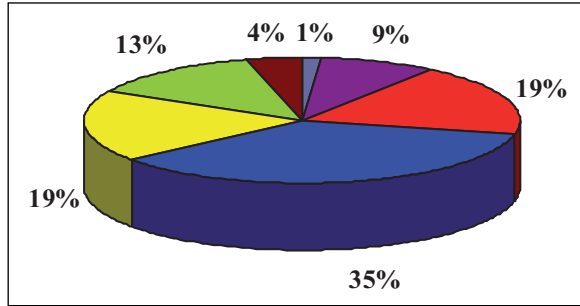
Chart 11 shows that an absolute majority of respondents has an afternoon snack each day. Twenty-six percent of students indicated 6 times a week (option 4). Thirteen percent of respondents do not have an afternoon snack at all, while 9 % of the surveyed students indicated that they have it 3 times a week (option 2). Having an afternoon snack less than once per month was indicated by 1 % of students.

Chart 12: Evaluation of Question 3 – Please mark how often you have dinner as part of your daily diet.



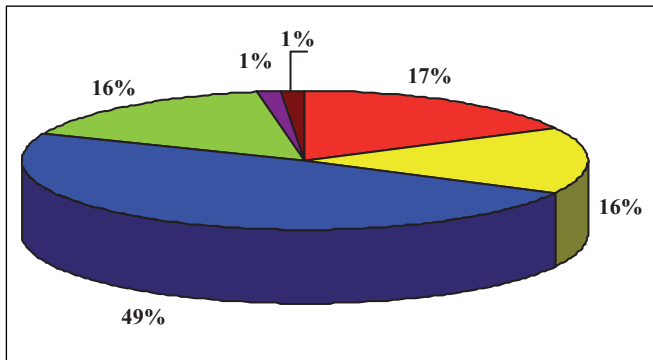
From Chart 12 it is apparent that an absolute majority, namely 87 % of the surveyed students have dinner daily. Six percent of respondents indicated that they have dinner 6 times per week (option 4) and 4 % of respondents said that they have dinner 3 times a week (option 2). That they have dinner less than once per month was indicated by 3 % of students. Dinner (just after lunch) was had by the most respondents, which is of course proper.

Chart 13: Evaluation of Question 4 – *How many liters of liquids do you drink daily?*



From Chart 13 it is clear that 35 % of the surveyed students drink between 1.5 to 2 liters per day. Nineteen percent of respondents indicated that they drank between 1 to 1.5 liters while another 19 % indicated 2 to 2.5 liters. Thirteen percent of surveyed students drink 2.5 to 3 liters per day. Four percent of respondents drink more than 3 liters per day and 1 % of respondents drink less than 0.5 liters of fluids per day. Most literature recommends a daily consumption of 1.5 to 2 liters. This amount is met by 35 % of surveyed students, which are not very positive findings.

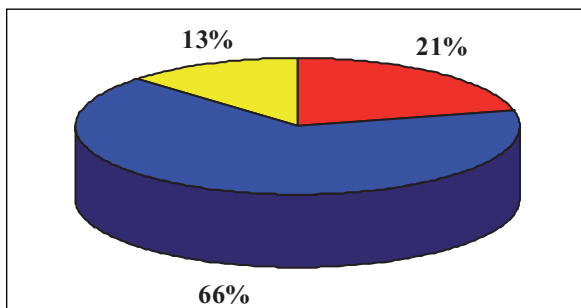
Chart 14: Evaluation of Question 5 – *How often do you do physical activity?*



From Chart 14 it is apparent that 49 % of students do some kind of sport 2-3 times a week. Seventeen percent of students answered every day. Sixteen percent of students do some kind of physical activity once a week and another 16 % 4 to 6 times a week. One percent of students reported that they do some kind of sport once a quarter of the year, and another 1 % answered once per half a year. Eighty-two percent of respondents devote time to physical activity at least 2 to 3 a week, which to me seems like a very good result.

Hypothesis 1 – One quarter of respondents do physical activity every day. The proposed hypothesis has not been proven. Every day, 17 % of surveyed students do some physical activity.

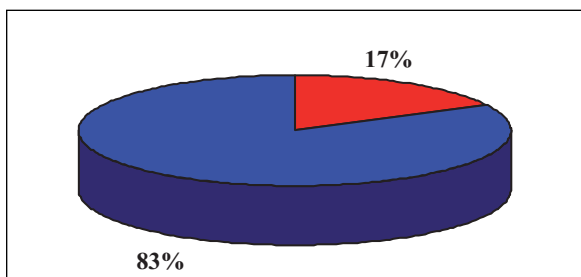
Chart 15: Evaluation of Questions 6, 7 – *How many kilograms do you weigh? How tall are you (in centimeters)?*



From Chart 14 it can be seen that 66 % of students have a normal body weight. Twenty-one percent are underweight and 13 % of students are overweight. We believe that a 21 % portion of overweight students is a very high number. The reason for people being underweight during adolescence is due to frequently skipped meals. Teenagers do not eat because they are too busy, they are trying to be very slim or because they sleep more and meals are left neglected. Being overweight during adolescence is associated with having meals in fast food restaurants. Food prepared in these restaurants often has unnecessarily high energy values, is too fatty, salty and overall unhealthy. Low physical activity, an irregular diet, and other factors contribute to becoming overweight.

Hypothesis 2 – An absolute majority of high school students has a normal body weight. The proposed hypothesis was confirmed. Sixty-six percent of students have a normal body weight.

Chart 16: Evaluation of Question 10 – *Are you a smoker?*



From Chart 15 it can be shown that the vast majority of students (namely 83 %) are non-smokers. The opposite answer was provided by 17 % of the respondents. Seventeen percent of smokers appears to be a small percentage to us. The reason for this low percentage could be false denials.

Hypothesis 3 – Girls smoke less than boys. Of the seventy surveyed students, only

twelve reported that they smoke. Based on gender, there were seven girls and five boys that smoke. The proposed hypothesis has therefore not been proven.

Conclusion

In this seminar thesis we studied the lifestyles of students from three high schools. On the basis of the evaluation of the investigation questionnaire it can be said that students consume a minimal amount of vegetables, eat irregularly and also do not drink the recommended amount of fluids. The findings can certainly be considered unfavorable. On a positive note, the findings indicate that the majority of the surveyed students devoted a sufficient amount of time to physical activity.

We proposed three hypotheses. Hypothesis 2 was confirmed, that is that an absolute majority of high school students are of normal body weight. Hypothesis 1 and 3 could not be proven, i.e. a quarter of the surveyed students do not do any physical activity every day, and that girls do not smoke less than boys.

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ŽIVOTNÍ STYL DNEŠNÍCH ADOLESCENTŮ A JEJICH STRAVOVACÍ NÁVYKY

Abstrat: Pohled na zdraví cílené věkové skupiny, jejíž pojetí hodnot zdraví se utváří a nabývá stabilizačních forem a perspektiv. Je to významný faktor životního stylu

a etablování se do kategorizující se společnosti. Příspěvek informuje o nutričních potřebách vyvážené kvalitní stravy a prezentuje výsledky dílčího výzkumu, jehož cílem bylo analyzovat postoje dospívající mládeže k faktorům ovlivňujícím jejich vlastní zdraví. Stravovací návyky, hygienické návyky, problematika životního stylu nemají již tak široce plošné uplatňování vzhledem k osamostatňování se této generační skupiny. Naším primárním zájmem v empirické studii bude zjistit: Jak se expandovaly životní individuální styly, postoje ke zdravému žití života a zdravým životním hodnotám?

Klíčová slova: zdraví, životní styl, adolescent, zdravá výživa, odolnost, návyky, postoje, aktivita

ONGOING UNHEALTHY TRENDS IN EATING OF OLDER PUPILS

*Magdaléna SZÁRAZOVÁ, Tatiana JANUŠOVÁ,
Tatiana KIMÁKOVÁ*

Abstract: *In the project “Healthy school” doing their nutritional intervention the authors of the article found some “old/new” facts in the nutritional status of 15-year-old pupils. By repeated nutritional evaluation of elderly pupils in 2010 there were observed unfavorable trends in their nutrition in comparison with 2005. Number of boarders was lessened in school canteens; pupils have their dinner at home because of convenience or economic reasons. In the 2010 there is the alarming evidence that 25 % of school-girls in the evaluated group have no dinner and that the other girls have their dinner in the afternoon or in the evening. In the evaluated group 88.9 % of school -boys and 72.7 % school-girls have some breakfast. However, almost half of the school-girls refused both snack and brunch. Number of basic meals per day was decreased: the school-boys has 4-5 the basic meals per day; the pupils-girls have 3-4 small meals per day. The school-boys in the studied group do behave more couscous though. The elderly school-girls has a worse behavior, which probably results from their adolescence. The stated facts urge the need to continue in nutritional intervention in this population group. There is need to rely on results from last years, the 5-year interval of the repeated evaluations of nutritional behavior of elderly pupils illustrated changes in nutritional behavior of pupils. A collaboration of experts from different regions may confirm or deny the finding of authors of the article.*

Key words: *elderly pupils; nutritional status; nutritional behavior; unhealthy trends*

Introduction

Cardiovascular disease, obesity, osteoporosis, and other “civilization diseases” are diseases that develop years to centuries and are often the result of improper nutrition in childhood or youth. Adopt good habits in childhood is considered one of the most effective forms of prevention nutritionally conditional diseases.

The increase in obesity reaches over the past two decades years of epidemic proportions in many countries. This trend also applies to children and is a harbinger of serious health complications in adulthood. Up to 96 % of cases is obesity caused

by improper diet, lack of exercise combined with (epi) genetic factors. Results of the study “The current state of nutrition and obesity in children aged 6-15 years in selected regions of Slovakia”, which ran in the year 2007, highlighted deficiencies in children’s eating habits, which may be reflected in the child’s health and increase the risk of lifestyle diseases.

In general, when considering the dietary regime is determined by the number of daily meals, frequency of consumption (usually daily, several times a week, irregularly, rarely ever), and type of diet (collective, individual, combined, at home, in canteens, in the cafeteria, in hot or cold treatment).

Distribution of food for more meals during the day to ensure a balanced income and better use of nutrients in the body. Diet is the right catering rhythm, proportionality of daily meals, depending on the age and energy uptake. The optimal regimen is five daily meals, especially for older students and adolescents.

While solving the tasks in the grant project “VEGA” ME SR (since 2004) in collaboration with the Faculty of Medicine, Safarik University in Kosice results of our evaluation of the eating habits of children, adolescents, college students but also highlight and find solutions to the consequences of unhealthy trends in their diets. Based on the disappointing results of our work has repeatedly Department of Hygiene - Department of Public Health Jessenius Faculty of Medicine in Martin investigates mentioned vulnerable population groups, and monitor the development of adverse changes in eating habits in particular groups of young adolescents, pupils 9th classes and evaluate the effectiveness of nutrition interventions.

Contribution (work) re-mapping and analyzing the eating habits of young adolescents (15-year-old) - pupils 9th classes of Elementary school in Martin and compares the results of the year 2005 vs. 2010.

Materials and methods

Evaluated a set of young adolescent - pupils accounted 9th selected elementary school classes in Martin. In 2005 set of $n = 59$ girls and $n = 41$ boys aged 15 years, in the year 2010 with a pole 100 pupils (15 years) of the girls $n = 55$ and $n = 45$ boys. The methods for monitoring food consumption, we used a method aimed at the frequency of consumption of selected foods - the six basic food groups (food frequency), which reflects long-term nature of the diet. Through an anonymous questionnaire, we asked students on the usual number of “frequency” of six basic food groups during the day in their diet, which correspond to the recommendations of a healthy diet. Diet: the number of main meals during the day and diet (home, school cafeteria), the second part of questions in the questionnaire. The results were evaluated using descriptive statistics.

Results and discussion

Frequency servings (portions) of the basic food groups in the diet of students usually occurring during the day was evaluated using a modified food pyramid. In **Tab. 1** and **Tab. 2**, we have seen food preference groups (number of servings / day)

for pupils 9th classes in the year 2005 and in **Tab. 3** and **Tab. 4**, the incidence of staple foods in the diet of pupils 9th classes (girls and boys) in the year 2010.

Tab. 1 Incidence of cereals, milk and milk products in diet of pupils (15-year-old) in Martin, Slovakia (in 2005)

Food group	Number of servings per day	Boys (n=41) %	Girls (n=59) %
CEREALS (Bread - slice, roll - 60g, pasta, rice and legumes - to 125g) (min. RDI* - 4 servings)	≥ 4	51.2	5.1
	3	48.8	86.4
	2	0	8.5
	1		
MILK (250ml), CHEESE (50g) and MILK PRODUCTS (150g) (min. RDI- 3 servings)	≥ 4	4.9	0
	3	73.2	67.8
	2	19.5	16.9
	1	2.4	15.3

*RDI – recommended daily intake

Tab. 2 Incidence of fruit, vegetables, meat, fats in diet of pupils (15-year-old) in Martin, Slovakia (in 2005)

Food group	Number of servings per day	Boys (n=41) %	Girls (n=59) %
FRUIT (100g, 250ml juice) (min. RDI* - 2 servings)	2	48.8	59.3
	1	51.2	40.7
VEGETABLES including potatoes (100g) (min. RDI- 3 servings)	2	7.3	16.9
	1	85.4	69.5
	0	7.3	13.6
MEAT (50g) and EGGS (50g) (min. RDI- 2 servings)	2	61	32.2
	1	39	52.5
	0	0	15.3
FATS (20g) and SWEET (50g) (min. RDI- 1 serving)	3	24.4	78
	2	75.6	22

*RDI – recommended daily intake

Tab. 3 Incidence of cereals, milk and milk products in diet of pupils (15-year-old) in Martin, Slovakia (in 2010)

Food group	Number of servings per day	Boys (n=45) %	Girls (n=55) %
CEREALS (Bread - slice, roll - 60g, pasta, rice and legumes - to 125g) (min. RDI* - 4 servings)	≥ 5	28.9	0
	4	33.3	29.1
	3	31.1	30.9
	2	6.7	40
MILK (250ml), CHEESE (50g) and MILK PRODUCTS (150g) (min. RDI- 3 servings)	≥4	20	0
	3	22.2	25.4
	2	42.2	45.5
	1	15.6	29.1

*RDI – recommended daily intake

Tab. 4 Incidence of fruit, vegetables, meat, fats in diet of pupils (15-year-old) in Martin, Slovakia (in 2010)

Food group	Number of servings per day	Boys (n=45) %	Girls (n=55) %
FRUIT (100g, 250ml juice) (min. RDI* - 2 servings)	4	11.1	18.2
	3	20	16.4
	2	53.3	40
	1	15.6	25.4
VEGETABLES including potatoes (100g) (min. RDI- 3 servings)	2	20	40
	1	60	49.1
	0	20	10.9
MEAT (50g) and EGGS (50g) (min. RDI- 2 servings)	3	31.1	21.8
	2	42.2	30.9
	1	26.7	47.3
FATS (20g) and SWEET (50g) (min. RDI- 1 serving)	3	40	9.1
	2	51.1	60
	1	8.9	30.9

*RDI – recommended daily intake

In **Fig. 1** we compare the most frequent occurrence (frequency), the basic food groups portions per day, dietary prefer girls 9th classes between 2005 and 2010. We evaluated the % of girls who daily consumed at least 3 servings of cereal. In 2005 to 3 servings of cereals consumed 86.4 % of girls, but in the year 2010 only 30.9 % of schoolgirls. It also reduced the consumption of milk and dairy products: in 2005 - at least 3 servings of it and 67.8 % in the year 2010 - only 2 portions usually consumed 45.5 % of girls. The fruit was no difference in the minimum number of servings rated between years: 2 servings have been reported in 59.3 % of schoolgirls (2005) and in 2010, 40 % of girls. Consumption of vegetables (in 1 portion) in the year 2010 (49.1 %) versus r. 2005 (69.5 %) decreased in girls. Recommended minimum of 3 servings / day of vegetables (300g/deň), including potatoes, are not seen in girls. Sweets girls ate 3 servings more often in 2005 (78 %) in the year 2010 60 % of girls consumed 2 servings (2 x 50g).

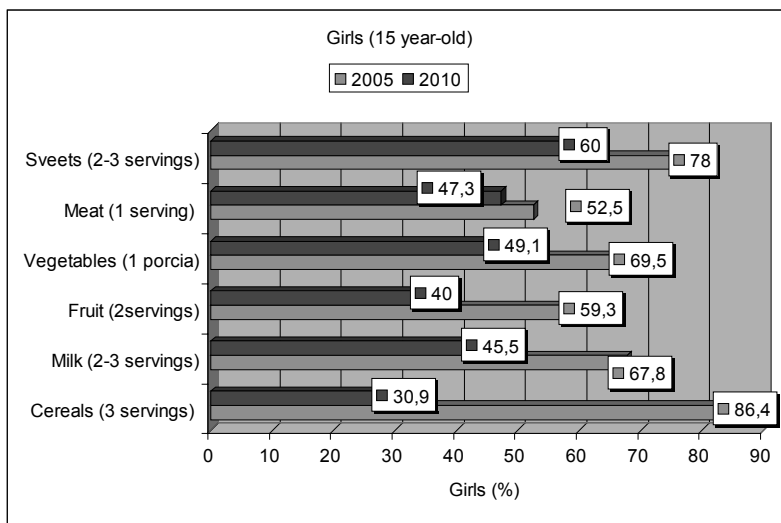


Fig. 1 Frequency of the base food / day in the diet of older girls of 9th classes (2005 vs. 2010)

Diet pupils 9th classes (girls and boys), eating three main meals during the day (breakfast, lunch, dinner) was recorded in **Tab.č.5** and comparison of 2005 vs. 2010 illustrated graphically in **Fig. 2** and **Fig. 3**.

Tab. 5 Diet of pupils (15-year-old) from Martin, Slovakia – a comparison of 2010 vs. 2005

Year	Girls (%)		Boys (%)	
	2010	2005	2010	2005
Number	(n=55)	(n=59)	(n=45)	(n=41)
Breakfast	72.7	84.7	88.9	95.1
Lunch at school	45.4	16.9	75.6	51.2
Lunch - snack	29.1	67.8	24.4	48.8
No lunch	25.5	15.3	0	0
Dinner	61.8	86.4	100	100
Total meals /day	3 – 4	3 – 4	4 – 5	4 – 5
% of pupils	80 %	84,7 %	76,7 %	92.7 %

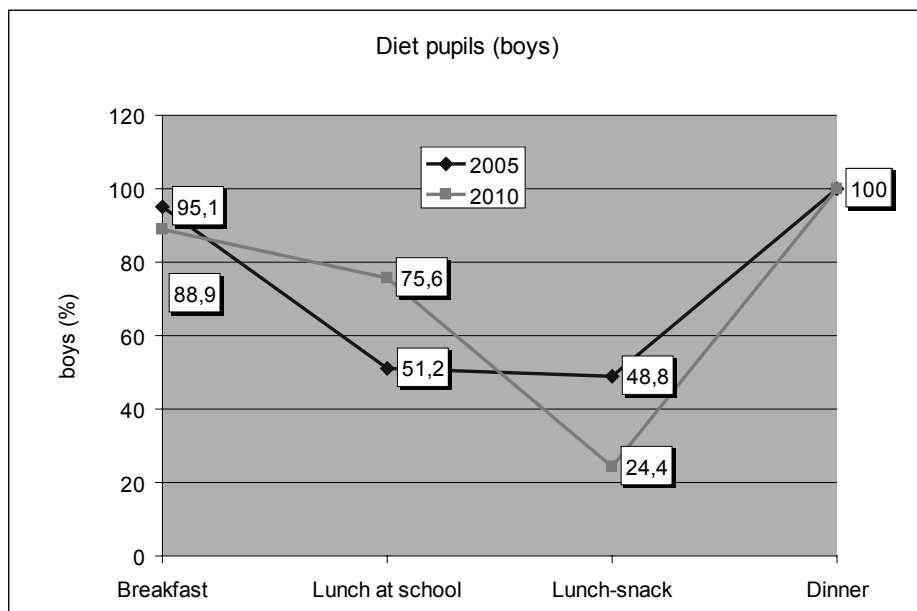


Fig. 2 Diet pupils (boys) of 9th classes - a comparison between 2005 and 2010

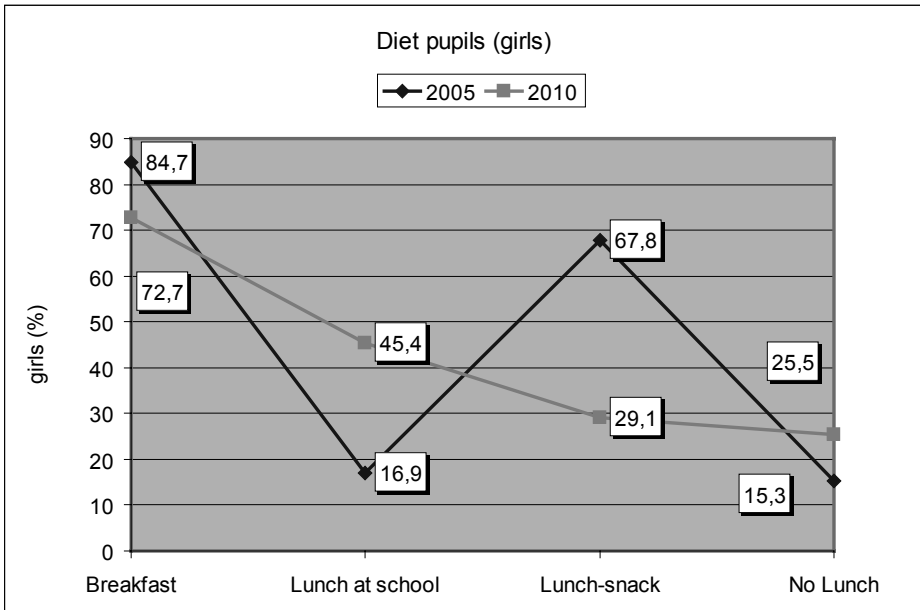


Fig. 3 Diet pupils (girls) of 9th classes - a comparison between 2005 and 2010

In **Fig. 2** we evaluated the diet of pupils (boys) 9th classes. We have had a significant decrease boys who have their breakfast (95.1 % in 2005; 88.9 % in the year 2010). Positive growth was evaluated boys who eats in the school of 51.2 % (in 2005) to 75.6 % (in 2010) and decreasing % of boys who eats lunch at home at the time of snack 48.8 % (in 2005) to 24.4 % (2010). Dinner had 100 % of students in both years studied. Similarly we in **Fig. 3** evaluated the diet and in girls. Although breakfast is the most important meal of the day, the number of girls who have breakfast decreased from 84.7 % in the year 2005 to 72.7 % in the year 2010. Positive growth was of girls who have lunch at school (from 16.9 % in the year 2005 to 45.4 % in the year 2010) and reduced the number of girls who eat lunch at the time snack from 67.8 % in the year 2005 to 29.1 % in 2010. In contrast, in the year 2010 increase in negative % girls have no lunch (25.5 % in the year 2010 compared to 15.3 % in 2005).

Summary

According to WHO recommendations, the occurrence of the basic food groups (cereals, vegetables, fruit, dairy, meat and eggs, fats and sweets direct) in the diet during the day, displayed in a modified food pyramid healthy eating for pupils investigated a group of ninth classes - a group of younger adolescents, a healthy eating pattern. In repeated studies in our group of pupils ninth classes in the year 2010, dietary habits and preferences of the basic food groups are constantly changing and tend to fluctuate from recommendations. We have seen a lower frequency of meals (number of servings) from the group of cereals and meat, as well as lower consumption of nutritionally important dairy products and vegetables during the day for both sexes.

Repeated evaluation of the diet of younger adolescents (pupils of 9th classes of Elementary school in Martin) in the year 2010 and comparing the 2005 has seen an increasing number of pupils, who eat lunch in school canteens, but steady decline number of pupils (of both sexes), that have their breakfast. Instead of using the school breakfast buffet for the purchase of chips, sweets and sweetened waters. Range of goods in the cafeteria while no satisfies the requirements of a healthy diet of schoolchildren. On the basis of repeated findings suggest the diet of young adolescents in particular, to increase the intake of milk and milk products, vegetables and cereals as well as meat consumption reduced. Stricter controls and legislation to treat the sale of unhealthy foodstuffs in the school cafeteria. Increase promotion of lunches in school canteens, to not leave the lunch to snack or to dinner. The prevention of obesity and chronic noncommunicable diseases will mainly focus on education about nutrition, not only among students but also parents!

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POKRAČUJÚCE NEZDRAVÉ TRENDY V STRAVOVANÍ STARŠÍCH ŽIAKOV

Abstrakt: V rámci projektu - Zdravá škola a počas nutričnej intervencie žiakov základných škôl autori príspevku zistili určité „staro/nové“ skutočnosti v stravovacom režime 15ročných žiakov. Opakovaným hodnotením starších žiakov 9. tried v r. 2010 a porovnaním s r. 2005 v sledovanom súbore zaznamenali nepriaznivé trendy v ich stravovaní. Znižuje sa počet stravníkov v jedálňach základných škôl; žiaci z pohodlnosti, ale i z ekonomických dôvodov obedujú doma. V r. 2010 sa opakuje alarmujúca skutočnosť, že až 25 % dievčat neobeduje vôbec, ostatné presúvajú obed do tzv. „olovrantu“ a do večere. Raňajky konzumuje 95 % chlapcov a takmer 85 % dievčat, avšak desiatu a olovrant odmieta takmer polovica dievčat. Znižuje sa celkový počet hlavných jedál počas dňa. Chlapci - žiaci 9. tried sa v sledovanom súbore paradoxne chovajú uvedomelejšie, ich frekvencia denných jedál je v rozpätí 4-5 jedál. Dievčatá prejavujú maniere plynúce pravdepodobne z pubertálneho vývoja, ktoré v minulosti boli zaznamenané u stredoškolskej mládeže. Malé jedlá konzumujú 2-3x denne, praktizujú módné typy diét pod tlakom nezdravej reklamy nevhodných potravinových výrobkov a doplnkov výživy. Uvedené skutočnosti nabádajú k nutnosti pokračovať v nutričnom poradenstve (intervencii) tejto populačnej skupiny. Netreba sa spoliehať na výsledky z ostatných rokov, päťročný interval opätovných hodnotení stravovacích zvyklosti starších žiakov naznačil zmeny v nutričnom správaní žiakov. Spolupráca odborníkov z rôznych regiónov môže potvrdiť, alebo vyvrátiť zistenia autorov príspevku.

Kľúčové slová: starší žiaci, stravovacie návyky, nezdravé trendy v stravovaní

„INVISIBLE“ FACTORS OF SCHOOL CATERING

Jana CHMUROVÁ, Eubomír HELD

Abstrakt: *The contribution is aimed at investigation of primary school pupils' attitudes toward school catering. The actual researches aimed at the mentioned topic usually use quantitative methods, mainly questionnaires. The researcher usually constructs the questionnaire out of the factors which probably (based on hypothetical level) influence attitudes towards school catering. The proposed questions evoke specific reactions of respondents and the research results offer no more reasons of the attitudes except the already known ones. That is why we decided to use qualitative method of gathering research data. The data have been evaluated by grounded theory. By using qualitative methods we have obtained very particular information about investigated phenomenon. On the bases of obtained results we are trying to explain a model of school catering operation for the observed group of pupils.*

Key words: *students, school food and preparation, qualitative research, focus groups, grounded theory*

Introduction

Children spend more and more time at school and parents are normally at work during the day, therefore, a family lunch together is impossible. As a result, it is very important for children to eat at the school canteen where a quality meal is provided. The present situation in school nutrition is unfavorable. The school canteen is used by only half of all children. From this half, the majority throw away the half-eaten school meal despite the fact that school is in accordance with healthy nutrition.

We could identify the school meal as the best alternative in the healthy nutrition of our children. Our school children do not prefer this kind of food. Nutritionists and dietitians see the problem as being that the children are not familiar with the type of meals prepared at the school canteen. There has been a lot of research done that looked for reasons which supported students eating in the school canteen. Studies relating to this problem use quantitative methods. In the years 2000–2004 at Karlova University in Prague a small research was conducted which targeted certain views about the young people's orientation in the sphere of healthy nutrition, about their present eating habits and attitudes towards food. The method used in the research was the questionnaire (Marádová, 2004).

In the years 1997–2001 a broad survey on the topic “Primary and Secondary grammar School Students’ Attitudes and Opinions on chosen lifestyle-related questions” was conducted within the whole country of Slovakia. As a research tool widely formulated questionnaires were taken (Ušáková, 2002).

Another research dedicated to the evaluation of secondary school students’ attitudes toward an alternative source of nutrition also used as a research tool a questionnaire. Questionnaires were designed for secondary school youngsters. Students in the questionnaire were marked their agreement or disagreement with the given statements (Peterková, V. – Paveleková, I. – Vámošová, T., 2009).

A study entitled “Evaluation of eating habits of a chosen sample of primary and secondary school students in Slovakia” gathered the required source data by using a questionnaire. The questionnaire was made within the project “Healthy Nutrition” administered by the Slovak National Institute for Education in Bratislava in the years 2006 – 2007 (Peterková, V. – Paveleková, I., 2008).

“Eating habits of primary students” is another research project conducted in Brno that for collecting data used a questionnaire too. There were open and closed questions used in this questionnaire (Veselá, J. – Stanková, H., 2008).

Thousands of researchers all over the world used a questionnaire as a research tool for collecting data. We were inspired by foreign countries, mainly by studies inquiring about attitudes and opinions on food and catering by using other research methods.

In Slovenia research was conducted on the topic “Attitudes toward foodstuffs in Slovenian grocery stores”. The research method used was the *method of focus groups* (Videcnik, 2001). In Eastern Baltimore a small research project was conducted using the method of focus groups to find out the dominant meals preferred by Afro-American adolescents (Dodson, Jennifer M.D. et al. 2005). The method of focus groups was used by researchers to find out the factors that impact drinking milk by children (Connors, Bednar, Klammer, 2001). Finding out the children’s eating habits there were used group interviews of women from particular ethnic groups from the U.S.A. These children were not older than one year (McGarvey EL, et al. 2007).

Methods

As a main research tool we chose the method of focus groups (FG). We wanted to get a multifarious, diversified and vivid portrayal of the participants’ discourse. This choice resulted from our need to meet the participants in direct verbal communication and participate in the interactions that we expected to arise from the discussion about school food and catering. We wanted to do it on the basis of the analysis of the group’s interactions that is considered as a basic trait of the method of focus groups.

In the literature we can find a lot of definitions of focus groups. They are characterized as organized discussions (Kitzinger 1994), collective activities (Powell et al 1996), social events (Goss & Leinbach 1996) and interactions (Kitzinger 1995). Morgan prefers a more inclusive approach. He defines the focus group as a research technique that gathers data through the medium of group interaction. “The group interaction arises from the discussion and the topic of the discussion,” states the researcher. Essentially it is a “focus” of discussion. It is set by the researcher’s interest. The researcher’s interest

creates the “focus” and the data start to be gathered themselves in the group interaction (Morgan, 1997).

According to Anita Gibbs (1997) research by focus groups requires an organized discussion with chosen groups of individuals, getting information about their opinions, and experiences with the given issue.

The group interview is a simple, fast and comfortable way of getting data from various people simultaneously. Focus groups explicitly use group interactions as a part of the method. The researcher asks serially about the questions’ responses. He encourages a mutual narration. Participants exchange their anecdotal opinions. The method of focus groups is useful mainly in case we want to get a view inside human knowledge, life experiences and thinking and reasoning (Kitzinger, 1995).

The analysis of gathered data was conducted by the method of qualitative methodology. While the quantitative research has a verifying character (is testing the already existing theory), qualitative research is above all constructive; that means a new theory arises from it (Gavora, 2001). The most important and fundamental difference is that in qualitative research we formulate a hypothesis. In quantitative research we test the hypothesis. Quantitative research uses deductive logic, which means the problem is theoretically described in the beginning. This problem is “translated into hypotheses” and the hypotheses are consequently tested. It is already given what will be observed and tracked. On the other hand the logic of qualitative research is inductive. In the beginning of the research process there is a widely formulated question and broad data collecting. The researcher is looking for similarities in the data, formulates preliminary conclusions and is searching for their support in other data. The result is a newly formulated hypothesis.

Both in qualitative and quantitative research similar techniques of data collecting can be used (interview, observation) but the way they are used is different. While the quantitative research reduces the acquired data, qualitative research tries to catch them in maximal range and work them up by specific analytical processes. The core of these analytical processes is always coding – operations by which the data are deconstructed, conceptualized and put together in another way. Coding is based on taking the sequences apart into units. To the units are then attached names. The researcher then works with such named fragments.

At the same time we decided not to stay on the level of describing the phenomena but we tried to formulate a complex theory. We also tried to identify the variables and relationships between them; and to outline the model of phenomena. Creating theoretically grounded interpretations is one of the most modern ways of understanding reality.

Results and their discussion

The time-consuming phases of hard work helped us to understand the problem and to outline the theory, for the given group of students, which explains why students accept or not accept food in the school canteen.

COLLECTING DATA (YOUNGER STUDENTS)

There were 10 students that were participating the group discussion. There were four boys and six girls. 351 individual statements appeared during the group discussion.

From boys we got 210 and from girls we got 141 individual sentences. Individual statements were within the range of 7 to 107 per student. There were two dominant speakers in the focus group. As a *dominant speaker* we considered a person whose personal utterance was manifested more than 50 times. As a silent participant we considered those whose utterances appeared less than 15 times. There were only three silent participants, the rest were relatively communicative. We could observe that the examined focus group consisted of mixed participants. We find important to mention that some of the silent participants brought new topics into the group discussion. For example, the participant with the smallest number of utterances brought into the discussion a topic related to additives. This topic was then developed by the participants.

Group discussion lasted 90 minutes. It was recorded on electronic medium (mp3 recorder). After that followed the literal transcription and began the analysis itself. In the literal transcription we got 19 pages that consisted of 907 lines and 9897 words. Interviewer articulated from all spoken word only 638 words.

Data gained from the group of younger students analyzed by the techniques of Grounded Theory

In the process of coding there arose relationships between main categories, which consequently created following categories

FEAR OF SCHOOL FOOD AND PREPARATION

CULTURE OF CATERING

SOCIAL RELATIONSHIPS

Later we introduced subcategories into the relationship with the main category according to the integrative diagram. The process of creating paradigm model is connected with thinking over and identifying causes, consequences, conditions and interactions that connect particular categories.

In the process of selective coding we placed individual categories under categories of a higher level because we wanted to get an integral generalized view on the issue as a basis for formulating our final theory and conclusions.

The task of the phase of reduced empirical data processing is to organize them into the following pattern: causal conditions, phenomena, context, intervening conditions, strategies of performance and interactions; and conclusions.

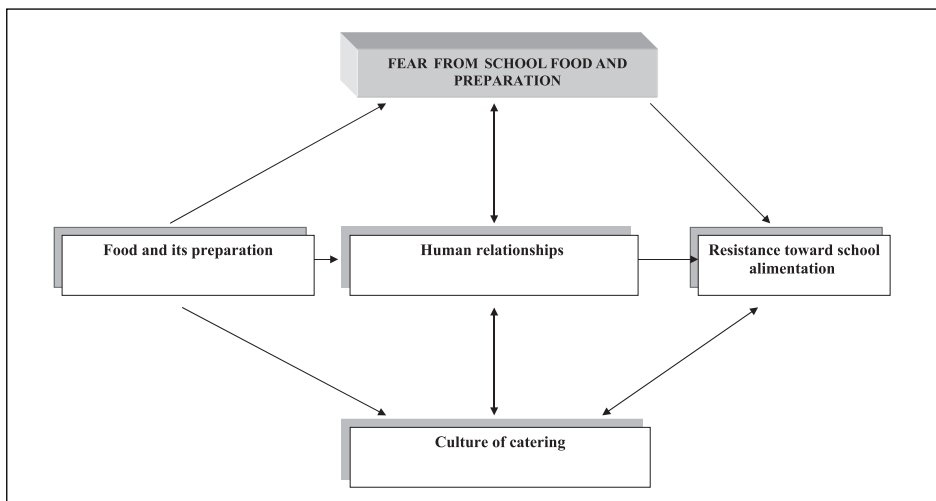
The causal condition that leads to the fear of school food and preparation presented "Alimentation's Organization and its Management" that have in charge all run in the school canteen. *The Intervening condition* that creates the fear in students are human relationships. *Context* is represented by catering culture. Simple and relatively explicit was the identification of conditions and conclusions, e.g. a cook is yelling at students when they forgot their meal ticket and it results in resistance and disgust in visiting the school canteen. Below (table 1) there is an integrative diagram enriched by examples of grounded data for the corresponding categories.

As a dominant category, extracted from the data acquired from younger students, is fear of school food and preparation that is why it stands as a central category of the causal model (scheme 1) that represents the relationships between fundamental categories.

Table 1 Paradigm model explaining the way of function of the main phenomena - Fear from school alimentation and catering (younger students)

	Causal conditions	Context	Intervening conditions	Strategies of performance and interaction	Consequences
Categories	Food and its preparation	Catering Culture	Human relationships	Resistance	Resistance - disgust
Groundation in data Examples	<p>„there are two lines /shows/, one line don't move and the older jump the line“</p> <p>„they shouldn't control what we eat“</p>	<p>„if somebody served for us, there wouldn't be lines“</p> <p>„anytime I get dirty plate or whatever“</p> <p>„they should dish wash better“</p>	<p>„and you, what are you doing there and swear follows“</p> <p>„she starts to ask me why I didn't eat it up, and then she tells me, go and sit over there and eat it“</p> <p>„she enforced me /verbally/, by force, to eat it“</p>	<p>„I hurry, I have a after school activity“</p> <p>„she had to eat it up, by force, she was watching her“</p> <p>„I carry it away when she is not watching“</p>	<p>„it bothers me, I don't eat the meal up“</p> <p>„she threw it out at home“</p> <p>„I don't eat it even though she force me“</p> <p>„I don't let her to command me“</p>

Scheme 1: Causal model – Fear from school food and preparation



Model of how the school system of alimentation and catering „works“ at younger students

At this place we would like to describe student and his/her behavior in school canteen as it is outlined in acquired empirical data. We also consider as important to mention the word “fear”. Fear as an anxiety of awaiting something unpleasant that an individual feels under certain circumstances. Fear is a protective part of his or her psychic. Fear is a feeling of concern caused by the presence or imminence of danger. It is a negative emotion, unpleasant experience with neurovegetative manifestation. Fear motivates us to escape and run from the danger. The run from fear = run from school canteen. It seems that the main problem of school nutrition is the fear of school food, its serving and its preparation. *Fear* appears at the students during their stay in school canteen. It chases them at his/her every turn. Entering the school canteen students experience the fear of theft. This relates to school that do not have guarded dressing room. Students are afraid of losing their personal things (school bag, jackets etc.). Student hurries because s/he is afraid of losing his/her personal things and consequently it results in quick and not proper eating. This induces the digestive system overload; otherwise students carry away the half-eaten meal. If student gets sick he finds the cause in the meal from school canteen. S/he considers the meal as bad and blames the cook who prepared the meal. The cause is not in the meal because every student would get sick, but the true reason is fear.

At the canteen’s entrance students can see a long line that forms at the meal counter. Students fear of not catching the bus home or after school activity.

Students also fear of older students that bully them. Manifestations of bullying in the school canteen are mainly: jumping the line and swearing. When the student finally gets to the meal counter s/he is waiting in anxiety what is going to happen.

From the participants’ utterances we can say that the relationships between cooks and students are not good. Bad social relationships have an impact on the development and state of human psychic. Yelling and shouting evokes stress in students and then it manifests with stomach contract. As a result of stomach problems students do not eat the meal up and throw it away.

When the canteen is full student doesn’t have a place to sit. Student experience the fear again. There is a high probability that the student carrying a tray in his/her hand pours the meal out and the probability is even higher if somebody hits him/her.

In the case that student doesn’t like the food and is about to throw it away or is hurrying because s/he was delayed in the line. Fear appears again. This time the fear is caused by the presence of a teacher - supervisor who often send the student eat the meal up. Student is enforced and have to eat the meal up either s/he likes it or not. The teacher-supervisor means it well and is not aware of serious effects that can be later developed not only in the sphere of eating habits but also as various eating disorders in adolescents and adults.

Conclusion

In the article we dedicated mainly to primary students’ attitudes toward school alimentation and catering. The research sample was made of 6th graders. For collecting

the data we chose the method of focus groups. For data analysis we used the method of Grounded Theory that helped us to explain the examined problem. The research in its development and results was oriented on the quality improvement of school alimentation and catering. In the article we also described the main problems of school catering. We explained the essential reasons why students don't want to eat in school canteen.

Fear is the biggest problem in school catering for the 6th graders at primary school. Fear appears as a result of negative human relationships.

On the basis of acquired results we suggest to change the system of school alimentation and catering. The change mainly relates to the organization and management of school catering. At the first place we consider as very important cooks' training in pedagogical, psychological spheres. Their verbal speech (discourse) should be pleasant and should induce in students' appetite. Non-verbal manifestation of the canteen staff shouldn't discourage students from eating the meal. Canteen's furniture and equipment should be renewed regularly to make students feel pleasantly in the school canteen. We know that it is not possible in term of money but some grants to modernize the school canteen would help. On healthy nutrition offered at school canteens depends health of our children, so why not to use it?

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„NEVIDITEĽNÉ“ FAKTORY ŠKOLSKÉHO STRAVOVANIA

Abstrakt: Cieľom príspevku je zistiť postoje mladších žiakov základnej školy k školskému stravovaniu. Výskumy, ktoré sa venovali tomuto aktuálnemu problému využívali kvantitatívne metódy, predovšetkým dotazník. Výskumník do dotazníka začlenil faktory, ktoré pravdepodobne ovplyvňujú postoj ku školskej jedálni. Navrhnuté otázky u respondenta vyvolajú odpoveď, čím sa nepodarí zistiť iné dôvody ako sú už dlhodobo známe. Rozhodli sme sa preto využiť kvalitatívnu metódu, ktorá slúžila na zber dát. Zozbierané dáta vyhodnocujeme metódou zakotvenej teórie. Pomocou kvalitatívnej metódy sme získali o jave detailné informácie, ktoré by sa kvantitatívnymi metódami obtiažne podchycovali. Na základe nami získaných výsledkov sa pokúšame o výklad modelu „fungovania“ školského stravovania pre každú vekom profilovanú skupinu.

Kľúčové slová: žiaci, školské stravovanie, vplyv, fókusové skupiny, zakotvená teória

ADOLESCENTS IN TROUBLES?¹

Lucie FOLTOVÁ

Abstract: *The aim of the study is to reveal the differences between the positive and negative components of the life situations of adolescents suffering from mental disorders in comparison with the normal population. It was based on the assumption that adolescents with disorders demonstrate more significant risk tendencies in their lifestyle. The study sample is populated by 15 year-old adolescents with mental disorders who participated in the project ELSPAC (European Longitudinal Study of Parenthood and Childhood) (N=447) and a control group, adolescents without diagnosis (N=2838). Based on the results we came to the conclusion that these adolescents really suffer from greater difficulties in psychological and social areas. Furthermore, risk behavior occurs in this group at a more significant rate. On the contrary, a positive finding is that this risk group also possesses protective, resilient components which can be an important source of strength in their life situations.*

Key words: *adolescents, mental disorders, risk behavior, resilience*

Introduction

The life situation of adolescents is not easy. They face greater demands from the environment, a changing body and psyche; they are looking for their place in the world. They are radically changing their lifestyle. Lifestyle is an expression of personality and it is characterized as the product of voluntary behavior and life situation (Mach, Kubatova et al., 2009). The World Health Organization (WHO) today designates adolescence as being the most risky period of life growing up, which was previously considered early childhood (ČSP communications, online), and the teens were defined as an independent risk population group (Kabiček, 2008).

Developmental psychology sees adolescence as a period during which individuals have to manage many changes. In parallel with the biological maturation (sexual maturation, physical development and growth) there are many significant changes in mental aspects (emotions, identity, the onset of formal abstract thinking, general intellectual development, social learning) and also it leads to a new level of individual's socialization. Indeed, adolescents experience changing societal expectations regarding behavior and performance, while experiencing changing role expectations and a changing self. All these changes are interdependent. The basic developmental tasks of this period are considered to be ending depen-

¹ The study was supported by grant IGA MZ ČR č. NS 9669-3/2009.

dence on parents and to make new, significant relationships with peers. This interdependent process of independence and the expansion of social relationships is crucial for the proper development of future social roles (Langmeier, Krejčířová, 2006, Macek, 2003).

Lerner (1985, dynamic interaction model) sees adolescence, especially early adolescence, as a “model case” in the “natural laboratory” for lifelong development. His model is trying to see the development in the context of biological, psychological, social (and cultural and historical) factors. The model highlights the complexity of adolescence and refers to the fact that in order to achieve a good social functioning the individual must cope with changes within themselves and their environment and this management (coping) is an interactive process. Now, given that a wide range of changes inevitably happen, it poses risks for some individuals. The term “risk” is interpreted as a predisposition or increased possibility of psychosocial development as compared with the general population (Labáth, 2001). Considering youth at risk, we consider vulnerable adolescents to be more likely to fail in social and psychological areas. Risk and danger may therefore be expressed in two aspects: the individual to society (delinquency, crime ...) or to himself (self-harm behavior - eating disorders, alcohol, smoking, drugs, sexual promiscuity, suicidal behavior, etc.). It is also noted that risky behavior in adolescence is composed of three areas, which are often combined and have a largely common risk and protective factors (according to Kabíček, 2008; Communication ČPS, online). These are areas of drug addiction (drugs, alcohol, and smoking), negative effects in psychosocial areas (aggression, crime, delinquency, but also self-harm and suicidal behavior) and reproductive disorders (sexual) health (early sexual life, promiscuity, unwanted pregnancies, venereal diseases).

A non-hazardous individual, in other words resilient individual, does not have any serious behavioral problems or learning and he is able to manage to tasks appropriate to their age and culture, despite exposure to adverse conditions. Youth at risk, then show a lower level of resilience², or its absence (Šišláková, 2006).

Group sample and methods

The data in the presented study are based on previously conducted research on the assessment of the life situations of adolescents with mental disorders, for which I have assumed a greater risk (Foltová, 2010).

The research group consists of adolescents in a longitudinal project tracking ELSPAC (European longitudinal study of parenting and childhood)³. In respect to the definition of adolescence, these individuals fall into the middle adolescence (defined as 14-16 years old, according to Macek, 2003), and the investigation is carried out on data obtained when the subjects were 15 years old. These adolescents were divided into two groups. The first group included adolescents who were diagnosed with mental disorders (these are the “weaker”, or more frequently occurring disorders that interfere with the individual’s life in a particularly serious way⁴), and possibly more than one of these

2 Resilience is an expressed ability to cope with stress regardless of the exposure to risk, negative conditions and stress . (Šišláková, 2006; in: Truhlářová, Smutek, 2006).

3 For more details, visit: <http://www.med.muni.cz/elspac>

4 Following disorders were included: hyperkinetic disorders, behavioral disorders, specific developmental disorders of language, specific developmental disorders of school abilities, eating disorders, mood disorders.

disorders (i.e. comorbidity). This selection was made from data collected from pediatric questionnaires in the study. The total number of the research group of adolescents with psychiatric disorders is N = 447.

The second group was created as a statistical comparison group and was composed of adolescents without diagnoses of mental disorders (this criterion was met from birth to 15 years of age). The total number of adolescents with no diagnoses (control group) is N = 2838.

For this study we used questionnaires filled in by the adolescents themselves at 15 years of age. The adolescents' mothers and pediatricians also filled out questionnaires about the subjects during the same period. Unless stated otherwise, the data relates to the age period of 11-15 years of the adolescents. The primary data analysis and the classical frequency analysis data were conducted. Furthermore, the data were tested using parametric tests in SPSS. If the data processing violated any of the conditions for parametric tests, a nonparametric test was used (e.g., Mann-Whitney U-test). The null hypothesis were tested, i.e., that the hypothesis about the differences in distribution in the monitored group, or differences in mean values, were required by the nature of data.

Results

The results part will be divided into risk and protective factors of adolescent life situation. In previous research (Foltová, 2010) from which the data is drawn, a large number of indicators were evaluated, of which only the most relevant and interesting in terms of the contribution to our goals were selected.

Risk Factors

First, the occurrence of the selected risk behaviors of adolescents (reported) was evaluated, as stated in Table 1.

Table 1: Risk Behaviors of Adolescents

Behavior	Adolescents with diagnosis	Adolescents with no diagnosis
Anger blowouts	58,2 % *	49,6 %
Quarrels with peers	51,6 %	46,9 %
Lying and fraud	29,9 %	26,7 %
Physical confrontation with peers	13,6 %	16,4 %
Truancy	9,3 %	9,6 %
Robbery	7,7 %	5,1 %

* $p < 0.05$

From the data obtained from adolescents one can see that explosions of anger paired with inability to control oneself are prevalent in 58.2 % of adolescents with disabilities compared with 49.6 % of adolescents with no diagnoses. This difference is statistically significant, and the significance level of $p < 0.05$. It can be argued that ado-

lescents with disabilities are 1.4 times more likely to be unable to control themselves than adolescents the control group (OR = 1.412, OR = interval /1030; 1935/, $p < 0.05$).

The other data shows that the adolescents with disorders argue with their peers slightly more often, but are less involved in fights. Furthermore, we can find a slightly higher incidence of theft and lying. The differences are not statistically significant. Truancy in both groups appears equally, below 10 %.

Next, I examined the subjects in terms of risk, what types of friends are adolescents watching. The results are shown in the Table 2.

Table 2: ‘At Risk’ Adolescents with Friends

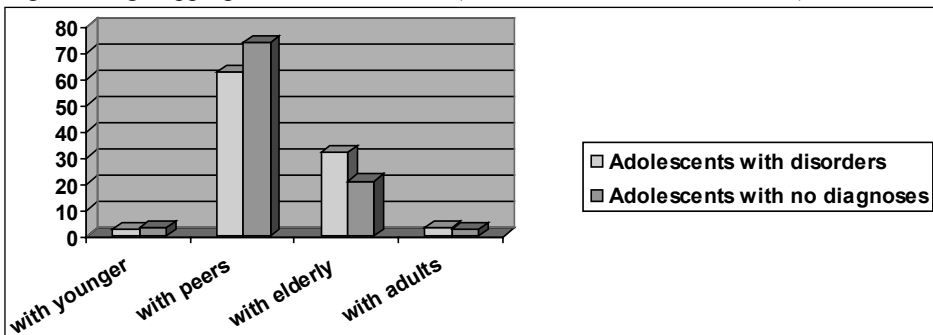
	Adolescents with diagnosis	Adolescents with no diagnosis
Abstainers	68,8 %	71,2 %
Often drinking	34,5 %	31,5 %
Smokers	71,2 %	70,5 %
Using drugs	32,2 % *	24,3 %

* $p < 0.05$

Abstainers among friends, of course, do not represent a risk group. However, the data shows that almost a third of adolescents do not have any friend who is abstainer (recall that these are adolescents age 15). On the contrary, often drinking friends is also prevalent among a third of the adolescents. Over two thirds of adolescents have smokers among their friends. Those numbers are true in both groups.

Drug users friends have a third of adolescents with disorders compared to a quarter of the friends of adolescents with no diagnoses. This difference is statistically significant, and the significance level of $p < 0.05$. Adolescents with psychiatric disorders are therefore have 1.48 times more friends who use drugs other than alcohol and cigarettes (OR = 1.480, OR = interval /1047; 2091/, $p < 0.05$). Also investigated was age appropriateness of the friends of tracked adolescents. This value was evaluated from the statements about which group of people adolescents feel best among or pursuing. The data illustrated in Figure 1.

Figure 1: Age Appropriateness of Friends (the number of adolescents in %)



The chart demonstrates the significant differences are also statistically significant,

at $p < 0.05$. The company of young people satisfies 2.5 % (3.0 %), adolescents, peers of the same age 62.6 % (74.1 %), elderly 31.9 % (20.8 %), and adults 3.1 % (2.2 %).

Adolescents with mental disorders seek the company of the same age peers 0.84 times less than adolescents with no diagnoses (according to the interpretation of relative risk: $RR = 62.6 / 74.1 = 0.844$, $p < 0.05$), while they are 1.5 times more likely than the control group to feel best with older people (according to the interpretation of relative risk: $RR = 31.9 / 20.8 = 1.534$, $p < 0.05$). The results also confirmed a danger in the sexual aspects as monitored adolescents with psychiatric disorders were significantly more likely to initiate an earlier sex life. 15.6 % of adolescents with disabilities and 10.0 % of adolescents with no diagnoses said they already had sexual intercourse (recall again that the data was under 15 years of age⁵). This difference is statistically significant, and the significance level of $p < 0.05$. It can be argued that adolescents with disabilities are 1.67 times more sexually active than control group adolescents ($OR = 1.665$, $OR = \text{interval} / 1062; 2608/$, $p < 0.05$).

Significantly more often the monitored group reported problems in relationships. These problems are 1.53 times more likely among the adolescents with psychiatric disorders than among adolescents with no diagnoses (42.4 % vs. 32.4 %), and the significance level of $p < 0.01$ ($OR = 1.533$, $OR = \text{interval} / 1115; 2106 / p < 0.01$).

Adolescents also reported on disputes with the parents. Out of the studied reasons I mention here only two that are, in my view, quite serious, both in terms of period of reference (data is limited to respondents of 11-15 years old).

Table 3: Adolescent – Parent Conflicts

Reason	Adolescents with diagnosis			Adolescents with no diagnosis		
	Often	Sometimes	Never	Often	Sometimes	Never
Cigarette smoking	9,4 %	37,5 %	53,1 %	8,8 %	45,6 %	45,6 %
Drinking	5,0 % *	43,3 %	51,7 %	1,5 %	32,2 %	66,4 %

* $p < 0.05$

The table shows that virtually half of the fifteen year-old adolescents fight with their parents often or sometimes over smoking cigarettes (46.9 % adolescents with diagnosis and 54.4 % adolescents without diagnosis, the difference is not statistically significant). As for drinking, almost half of the reference group of adolescents with disabilities (48.3 %) report fights compared with a third of adolescents with no diagnoses (33.7 %). This difference is also statistically significant. Adolescents with diagnosed mental disorders are 1.85 times more likely to have disputes with their parents about alcohol use than adolescents without a diagnosis, the significance level of $p < 0.05$ ($OR = 1.847$, $OR = \text{interval} / 1061; 3213/$, $p < 0.05$).

Protective Factors

In the experimental group, however, you can also find protective, resilience features that are now the center of our focus. These elements should be developed and further expanded.

⁵ The adolescents experienced their first intercourse: before 12 years of age 3,8 % (2,9 %); in 14 years of age 0 % (9,6 %); in 14 years of age 96,2 % (87,5 %). Those results were not significantly different.

I examined the number of close friends of the experimental group of adolescents. I was afraid that adolescents with psychiatric disorders would be more isolated, as they tend to have trouble choosing and maintaining close relationships. My findings, however, were contrary to that expectation and ultimately provided positive news. Adolescents with disabilities indicate an average of 7.45 friends, adolescents with no diagnoses, 7.87. The difference is not statistically significant. We can conclude that the adolescents in both groups have roughly the same number of close friends.

Other positives are found in perceived social support provided to the adolescents. Again, the results refute a presumption of reduced social support for adolescents with disabilities. Using the Questionnaire of social support for children⁶, adolescents were evaluated by both the total score of social support by frequency and by the total score of the perceived importance of social support and by other resources offered by the various aspects of support.

The total score of social support provided by frequency is averaged 231.3 points in adolescents with disorders and 232.2 points in adolescents with no diagnoses. The total score of perceived importance of social support is averaging 123.1 points in adolescents with disorders and 126.7 points in adolescents with no diagnoses. The assessment of resource supports that many (most) adolescents receive support from their friends / girlfriends (that adolescents with disabilities slightly more likely to receive it there than adolescents without a diagnosis - the average score of 55 versus 54), ranked immediately behind is the support given by parents (50 versus 51 points). Also very high support is manifested in adolescent classmates (49 vs. 48 points) and teachers (43 vs. 45). The perceived importance of this support more or less follows its frequency. None of the differences were considered statistically significant, but I think it is appropriate to reflect on the minor differences: It seems that adolescents with disabilities perceive support provided by peers, friends and classmates as being slightly more important than that of adults, parents and teachers. Would not this group deserve more empathetic approach from us adults?

Without removing credit for their parents' dedication, it is necessary to explore another unconfirmed assumption - that the parents of adolescents with ADHD and comorbidity were significantly more likely to pay little interest in their child's activities (Hurtig et al., 2007; research focused on the family environment of adolescents with ADHD). A summary of the activities pursued by the adolescent as reported by their mothers, the survey measured awareness of the child's activities in different aspects. When the teenager was home, adolescent mothers with psychiatric disabilities (without diagnosis) were aware of the child's activities: throughout the day, 31.9 % (36.1 %), most of the day or part of 67 % (63 %) and almost no part of the day only 1.1 % (0.9 %). If an adolescent is not at home, awareness of activities throughout the day 9.6 % (15.2 %), most of the day or part of 85.1 % (80 %) and almost no at all 5.3 % (4.8 %) mothers of ado-

⁶ Questionnaire Child and Adolescent Social Support Scale (CASSS - Child and Adolescent Social Support Scale of Malecki, Demaray, Elliott, 2000; translated and modified - Mareš, Ježek, 2005; included in the study ELSPAC). It contains 60 items, divided into five subscales (= support resources, i.e., parents, teachers, classmates, friends, people in school). Individual items also contain a statement regarding the type of social support (emotional, instrumental, information, support assessment). Moreover, specifically it examines also the frequency of support for a six-point scale and the importance / relevance of support on the three-point scale. Scale reliability - Cronbach alpha = 0.95.

lescents with diagnosis (control group). The differences are not statistically significant. Adolescents also expressed their satisfaction with talking to their parents. In talking with their mothers, 91.8 % of adolescents with disabilities felt satisfied to 94.2 % of adolescents with no diagnoses. In talking with the father 84.0 % of adolescents with a diagnosis of adolescents felt satisfied to 83.5 % of the control group. The differences are not statistically significant. It is clear that fathers should devote more time to their offspring, even though in my opinion, the relatively high satisfaction rating moves us to consider it a favorable report.

Discussion

According to Macek (2003) the image of adolescence has recently changed. He states that adolescents do not feel the majority of their experience of adolescence as a period full of crisis and conflict. This idea is consistent with the finding that a sixth of respondents almost never have conflicts with parents, another sixth have conflicts with their parents often, and two thirds have disagreements with their parents only sporadically (Foltová, 2010). But I see a serious argument to be made about alcohol consumption by adolescents surveyed. Since the respondents are fifteen years old adolescents (and thus correspond to the questionnaires for the previous four years, i.e., 11-15 years), it strikes me as an alarming indicator that affects nearly half of adolescents with psychiatric disorders and one-third of adolescents with no diagnoses. Here I see a need to recommend a greater emphasis on preventive efforts in regards to adolescents (the topic of smoking as well).

Theoretical considerations concerning the concept of resilience have shown that adolescents with psychiatric disorders may have a generally reduced level of resilience. In addition, adolescence is a sensitive period for the development of risk and problem behaviors (in Šišláková, 2005). The results of this study partially confirm this assumption - the observed group showed a decrease in self-control, and a threat can be particularly seen in the sexual aspects - an earlier start of sexual life is to be taken in addition to some close friends at risk - alcohol, smoking, drugs. Peers do represent an important element in their lives of young people. Adolescents look for a reference group among them from which to shape their identity (Šišláková, 2006, likewise in Langmeier, 2006, Lerner, 1985; Macek, 2003). Based on the results, the study also showed that the groups of adolescents with psychiatric disorders were significantly more likely to seek the company of older peers. Of course this does not explicitly say that older friends represent increased risk. It is possible that more sophisticated individuals other hand, can have a positive impact and to act more as a protective factor. However, it can be also expected that more problematic groups of individuals will take into their group rather younger individuals and this should be kept this in mind.

The results of this work have not confirmed the assumption of weakened support provided to adolescents with mental disorders from their social environment (reflections on the concept of coping with everyday tasks, as formulated by Bartlett, 1970; further developed Srajer and Musil, 2008, also as a model Lerner, 1985). Langmeier (2006) mentions that for a proper receipt of future social roles is a key process of independence, while expanding social relations. Snopek, Hublová (2008, p. 507) argue that “the social

relations in adolescence is an important source for creating your own self-image, self-esteem or self-realization.” It may seem that adolescents with psychiatric disorders are quite well integrated.

Regarding perceived social support, the results are in accordance with the research of Snopek and Hublová (2008), who also reported the highest scores for friends / girlfriends, followed by parents and peers, which according to the authors corresponds with previous studies. The results also revealed a relatively high level of perceived support provided by teachers. This fact can be considered positive, in accordance with the research of Šišláková (2006) that supporting teachers are resilience (protective) element in mesosystems of adolescent, as well good links between pupils, as also confirmed in this work.

Family members of individuals with mental disorders can suffer from negative reactions, such as constant supervision, ignorance and increased criticism (Probst, 2005). Continuous monitoring of the results in this study did not confirm that assumption. An overview of the activities of adolescents is similar in both groups.

Conclusion

Assessment of the situation took place at the very beginning of adolescence, when there is a greater role for parents (and in this case parents who can be presumed to have greater interest in their children than the absolutely “typical” population, because of their selfless participation in the longitudinal project). As indicated above, adolescents with psychiatric disorders did not account for too many differences in selected elements of lifestyle, compared with normal adolescents. And if this assessment can build any intervention, it revealed the need to address the increasingly psychosocial issues of adolescent life, to expand prevention efforts mainly on tobacco, alcohol and sexual issues and increase the resilience of adolescents.

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ADOLESCENTI V (PRO)PASTI?

Abstrakt: Cílem této studie je odhalit rozdíly v pozitivních i negativních prvcích životní situace adolescentů s diagnostikovanými psychickými poruchami ve srovnání s běžnou populací. Ověřoval se tak předpoklad, že adolescenti s poruchami vykazují větší rizikovost v životním stylu. Výzkumný soubor tvořili 15letí adolescenti ze studie ELSPAC (Evropská longitudinální studie rodičovství a dětství) s psychickými poruchami (N=447) a kontrolní skupina, tedy adolescenti bez diagnóz (N=2838). Z výsledků vyplývá, že adolescenti s poruchami opravdu častěji trpí potížemi v psychické a sociální oblasti. Vyskytuje se u nich ve větší míře rizikové chování. Pozitivním zjištěním naopak je, že i v této skupině rizikovějších jedinců lze nalézt ochranné, resilienční prvky, které mohou být v jejich životní situaci významným pozitivním faktorem.

Klíčová slova: adolescenti, psychické poruchy, rizikové chování, resilience

PROSOCIAL BEHAVIOUR OF ADOLESCENT IN SCHOOL AND AFTER-SCHOOL ENVIRONMENT

Michaela LUKAČIKOVÁ

Abstract: *The report presents the results of research investigations which aim was to find if the generation of teenagers seems to be interested in prosocial behaviour for assistance in the school environment and beyond it. Simultaneously we give the results of the willingness to help high school students in connection with the family mood, time pressure, and the attractiveness and homelessness and financial assistance of friend and stranger.*

Key words: *prosocial behaviour, altruism, helping behaviour, adolescent, help*

Psychologists, sociologists, and research teams began to address the issue of pro-social behavior, helping others in the sixties of last century. The motion became the murder of Kitty became Geneves who was brutally murdered before her own house, and the offense looked on 38 neighbors without even picking up the phone and calling for help. This heinous act has become a rider breaking point of many studies, since one is willing to help even in normal everyday situations.

The main contribution of our paper is to find the status of help of young people (high school) in different situations. It is well known that in the cities governs anonymity. In smaller towns or villages, where almost everyone knows each other, knows their options, is the notion of anonymity rather hidden. Therefore, we also carried out research in a smaller town where anonymity is lost, and visualization of the specific situation of the research is more real. In the present issue of prosocial behavior deals for example Eisenberg (2002, 2006), Mussen (1990), Kagan (1981), Knight (1981), Hill (2004), Kohoutek (2002) and others.

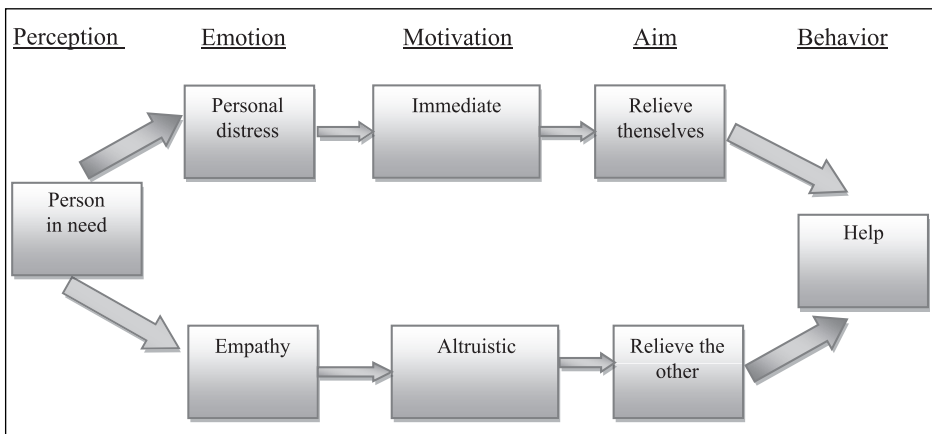
The definition of prosocial behavior is not clear. After studying the literary sources of domestic and foreign literature on pro-social behavior, we found that the authors used two parallel names, and prosocial behavior and altruism. In foreign literature also makes the concept of „helping behavior“ (Feldman, 1985; Bierhoff, 2002; Výrost, 2008), thus assisting behavior. What it means to be altruistic? What is the difference between prosocial behavior and altruistic behavior? Bierhoff (2002, p. 9) notes that the terms „helping behavior“, „prosocial behavior“ and „altruism“ are often confused and used

simultaneously. Differences between the three behaviors indicated as follows: „assist“ is a broader term that encompasses all forms of interpersonal assistance, the importance of „prosocial behavior“ is narrower. It indicates a situation where helping is motivated to help by their professional obligation and recipient is a person, not an organization, and the term „altruism“ shows on prosocial behavior that has different boundaries, thereby helping the motivation by helper, which is characterized by prospective income and empathy.

Nakonečný (2000, p. 105) refers to prosocial behavior (or „donor behavior“ - „helping behavior“) for altruism, too. This is either an expression of altruism, or the specific case of „emergency aid“, which is openly in research. Altruism may or may not be a sign of readiness to renounce their own good of another person or a whole group of people etc. It does not therefore relate to the victim (for example, altruistically motivated by financial contributions mean the same financial „sacrifice“, but not to sacrifice). Altruistic acts exist and there rises the question of what these crimes are motivated, when human nature is basically selfish.

Are people altruistic, or is our behavior always motivated by selfishness? Batson (1991, in: Kassin, 2007, p. 499) argues that aid is altruistic act in the case where the main aim of helper is to contribute to a person who needs it, regardless of the consequences for helping. According to Batson’s **empathy-altruism hypothesis** (Fig. 1) person, looking at people in need, has two emotional reactions: *personal distress* (guilt, anxiety, embarrassment and discomfort) and *empathy* (an insight, solidarity, understanding and compassion for another person). If dominates first reaction, we help because we want to get rid of own discomfort - *immediate „selfish“ motivations*. But if dominates the second response, people will help to ease the suffering of others - *the altruistic motivation*. Batson also says (in: Kassin, 2007, p. 499) that helping can often satisfy our selfish, but also noble motives.

Figure 1 Two ways of helping



We define the research problem by these questions:

What is the relationship between various types of pro-social behavior? In what

respect are the demographic variables /gender, completeness of the family/ to help others?

For goal of our paper, we have set to confirm the two hypotheses and to assume that there is a relationship between the child and completeness family and to helping others and that the girls help more over boys in the various situations in which they find themselves or the person requiring assistance.

The research sample consisted of 100 students (number of girls N = 56, number of boys N = 44) of Secondary Vocational School in Medzilaborce from first to fourth grade. Age structure of respondents was 15-19 years (mean 17.2 years). Students come from a complete (N = 76) and incomplete (N = 24) families. We realized the research using our created questionnaire, which was created for high school youth, based on Kassín (2007, p. 502) and his ways where is the most likely received help.

Results and interpretation of results

The program SPSS 19 was used to evaluate the results that we have established a link between aid and the relationship of individual demographic variables using chi-square.

Table 1 Relationship of assistance in relation to demographic variables (complete/incomplete families) for the entire file (N=100).

	df	p
Help your favourite teacher	5	,999
Help no favourite teacher	5	,999
Help old woman in a hurry	5	,999
Help attractive woman in ankle sprains	5	,999
Help homeless	5	,999
Financial assistance to known person	5	,999
Financial assistance to a stranger	5	,999

Demographic variables completeness and incompleteness of the family is not in linear relation to different types of assistance (Table 1) due to p values greater than the chosen level of significance $p = 0.05$. Zero first hypothesis is not rejected, the result is not statistically significant and the difference in the sample and the expected frequencies may be due to random selection, and also the influence of education as one of the factors affecting the development of pro-social behavior.

To help your favorite teacher in the fall on the ice school students are very helpful. Up to 80 % of boys and 100 % of girls help their favorite teacher in this unfavorable situation, but only 54 % of boys and 30 % of girls in the same situation will help teacher who does not like. Personal aversion is strongly confirmed here. We confirmed the Kassín's theory (2007, p. 502), where assistance is available to those who like and who is

attractive for donor of help. It will be interesting to find the reasons not to help a person with who they are in everyday contact and who teaches and educates them.

Time distress was another phenomenon, which we examined in prosocial behavior. Do students help elderly person if they are in a situation that is very important for them (e.g., maturity exams), and time is precious? The results were not surprising, as literary sources suggest. 80 % of boys and 95 % of girls would not help the elderly. The remaining percentage of high school, what is a quarter of the total number of interviewed students, will help even in time distress.

Attractiveness versus social phenomenon of homeless. At first glance it seems that the result is clear in one hundred percent, but the results were interesting. 80 % of girls will help attractive girl against a person who is homeless. Although only a small percentage of our sample respondents 30 % of boys and 8 % of girls help a man who is in a bad social situation, which is a pleasing result.

The financial situation today is quite unfavorable. Crisis and related issues are quite often not only tilt, but there are also real. Especially in the study area. If for the asked students is the man known, with the funds will help 40 % of boys and girls 45 %. In contrast, to the unknown would not help at all boys and girls only in small degree, only 8 %. The financial situation has become more significant phenomenon than attractiveness.

Conclusion

Finally, we could claim that helping behavior disappeared from today's adolescent youth. Overall, we conclude, from which family a child comes does not affect their behavior to help. Popularity (in our case the teacher) and attractiveness were significant factors for assistance. About a quarter of respondents would help a person in need, even though they are in a hurry. We also confirmed the assumption that homelessness and financial assistance to a stranger is not seen as much as help close to gender.

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PROSOCIÁLNE SPRÁVANIE ADOLESCENTOV V ŠKOLSKOM I MIMOŠKOLSKOM PROSTREDÍ

Abstrakt: V príspevku sú prezentované výsledky výskumného šetrenia, ktorého cieľom bolo zistiť, či generácia teenagerov javí záujem o prosociálne správanie v súvislosti s pomocou v školskom prostredí i mimo neho. Súčasne podávame aj výsledky ochoty stredoškolákov pomôcť druhému v súvislosti s rodinným rozpoložením, časovou tiesňou, atraktivitou a bezdomovstvom a finančnou pomocou známemu a neznámemu človeku.

Kľúčové slová: prosociálne správanie, altruizmus, pomáhajúce správanie, adolescent, pomoc

PUPILS WITH MILD INTELLECTUAL DISABILITIES IN INCLUSION EDUCATION

Miroslava BARTOŇOVÁ

Abstract: *In the last decade, there has been a trend toward the inclusion of pupils with SEN, pupils with mild intellectual disabilities into mainstream schools. A specific feature of the approaches used in educating pupils with MID is the acquisition of key competencies – the preparation of pupils with mild intellectual disabilities (MID) for everyday life. The aim of the research was to describe the factors and support measures which affect the process of integration/inclusion of pupils with mild intellectual disabilities into primary schools in the city of Brno and Vyškov. In-depth qualitative interviews based on the phenomenological paradigm were used, as well as semi-structured interviews methodologically inspired by the grounded theory approach (Strauss, A., Corbinová, J 1999). The research results confirm that a foundation of lesson procedures is the adherence to support measures: the role of the assistant teacher, an individual education plan, personal development plan, individual approach, special methods and forms of work.*

Key words: *education, inclusion, support measures, teacher, pupil with mild intellectual disabilities, qualitative research, teaching strategies, school environment.*

Introduction

The education of pupils with special educational needs (SEN) in mainstream schools is one of the most important tasks and challenges for future education policies in both domestic and international contexts. Inclusive education is based on the legal provisions of the UN, UNESCO, Salamanca Statement (1994). But the question remains: What do we call the values of inclusion and individuality? A partial answer to this question may be some of the key aspects of education. The first aspect is correct diagnosis; determining whether there are special educational needs or not. Furthermore, there is the structure of the curriculum – namely, how necessary it is to specialize the curriculum of a regular educational program.

An inclusive education is understood to be an education that develops the culture of the school towards social coherence, and inclusion is understood to mean the arrange-

ment of a normal school in a way which can offer an adequate education to all children (pupils and students) with regard to their individual differences and with respect to their current educational needs regardless of the type of “*special*” needs or of the results of a comparison of pupils’ performance (www.msmt.cz). In the past decade, there has been a notable trend toward the inclusion of pupils with SEN who had previously attended special schools. The inclusion of pupils with learning difficulties (MID) has been undertaken in the USA. Some of the studies conducted abroad between 2002 and 2003 point to a decline in pupils with learning difficulties (MID) in segregated special education from 54 % to 43 % (Norwich, B., Kelly, N. 2005).

An intellectual disability poses a significant limitation in the functionality of an individual. It is characterized by a significant reduction in intellectual abilities and exists concurrently with limitations in two or more skill areas such as communication, self-maintenance, family life, self-control, health and safety, education, leisure and work. The active molding of the personality of a pupil with an intellectual disability depends on how the support systems work, how stimulating the environment is for the teacher’s creativity, the experience of the individual, personal factors (e.g. what are the cultural connections with the strategies or patterns of behavior) and what skills the pupil possesses. The aim of teaching is to create a teaching environment that is necessary for life and leads to the greatest possible independence and self-sufficiency. To do this, it is necessary to differentiate and didactically adapt the educational content. The most effective teaching methods used with pupils in mainstream schools are also the teaching methods used with pupils with mild intellectual disabilities. Teachers of both groups of pupils make use of such measures in order to make it as easy as possible to educate students with mild intellectual disabilities, modifying the various methods according to the individual.

A specific feature of the approaches used in educating pupils with MID is the acquisition of key competencies – the preparation of pupils with mild intellectual disabilities (MID) for everyday life. Strategies aimed at the ability to receive and impart information through symbolic or non-symbolic communication (communication skills), teach pupils to be perceptive of their strengths and limitations, be aware of their interests, and be able to recognize and accept their own need for support (personal skills). An important strategy is the ability to lead students toward deepening their knowledge and skills in certain areas (objective skills), to acquire learning methods and master the ways of work organization (methodological skills). The planning of inclusive learning in a classroom or school assumes that consideration of the additional individual support measures of the pupils concerned is being taken. This means that an individual model cannot exist without a social model, just as a social model must reflect the individual conditions. It is not possible to determine the individual needs and arrangements for the pupil unless we take into account how capable the community is in responding to the differentness of the pupil (Henley, M., Ramsey, R., Algozzine, F.).

We can consider the analysis and evaluation of the procedures used in teaching and the ability to describe and re-use them as key skills of an inclusive educator.

An educator in an inclusive school is no longer someone who directs the lesson – they become more of a facilitator in a pupil’s learning and development, a guide, a mentor, and a partner in dialogue and discussion. They focus on finding new teaching

methods, their effectiveness and evaluation. An inclusive school applies *internally individualized learning methods* and monitors *the individualized teaching goals*. Ex cathedra teaching recedes into the background and *cooperation and differentiation in education* prevail (Hájková, V., Strnadová, I. 2010).

If inclusion is to be carried out as it has over the past twenty years, the group of pupils with learning disabilities (pupils with MID) presents a difficult test for the inclusion. An additional subject of our research was the mapping of the state of educating pupils with MID within inclusion conditions within primary education.

Description of research methods and the research

Research was carried out following qualitative research methods. The aim of the research was to describe the factors and support measures which affect the process of integration/inclusion of pupils with mild intellectual disabilities into primary schools in the city of Brno and the Vyškov region. The research determined to what extent the individual measures are being by teachers. A substantial part of the research also included a combination and confrontation of the points of view held by persons involved. In this particular research, the involved persons were mainly teachers, pupils and their parents.

In order to meet the objectives while also taking into account the nature of the subsequent specified research questions, a combination of two qualitative techniques was chosen. Both *in-depth interviews* based on the phenomenological paradigm and *semi-structured interviews* methodologically inspired by the *grounded theory* approach were used in the research (Strauss, A., Corbin, J. 1999). For the qualitative analysis, we formulated research questions proceeding from the most general and very broad questions to very specific ones. The most general research questions (and research objectives) were divided into several broader sections:

- 1) *The significance of the disability in connotation to teachers and pupils*
- 2) *The individual needs of pupils with an MID*
- 3) *The approaches and skills applied by teachers towards pupils with mild intellectual disabilities*
- 4) *Confrontation of the viewpoints of teachers, pupils and parents*

Emphasis was placed on gathering as wide a range of approaches to inclusive education as possible, on their categorization and their placement into context with other statements of involved persons. We were interested in the capability of co-operating, the application of specific approaches to the educational process, assuring conditions, the form of evaluation and the use of an assistant teacher in the classroom. The potential of phenomenological research was used to confront the points of view of three surveyed groups of respondents. This part of the research showed where their perceptions are similar and where they are different. How the respondents perceive the situation of a pupil with an MID, what the problematic areas are, and areas with hidden potential.

The research sample included respondents from three involved groups: **teachers**, **parents**, and **pupils with an MID**. The key group for the research were the students with an MID themselves. In addition to them, however, is the interrelationship of teachers from integrating schools of Brno and Vyškov and the parents of the interviewed pupils.

The research sample was in the interest of the answers to all of the research questions. Such diversity is very important for a *triangulation of results*. Triangulation ensures a diversity of viewpoints to the researched issues without being dependent upon any philosophical approach. It shows a diversity of viewpoints and the influence of the situation on the testimonies (Šafaříček, R., Šed'ová, K. 2007). The greatest emphasis, however, was given to interviews with teachers.

The tool used for the collection and creation of data for the qualitative depth interviews with representatives of the target populations were *interview scenarios*. The subject matter of the interview was largely determined by the respondent. Interviews were recorded using audio-visual devices and then transcribed and analyzed. The length of an interview was between 45-60 minutes. Through *open coding* we identified the basic concepts of the analyzed interviews and created the primary key categories. Each category basically represented a sub-theme, which was a subject of conversation.

Nine interviews were carried out with teachers (they were all teachers who had agreed to take part in the research and who work with an integrated pupil with an MID in their class), 2 interviews with pupils with an MID, and 1 conversation with their parents. In that chapter we will present only the results of the research conducted with teachers of integrated pupils with an MID in mainstream schools.

The qualitative analysis was carried out in the *grounded theory* paradigm. On the basis of this analysis we searched for basic *research categories* with the aid of *open coding*. This was followed by an *axial coding* technique that puts into context the various categories and subcategories and acts as a tool for sorting data (Šafaříček, R., Šed'ová, K. 2007). Among **the basic categories** were the *system framework of education (1)*, the *category view of the pupil (2)*, *category role of the actors (3)*, and *category specific approaches to teaching (4)*.

Within the **first category (1)**, we focused on the system of education of pupils with MID. Some of the schools that participated in the research had developed a separate educational program based on the FEP PE (Framework Education Program for Primary Education) – an appendix defining the education of pupils with MID (in cases with a larger number of integrated pupils at the school). Another option was to create an individual education plan based on the FEP PE – Appendix MID. In these cases, pupils also had their own personal development plans. An individualized education plan (IEP) contains the principles essential for teachers making decisions. Such decisions need to include tasks that are clear and understandable to pupils, teachers and parents. An IEP should be prepared in a way that makes it easier for the teacher to run lessons and, primarily, plan the lessons – not vice versa (e.g. specific supporting goals are defined). Such a plan was the result of the mutual co-operation of the teacher, a special pedagogical center (SPC) with a supervisory role over correctness, and a parent that would acknowledge the completion of their child's tasks with their signature.

The **second category (2)** involved an insight into the evaluation of the pupils' level, their special needs, and identifying the extent of their ability to get engaged (integrate) with the collective of the class and school. Intellect was perceived by the informants (teachers) as a basic feature that is essential to doing well within the educational process. The distinguishing question is whether the “pupil can do it”, or “not”. A reduced intellect places the pupil in an inferior position at all levels – although IQ is only

one of many aspects of mental activity. Teachers applied a system of hierarchization and nearly always expected that such a student would do worse than others, and when a pupil with an MID stood out in something over the rest of the class, teachers often viewed it as surprising.

Most of the time, integrated pupils with an MID were mentioned as having problems with more general operations – generalizations, categorizing, imprinting into memory. This aspect is also related to frequent loss of attention and memory deficit, which, in particular, has an impact on success in learning. Classic psychological research has shown that random strings of symbols without any mutual correlation are far more problematic to remember than any content in which a certain internal logic can be both observed and recollected from memory based on such a system. In addition, the ability to learn materials that are understood well by other pupils and considered to be systematic are, according to the informants, more difficult to acquire for pupils with lower intellect. It is often seen by them as an illogical sequence of information, thus making the learning process less efficient. Among other aspects of the pupils' disabilities were speech impairments, especially when pronouncing more complex expressions. Another aspect, of course, is a more limited vocabulary – whose extent, however, was often connected to a lack of stimulation within the social environment some of the pupils lived in.

Another of the *categories* (3) was the specific aspects of approaches in the educational process. In connection with a limited ability to generalize and link different content was frequently mentioned the need for an illustrative interpretation of the curriculum. Teachers also mentioned measures necessary for sustaining attention, which pupils with an MID is very scattered. They tend to lose attention especially during longer presentations of the curriculum. As a result, it is impossible for the teacher to meaningfully differentiate individual conventional phases of the lesson procedure. Furthermore, all of the interviews have shown that an emphasis has been given to illustration and tactile-kinesthetic activities in various forms. The fulfillment of this specific need was a result of teachers' efforts to help pupils overcome their deficits in the area of more general logical operations; their inability to order things is replaced by physical manipulation and making connections. The use of such techniques is suitable mainly for the practice of operations that cannot be connected through logical processes (counting and multiplication) and that require mechanical memorization. The question is how to overcome the deficit when more complex logical content is concerned, such as in the fields of the natural sciences and the history and geography of one's own country. In addition to illustration and frequent changes in lessons, pupils with MID also need more specific and clearer instructions than others. Teacher's help and advice are necessary to make sure that pupils are doing the task they are supposed to and that they are doing the task correctly. Joining the collective was not viewed by any of the pupils as a problem. The other pupils were generally made familiar with the issue of the disability of the integrated pupil and their relationship to the pupil was more protective than conflictive. It is also significant that the pupils with an MID that were discussed in the research had no behavioral problems. Instead, they were rather quiet, sometimes even slow or apathetic. Since pupils with an MID were not seen as competition by the other pupils, they often got into protected positions and were cared for by their classmates.

On the other hand, some teachers question the sense of integration. Although the

relationships in the collective are not a problem, a significant difference while trying to integrate (especially at upper primary school) rather inhibits the personal development of a pupil. If the pupil is significantly below the average of the class, they experience systematic feelings of difference and inadequacy they would not have were they in a pool of children at a similar level.

The dilemma of integrating into a regular class

On the one hand, there is the motivation to integrate the pupil into the collective, enabling them to compare themselves with others and to self-reflect, which is derived from a normal group. On the other hand, the pupil's experience from integration into a normal class is often problematic because they see their difference. Problems are not usually mentioned in relation to accepting the pupil by the collective. On the contrary, in all of the interviews a positive attitude toward the pupil has been strongly emphasized. On the other hand, however, the interviews showed a latent phenomenon of students with an MID as diversifying and making the school environment more interesting for other students. Although their attitude is positive, the integrated pupil is relegated to the role of someone to help and care for.

The dilemma of cooperation with parents

Although cooperation with parents was evaluated as positive and trouble-free in most interviews, there was also a latent conflict between parents and the school about requirements that a child could manage to complete. There is the particular school, teachers and in some cases a special pedagogical center with their own experience from various cases of integration on one side, and on the other side are parents who have detailed knowledge about their child and who are the most motivated to support them. The contradiction is apparent when teachers talk about the fact that parents refuse to place their child at a different type of school, although the teachers themselves view the integration process within a regular primary school as something pointless.

Another aspect of cooperation is given by the social status of the parents. So far, the interviews have shown that it is possible to distinguish two types of parents that stand out more significantly as far as feedback on the dynamics of coping with MID within the family is concerned. The first type is socially weak parents. The second type is mobilized parents, usually from higher educational levels. The family environment with the first group is not very stimulating, the pupil is not being developed, and their willingness to co-operate is quite low. The second group of parents, on the other hand, are mobilized by the MID of their child and they become "expert parents" who integrate the care of their child into their life plan. Both groups, however, are similar in the fact that they want their child to participate at the highest level of education possible (the level that is actually beneficial to the child may be, however, subject to conflict with other parties).

The following subcategory (3) was related to co-operation with other teachers, with a special pedagogical center (SPC), and other institutions. Co-operation among teachers was more effective at lower primary school levels. At upper primary school levels, co-operation with an assistant was more prevalent than among the teachers themselves. Co-operation with an SPC was carried out at three levels: negotiating a claim for an assistant, consulting and training activities, and counseling work in specific cases. The first two areas were noted as trouble-free. Co-operation on specific cases (and mainly the participation of SPC representatives) took place only marginally within the class, and sometimes differently than what the teachers would have expected. Not all pupils discussed in the interviews were recommended to have an assistant teacher. The assistant teacher's role was mentioned mainly in reference to balancing the pace and requirements of the curriculum at a regular school. Integration is often possible only with the use of an assistant who helps the pupil when they significantly lag behind the normal pace of a lesson. Sometimes it is the assistant who takes over the major role not only in communication with the pupil, but also in planning the pupil's development and estimating their abilities.

The last category (4) included the particulars in education and the application of support measures. The general organization of a lesson is influenced by the use of assistance. Thus a teacher may afford to slightly exceed the pace of a pupil with an MID because they know that, thanks the assistant, the pupil will not get lost in the flow of information.

The dilemma of lesson organization

Pupils with an MID are often very rigid in their approach to change; it takes them longer to adapt and get used to something. Paradoxically, it is those pupils going through integration with an increased burden that attend part of the subject outside of their class. They are faced with the need to alternate groups, which would be a burden to even pupils without an MID. On the other hand, it actually provides a positive aspect, which lies in the fact that they get used to change, which is something they will have to cope with throughout their entire lives.

Teachers place an emphasis on the need to more closely monitor the completion of tasks and the systemization of common activities. The general direction of the lesson is related to the specific needs mentioned by teachers in the previous parts of the interviews. Illustrative and tactile-kinesthetic activities often required non-standard aids that were not yet commonly available, and teachers had to improvise or manufacture their own teaching aids; they used aids (textbooks) of both special and normal primary schools. During the lesson, teachers put great emphasis on differentiation and cooperation (group work) and take advantage of alternative approaches and elements of therapy (art therapy, music therapy).

An important part of the educational process is evaluation. During evaluation teachers often cite self-consciousness as they evaluate integrated pupils. Verbal assessment is used only for some of them and giving grades evokes the same scale of grades as with the other pupils, which is, however, perceived as problematic. Performance was

evaluated according to the level of knowledge of the curriculum of a special primary school. Parents often did not want verbal evaluations and preferred grades.

The dilemma of evaluation

Pupils with MID are assessed differently than other pupils in the classroom, yet still at the same scale of grades. This raises questions or concerns of other students with which the teacher has to cope with. On the one hand, it has been mentioned that it is important to have the same evaluation scale for a pupil with an MID and the others (pupils with an MID often request it themselves). On the other hand, it is often clear to the other pupils that they are marked according to other criteria.

Conclusion

An intellectual disability is associated with limited intellectual or cognitive functions that can impair learning and the acquiring of new knowledge. Pupils with an MID have various educational needs and various opportunities. The aims at of teaching students with an MID are focused on securing, extending and modifying the existing competencies of the pupil. In order to motivate them, broaden their knowledge, behavior and conduct, those objectives (based on the pupils' interests) are individualized and differentiated. They should motivate them in such a way that they become aware on their own of their strengths.

Integrated learning of pupils with and without disabilities is a mutual task for all schools, as it is protected by school legal documents. We must realize that integrated education is not the opposite pole nor structural alternative to the existence of special schools, but rather an integral part of the school profile. It consists of creating learning situations that take into account individual learning opportunities and the needs of all pupils involved, as well as to bring them into a mutual learning process. A lesson procedure such as this is possible in a team of teachers. The team should discuss, plan, implement and reflect upon their lesson procedures through a permanent information exchange depending on the specific topics and learning objectives of particular fields.

On the basis of the research results, we have confirmed that the foundation of education is the adherence to support measures: *the role of the assistant teacher, an individual education plan, personal development plan, individual approach, special methods and forms of work*. Teachers must have certain skills in understanding pupils: for example, be able to perceive themselves and others, identify strengths and weaknesses and know how to manage and use them, be capable of self-evaluation and of assessing others, create communication situations with various partners and be able to reflect upon them, and further develop mutually agreed upon arrangements and be able to carry them through. Working together cooperatively is a condition for success.

Parents are also an important factor. Parents usually observe the development, abilities and educational needs of their children from a different perspective than te-

achers. Many parents go through a lot of stress during the upbringing of their child. Keeping each other informed about the child's evaluation, listening attentively, empathy, an understanding attitude, a realistic perspective on what is being done, and the acceptance of limits and valid critiques are among the invaluable skills required for cooperation between parents and teachers.

At present, however, there is not yet enough experience in methodology and didactics for joint teaching. It is therefore necessary that integration in lesson procedures be given extra support through counseling, reflection and further education.

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ŽÁCI S LEHKÝM MENTÁLNÍM POSTIŽENÍM V INKLUZIVNÍM VDĚLÁVÁNÍ

Abstrakt: V posledních deseti letech je patrný trend inkluze žáků se SVP, žáků s lehkým mentálním postižením do škol hlavního vzdělávacího proudu. Specifikou přístupů v edukaci žáků s LMP je osvojení si klíčových kompetencí, příprava žáka s lehkým mentálním postižením (LMP) na konkrétní každodenní život. Cílem výzkumného šetření bylo popsat faktory a podpůrná opatření, ovlivňující proces integrace/inkluze žáků s lehkým mentálním postižením v základních školách v Brně městě a Vyškově. Bylo využito kvalitativních hloubkových rozhovorů vycházejících z fenomenologického paradigmatu a polostrukturované rozhovory metodologicky inspirované přístupem zakotvené teorie (Strauss, A., Corbinová, J 1999). Na základě výsledků výzkumu se

nám potvrdilo, že základem vyučování je dodržování podpůrných opatření: funkce asistenta pedagoga, individuální vzdělávací plán, plán osobního rozvoje, individuální přístup, speciální metody a formy práce.

Klíčová slova: vzdělávání, inkluze, podpůrná opatření, pedagog, žák s lehkým mentálním postižením, kvalitativní výzkum, učební strategie, školní prostředí.

SPECIFIC FACTORS OF QUALITY OF LIFE IN CHILDREN WITH DIABETES MELLITUS

Marcela LINKOVÁ, Tatiana KIMÁKOVÁ, Róbert LINK

Abstract: *The results of research prove the antagonistic effect diabetes mellitus (DM) on growth and psychosocial functions of adolescents. In children, who suffer from chronic disease, diabetes is significant factor influencing their identity. In these cases, researchers found out higher occurrence of depression and stress, even children's aggressiveness is increasing. The aim of our study was to analyse factors, which are connected with 1 type diabetes mellitus in children, and remarkably effect on their dimensions of quality of life (QL). The main situation where their QL is influenced with DM is school, education process and their effort to integrate themselves in school environment. Children patients have to get used to keeping strict schedule of doses of insulin, eating, self-monitoring, hospitalisations. Changed lifestyle requires exactness, self-discipline and is connected with negative emotions, such as pain, anxiety, fear. Their effective education and psychosocial support from children's doctors and families are necessary. Families have to accept the fact of disease and the plan of families should adjust to actual necessity of children.*

Key words: *type 1 diabetes mellitus, quality of life, self-monitoring, treatment of diabetes, school education*

Diabetes mellitus (DM) is significant wide-spread disease, which affect many people. Number of patients with DM is approximately three times more than they were 20 years ago. Many children also suffer from DM. According to National register of patients with 1st type of DM, prevalence of children aged 0 – 14 years reached 99.51 ill children/100 000 children in 2008 (NCZI, 2008). Even though incidence of 1st type of DM in that age group has more stable character, on contrary to rapid increase in 1990's, doctors warn that 2nd type of DM is increasing. These findings in Slovak population correlate with rising of obesity in the whole world. American diabetes association ADA alarm that risk model supposed by 50 % increase in 2nd type of DM in pre-school aged children compared with present time.

1st and 2nd types of diabetes mellitus are etiological different diseases. DM of the 1st type is caused by defect of secretion of insulin. Whole-life exogenous insulin

administration is necessary for patients because of absolute insulin deficiency. DM of the 2nd type is caused by the defect of insulin efficacy. Disease occurs after long asymptomatic period, more often in adults than in children, and is associated with obesity. In case sufficient insulin secretion, patient can be treated with oral medicines (Vozár, 2004). Diagnoses of 1st type DM is usually fast, without warning and means change of life for child and all members of family. Typical symptoms of DM are polyuria, thirst, rapid loss of body weight, and finally ketoacidosis (Rác a spol., 2004). The most typical symptom is strong smell of acetone. Without specialized treatment and exogenous administration of insulin state of the children will finish fatally. Until 1922 medicine was not able to effective cure children with 1st type of DM.

Nowadays, children in case good treatment and correction of blood glucose level, have the same chance to live as long as their healthy classmates. True is that patient has to keep a strict every-day timetable. DM makes people have strong discipline and rules. There is a list of specific requests for every-day time table for patients with 1st type of DM (Table 1).

Table 1. Specific requests for every-day time table for patients with 1st type of DM

Regular use of medicines and insulin application
Use of glucometre, insulin pen, insulin pump
Self-monitoring of blood glucose level, blood press body weight
Education, self-studying about DM
Regular checking in diabetes doctor, examinations in specialized doctors
Keeping diet
Treatment about foot
Regular exercises
Management emotion stress
Management other associated diseases

Except of the necessity to accept their illness, children have to manage ordinary problems of their every-day lives during childhood and adolescent period. On the other hand, acceptance of illness teaches child to eat healthy food and live healthy style of life. The child become little specialist in his trouble and often pass over their mates in intelligence, knowledge about healthy way of life, nutrition. Child often copes with his disease quicker than his parents. Emotion reactions of parents go through various periods (Table 2). During first days after diagnosis of illness parents have to get over psychological stress, which come from finding their child has life-long illness. After getting over the first crisis, the balance period begins. Parents try to take active role in management of their child disease. The family accepts the fact of diabetes mellitus, the whole rhythm of family life adjust to actual necessities of child. This is practically life-long stage (Michalková, 2003).

Table 2. Stages of emotion reactions of parents, after diagnosis diabetes mellitus

Shock with irrational emotions and thinking, parent often react excessively
Denial – they do not want to accept the fact of illness, they try to find “miraculous medicine”
Sadness, anger, anxiety, feeling of guilt – often reactions are feelings of failing, disability, parents feel to be guilty for illness
Balance – feeling of sadness, sorrow decreases. Parents aspirate to manage therapy of illness more actively
Reorganization – family accepts the fact of disease, their whole rhythm adjust actual needs of child.

The main lifelong problem for patients with DM and their families is to accept diagnosis of illness, and find to answer to the question how to live with their disease.

Influence of social and psychological factors on management of DM in children and adolescents is studied in many works and projects. They monitor quality of lives in children with the lifelong disease. There are many questionnaires and measure scales for describing quality of live (QoL). Scales can be divided into groups: general, generic, evaluating general patient’s state not focused to special disease, but mainly special scales for DM. The special scales evaluate effect of DM on physiological, psychological and social aspects of patient’s QoL.

The first studies, which describes problems of young patients with diabetes, were done by Ingersoll and Marrer (1991), measured with Diabetes – Related Quality of Life. Authors adjusted questionnaire Diabetes Control and Complications Trial Research Group to the young age categories.

The new studies include the whole scale of QoL of young patients, monitor the influence of DM on whole family, and level of their metabolic checking. Diagnose of DM in child changes family activities for long time and very often also family’s view on life. Study of Kylie et al. (2004) investigated changes in lives of children patients with 1st type of DM, who suffered from DM more than two years. There were 117 children and their parents included into the trial. In 1998 parents of 5–18 year-old children evaluated QoL of their children before hospitalization on diabetes clinic, they used Child Health Questionnaire PF 50. Children at the age 12–18 years could evaluated their QoL, in Child Health Questionnaire CF-80, by their own. In both groups, level of glycemic haemoglobin as parameter of glycemic control was measured. Measurements were repeated after two years.

In general evaluation of results, different attitudes of parents and their children were found before and after study. Adolescents described significant improvement in family activities ($p \leq 0.001$), getting better in feeling of body pain ($p=0.004$) and also better adaptation to the illness ($p=0.001$) after finishing of study. In scale, which measure their behavior, however, slight diminishing was revealed ($p=0.04$).

Social support and influence of family environment on life with DM observed some more studies. Study in groups of children and adolescents, who suffered from 1st type of DM (Hauser et al. 1990; Schafer et al. 1986), similar to work in adult patients with DM type 2nd (Garay-Sevilla a spol., 1995), revealed that better adaptation to the disease is connected with the high support of family rare incidence of big conflicts in

family. Results works asserted association between social support and glycemic control in adolescents (Eaton et al. 1992).

But not in all families, process of adaptation on disease is without problems. Several long-lasting works suggest that diagnose of DM is able to cause severe problems in children lives (Delamater, 1990). Lack of communication, small interest of parents in children troubles, lack of support are narrow connected to weak metabolic control and insufficient glycemic regime. As Kovács (1985) wrote, about 36% of new diagnose of DM in children was associated with psychological problems. Results shew that adolescents with the worse metabolic control had higher percentage of anxiety, lower self-esteem, bigger problems in relationships with their classmates, more depressions, and higher level of stress. Especially girls with DM felt higher level of depression and anorexia. Mental anorexia, bulimia in young girls with DM is three times higher than in group of healthy girls. Ketoacidosis is also the most important lethal factor of the patients with the 1st type of DM.

As is written above, the markable part of the treatment of the young patients is psychological – psychiatric support as individual and family psychotherapy, consultancy and, if it necessary, antidepressive therapy.

In conclusion we can mention, that in case a such difficult, life-long disease as DM the 1st type is, therapy management has to be individually in accordance to needs of young patient and the whole his family. It is always important to prepare patients to do self-management and metabolic controls by their own. This is not possible without thorough education and knowledge of risk factors, which are connected with DM.

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ŠPECIFICKÉ FAKTORY KVALITY ŽIVOTA DETÍ S OCHORENÍM DIABETES MELLITUS

Abstrakt: Výsledky výskumov dokazujú možný „nepriateľský“ vplyv ochorenia diabetes mellitus na vývoj a psychosociálne funkcie adolescentov. Pre deti, u ktorých sa objaví chronické ochorenie je významným faktorom ovplyvňujúcim ich identitu. V týchto prípadoch sa zaznamenáva vyšší výskyt depresí a stresu, ba dokonca sa stupňuje aj detská agresivita. V našej práci sa venujeme analýze faktorov, ktoré súvisia s ochorením diabetes mellitus 1 typu u detského pacienta a ktoré významným spôsobom modifikujú jednotlivé dimenzie jeho kvality života nevynímajúc školu, vyučovací proces a ovplyvňujú jeho začlenenie sa do školského prostredia. Detský pacient si musí zvykať na striktné dodržiavanie režimu, zmeny v stravovaní, denné dávky inzulínu, selfmonitoring, hospitalizácie. Zmenený životný štýl vyžaduje presnosť, sebadisciplínu a spája sa s negatívnymi emóciami ako sú bolesť, strach a úzkosť. Efektívna edukácia a psychosociálna podpora detského diabetika a jeho rodiny je nezastupiteľná. Rodina musí prijať skutočnosť choroby a celý jej chod sa musí prispôbiť aktuálnym potrebám dieťaťa.

Kľúčové slová: diabetes mellitus 1. typu, kvalita života, selfmonitoring, diabetická terapia, školské vzdelávanie

DISRUPTION OF SOCIAL BONDS AS A CAUSE OF DELINQUENCY OF ADOLESCENTS

Monika NIGUTOVÁ, Tatiana KIMÁKOVÁ, Petr KACHLÍK

Abstract: *Disrupted social bonds in adolescence have direct connection with the delinquency of young people. Adolescence is a period of stabilization of mental and physical development; the main developmental task is to find and develop their own identity. Family environment plays an important role and has a big influence on further personal life. The work deals with the importance of family, family relationships and peer contacts in particular, and describes social deviation briefly. The objective of the work was to find out the connection between the delinquency of adolescents and disrupted social bonds, specially feeling of the absence of parental love and attention and to find out the main motives for the delinquency of adolescents. The work pointed out the friends as the most important factor of delinquency of adolescents and finally pointed out the fact the most of adolescents saw the same or similar delinquent behaviour in the family.*

Key words: *adolescents, delinquency, family, peers, social bonds*

Introduction

Adolescence covers the period approximately from 11 to 20 year of life, where there are important physical, mental and social changes. They run somewhat parallel and are in mutual interaction. They are not essential as personality is determined by the conversion of a number of other factors - social, cultural, economic, etc. (Langmeier, Krejčířová, 2006).

One of the most important factors is the family environment that surrounds an individual from birth, and in which virtually all life takes place. What an individual gains during his life in the family has an irreplaceable impact on his personality, relationships and every area of his career. The first identification educators and role models for children are parents. They represent an irreplaceable source of love for them. Their job is to ensure a universal mental and physical development, emotional support, moral and intellectual growth for their children (Koteková et al., 1998). Among the relevant factors of the child's social development belongs creating a lasting emotional bond between the child and the person close to it (parents), so-called attachment. It is

created from birth and is normally developed at the age of 1.5 years. This is a cyclic model, consisting of four phases (1. child has a need, 2. child gets the need, 3. parent meets the need, 4. child feels comfortable). The more often the cycle is repeated, the more it strengthens the attachment. A child who can create this bond can later create safe and stable relationships and build trust with others (Children Welfare League of America, 2003). Hewstone, Stroebe (2006) and others confirm that the quality of family relationships determines the quality of other relationships of the individual. These links provide children and adults with the primary sense of security, allowing individual to better face the threats and uncertainties outside. For adolescents harmonious family relations are a base of security and social support. While seeking autonomy, which demonstrate different manifestations of defiance, the family is often a model for them to solve problems (Ruiselová, 1997). On the other hand, the family that does not meet the basic demands of society and does not adequately fulfil its functions, negatively affects the personality development of children. Negative relationship of parents with a child largely frustrates its need for security, protection, understanding, care, and so on. As a result, emotional deprivation, disordered emotions, sociability, self-esteem, behavior, etc. arise (Ďuricová, 2005). Blackburn and Raine believe that certain types of families or other social groups stimulate antisocial behaviour. For example, parents with criminal background are at increased risk of a similar behaviour in their children (Vágnerová, 2008). The development of undesirable behaviour is also affected by neglected care, harm by parents, but also the overall strengthening of negative behaviour patterns and family disharmony. However, some authors doubt the direct connection with crime in dysfunctional families, relying on the findings of solid family ties in some deviants. They argue that a certain kind of functional families directly determines criminality of its members and on the other hand, the majority of survivors of family crisis who came from dysfunctional families, is non-criminal (Nevřala, 2005).

In the adolescent period, sibling and peer contacts play an important role. Peer group provides a platform for the acquisition of various social skills, it is the source of certain standards of conduct and has a specific role in building a sense of their own autonomy. Through relationships with peers adolescent clarifies the relationship to himself. The way how individual evaluates himself, depends largely on whether he is accepted by his group. Relationships and interactions within the group have an impact on decisions of individuals in everyday situations, allowing the download of new roles, imitation, modeling, and also provide feedback. It is a common example in adolescents with low self-esteem, whose parents are not desirable behavioural patterns (Macek, 2003). Behaviour that violates any social norm, not only legal, religious or moral, is known as social deviance (Krářová, 2006). The deviation includes concepts such as criminality, lawlessness, delinquency, while the latter is in our environment mainly linked with criminal activity of youth. Risk factors for committing deviant acts are divided into two main categories: subjective (psychological, physical characteristics of a person) and objective factors (family, school, company, etc.) (Sejřová, 2006). Based on the preferences of one or several risk factors various theories of deviant behaviour have been formulated. There are two basic groups of theories, *the traditional theories of social deviance* (e.g., psychological and psychogenetic theory, sociological theory, the multifactorial theory, etc.) and *theories based on the paradigm shift* (e.g., labelling theory approach,

the theory of social control and prevention, etc.) (Ondrejko, 2001). Although no theory perceives the causes of crime in its entirety, many criminological, psychological and other approaches give prominence to the theory of social control and also multifactorial conditionality of crime. According to this theory, deviant behaviour is the result of multiple internal and external factors (innate dispositions, situational factors and environmental influences). The environment is especially meant to be family, school and peers (Vágnarová, 2008).

The aim of this work was to establish a link between adolescent delinquency and social disorders, especially with the perceived lack of parental love and attention and identify the main motives of adolescent delinquency.

Materials and methods

The survey focused on inmates in re-education centres belonging to late adolescence, i.e. on 15-18 years old youth. However, due to the fact that the boundary between early and later adolescence is not strictly given, possibly because experts concede some individual variability, we also accepted the questionnaires completed by 14-year-olds. The questionnaire was administered to 56 respondents, the response rate was 52 questionnaires. Due to the incomplete data, we have not included 3 questionnaires into the evaluation. Thus, our exploratory sample consisted of 49 respondents, of which:

- a) 16 inmates were from re-education centre Horný Bankov
- b) 16 inmates were from re-education centre Sološnica
- c) 17 inmates were from re-education centre Tornaľa

Participants in our survey were almost homogeneous in terms of gender - 46 boys and 3 girls. This fact is the result of the availability of samples, since the target institute clients are predominantly male. Aged 14-15 were represented by 22 respondents, aged 16-18 were represented by 19 respondents, eight respondents did not state their age.

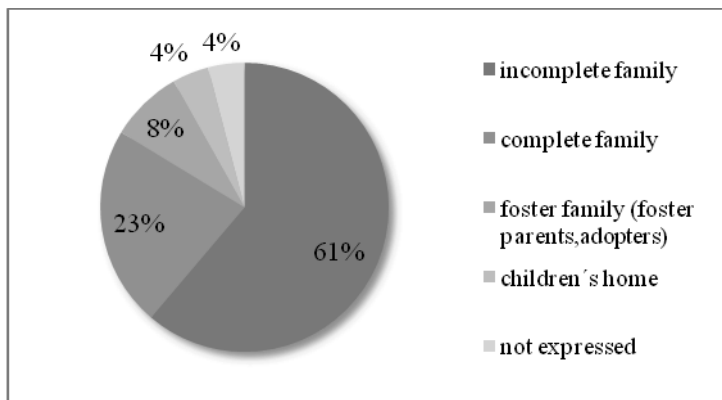
Sampling was both random and targeted. The re-education centre Horný Bankov was selected for our survey because of our proximity to the place, other centres were included in the survey on a random basis. The questionnaires for the re-education centre Horný Bankov were delivered personally, to the other two centers they were mailed.

The method for obtaining data was a questionnaire consisting of 37 questions, 22 of which were semi-closed and 15 closed. The questions were based mainly on the level of subjective feelings, opinions of respondents about the relationship and behaviour of (foster) parents towards them, about the motives of delinquency, relations with friends, and attitudes toward oneself.

Results

Due to a limited extent of the contribution only the most important survey results have been published. In the scope of the research problem we set out four scenarios. In **the first hypothesis** we assumed that at least 70 % of adolescents experience a lack of parental love and attention. This assumption should be proven by the answers to the

questions related to family environment and access, behaviour and relationship of (substitute) parents with their children. The information on family patterns of respondents is recorded in Graph 1. We can see that most adolescents come from broken families, i.e. families, consisting of one parent and another relative, or other relatives only. If we include the category of single parent family and adolescents growing up in a foster family, or in foster homes, we find out that their share out of the total is 73 %. Only 23 % of respondents grow up with both parents.

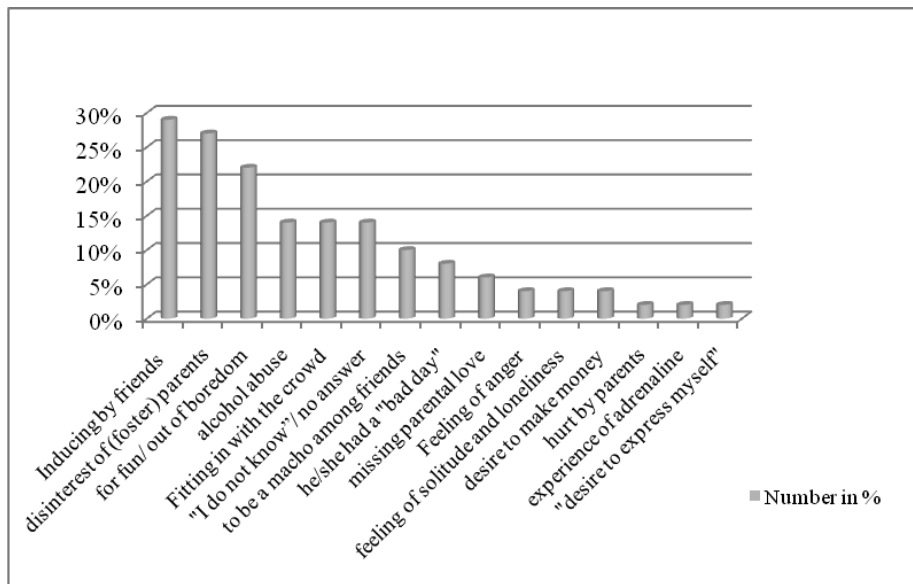


Graph Nb. 1 Family models

The answers to the question what expressions of parental favour adolescents missed most should also point out the lack of parental affection. Only 10 % of respondents identified love alone, but from our point of view the expressions of love can also include trust, embrace, support, praise and understanding. In this case, the absence of love is present in 81 % of respondents. Similarly, it is the same with the interest of (foster) parents in their children. Only 16 % of adolescents identified especially the lack of interest, but including interviews, time spent together, reading stories and trips the final number of respondents will increase to 72 %. On the other hand, 74 % of respondents felt that the (foster) parents care about them. Feeling that their (foster) parents love them had almost half (49 %) of adolescents and feeling that adolescents are not loved by their (foster) parents had only 12 % of respondents (39 % of respondents were not able to answer). Desire to be loved more was expressed by only 18 % of respondents, 20 % of adolescents would like to have more parental care. The fact that our respondents did not perceive the lack of attention from the parents indicates that most of them did not like the fact that their (foster) parents were arguing and angry (88 %) more than the fact that the parents neglected them, did not encourage their talents, hobbies and were indifferent to their school performance (16 %). We see therefore that the findings are inconclusive. While from the objective point of view we could conclude a lack of parental love and attention, the subjective testimonies suggest rather the contrary. Therefore, based on the fact that our assumption concerned just the subjective side, we consider this hypothesis rather **unproven**.

In **the second hypothesis** we assume that in at least 60 % of the adolescents the main motive for deviant behaviour was lack of parental love and attention. For the

verification, we focused mainly on the testimonies about what led them to their offenses, but we were also looking for a link with the absence of love of (foster) parents or undesirable parental behaviour towards them. As a matter of interest first we will list the case frequency of deviant respondents. Most represented are repeat offenders who have committed such action three times or more (57 %) followed by juveniles with a double offense against standards (16 %), 14 % of adolescents claimed that they had committed “only” truancy offense and no other offences, and 10 % of respondents have performed deviantly once, one respondent did not express himself. Furthermore, we have shown an overview of motives for adolescent delinquent behaviour in graphical form (Graph 2).

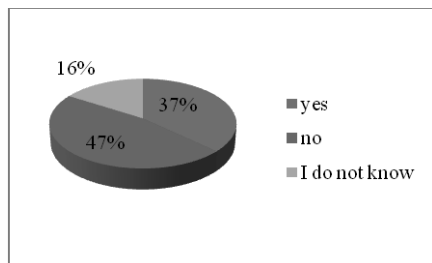


Graph Nb.2 Reasons of delinquency behaviour

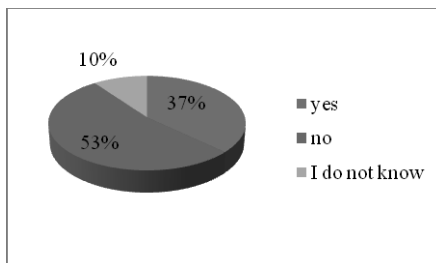
As we can see, the most common cause of offense was that they were persuaded to do so by friends (29 %), immediately followed by a reluctance on the part of (foster) parents (27 %). Taking into account all the testimonies received, however, we find that the influence of friends was also reflected in other contexts, namely in the form of efforts to fit in with the crowd (14 %) and desire to be macho among friends (10 %). Calculating all these motives, we find that friends influencing the delinquent behaviour of adolescents amount to 53 % of cases. Also, we have seen the influence of (foster) parents not only in the entry disinterest of (foster) parents, but other reasons were lack of parental love (6 %) and hurt by parents (2 %). Also action due to a feeling of abandonment and loneliness indirectly points to a lack of parental affection (4 %). Together, these results represent 39 % of the cases due to a lack of parental love and attention. We tried to infer the motives for behaviour from the answers to the question whether some of them had ever fled from home and especially what led them to do it. This item, however, did not demonstrate significant findings. The escape was confessed by 47 % of adolescents, but the reason why was given by only 18 %. Three respondents fled because of a quarrel

with their parents, also three respondents left the house because of the desire to be with friends or enjoy themselves, two adolescents reported as a reason for fleeing a fight with a sibling, or bullying by their stepmother, and one respondent did not feel well at home. It is interesting to mention the fact that 22 % of adolescents considered their action to be good. The reason for such perception of the offense was especially the fact that they also saw the same behaviour in their friends. This also points to the above finding that friends are an essential element of delinquent behaviour of adolescents. Summarizing the results obtained we conclude that this hypothesis **has not been proven**, since the lack of parental sympathy to justify the delinquent action was reported by less than 60 % of adolescents. The influence of friends in various forms showed to be the strongest motive. On the other hand, as shown in the first hypothesis, most adolescents lacked parental love and attention and also came from broken families, which can be, apart from the subjective views of adolescents, a direct or an indirect factor in delinquent actions.

In the **third hypothesis** we assumed that at least 50 % of adolescents who committed delinquent actions saw the same or similar behaviour in their (foster) parents. Graph 3 shows that 37 % of (foster) parents committed the same deviant act as their child and 47 % did not commit any such action. According to Graph 4, there are also more (foster) parents who did not commit the same deviant act (53 %) than those who did (37 %).



Graph Nb. 3 Equal deviant act



Graph Nb. 4 Similar deviant act

Since our assumption allows for both variants of deviation simultaneously, the resulting sum represents 74 % of substitute) parents who, according to the statements of juveniles, committed the same or similar deviant act. Thus, we consider our hypothesis in this case as **proven**. **Hypothesis number 4** assumed that at least 50 % of delinquent adolescents have lower self-esteem and feel not accepted by their environment. We wanted to identify these facts using questions about the value of their personality, feeling of loneliness, their own abilities, or the behavior of others to their person. More than half of respondents (55 %) did not think that they have lower value than other people, 41 % of respondents felt inferior. The respondents saw the reasons for the perception of themselves as inferior in their placement in re-education centres in particular. 86 % of adolescents believe in their own success in life. The object of our interest was the question whether they know the areas at which they are good. Except for one respondent, each of them said something that they were good at. Talent for physical activities and ability to advise and help others if necessary dominated (39 %), as well as fulfilment of duties and keeping promise (37 %). One of the features of a healthy self-esteem is also setting specific life goals. An overview of the ambitions of our respondents offers Table 1.

Table Nb. 1 Life ambitions of adolescents

Ambitions	Number of answers	Number in %
finishing the school	29	59 %
desire to be better	27	55 %
starting a family	25	51 %
Finding a job	23	47 %
Willingness to look after myself	19	39 %
return to (foster) parents	16	33 %
apologizing to sb	14	29 %
Doing sport	3	6 %
no answer/ „I do not know“	3	6 %

Adolescents have many remarkable plans. The desire to finish school dominated (59 %), as well as to be better than ever (55 %). Confidence is not just a matter of individual attitude and mindset. This may be affected by the fact whether the person feels accepted and loved by someone. We found out that 43 % of adolescents often heard their (substitute) parents say that they are important to them, 31 % heard it sometimes. The feeling that they mattered to their (substitute) parents in childhood had, as we know, 74 % of adolescents. Finally, we wanted to find out the opinion of respondents about their adoption and feedback from their friends. We learned that 55 % of the adolescents in the centre have four or more friends, 20 % have two or three friends, 10 % of adolescents have no friend. 88 % of respondents have good friends outside the re-education centre, three of them reportedly have no friends. The most common is a joint activity of listening to music and watching television (57 %). Up to 82 % of adolescents feel accepted and supported by their friends. On the other hand, only three respondents do not feel the friendship of friends. As for the survey of negative behaviour, most adolescents indicated that they did not experience such behaviour because their friends like them (35 %). The last survey was about a sense of loneliness and abandonment. Up to 53 % of adolescents experience solitude and loneliness sometimes, and 27 % of adolescents often feel that way. About a third could not give the cause of this feeling (33 %). The principal reason was the absence of parents (24 %). Based on the above findings, we conclude that the hypothesis **has not been proven**, as it has been shown that more than half of the juveniles do not consider themselves inferior, a significant majority believes in their own success in life, and at least sometimes their parents / substitute parents let them feel that they are important to them. In addition, most adolescents have significant friendships and support. Findings about solitude and abandonment felt by more than half of respondents could lead to the validation of the hypothesis. However, we consider this fact understandable, since the most reported reason for these feelings was a lack of parents. As we are dealing with the natural reaction of someone who is separated from their loved ones, we do not consider this finding as a guide.

Conclusion

Based on surveys we came to some interesting findings, the most important are: adolescent behavior is largely influenced by two elements. First, the conduct of their

friends who act as direct or indirect indicators of delinquent behaviour of adolescents (talking sb into an offense/pattern of delinquent behavior, trying to fit into the crowd, etc.). For adolescents, it is very important to be accepted and be part of peer crowds, and to achieve this objective they are also willing to resort to deviant behaviour. Another important fact is that most offenders saw a pattern of deviant behaviour in their parents /foster parents. It has been proven that an essential factor of delinquency in terms of a family system is the behaviour of parents /foster parents that adolescents normally see at home. They see that as a natural and right, and therefore they imitate it themselves. Thus, the issue of personal models here seems to be a key in minimizing juvenile delinquent activities.

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NARUŠENIE SOCIÁLNYCH VÄZIEB AKO PRÍČINA DELIKVENCIE ADOLESCENTOV

Abstrakt: Narušené sociálne väzby v adolescencii majú priamu súvislosť s delikvenciou mladistvých. Adolescencia je obdobie stabilizácie psychického a fyzického vývinu; hlavnou vývinovou úlohou je hľadanie a rozvoj vlastnej identity. Dôležitú rolu tu zohráva rodinné prostredie, ktoré vo veľkej miere vplyva na ďalší život človeka. Príspevok sa venuje predovšetkým významu rodiny, rodinných vzťahov a rovesníckych kontaktov v živote jedinca a stručne opisuje sociálnu deviáciu. Cieľom práce bolo zistiť súvislosť delikvencie adolescentov s narušenými sociálnymi vzťahmi, najmä s pociťovaním nedostatku rodičovskej lásky a záujmu a zistiť hlavné motívy delikvencie adolescentov. Práca poukazuje na fakt, že na delikventné správanie adolescentov majú najväčší vplyv kamaráti a väčšina delikventov pozorovala rovnaké alebo podobné deviantné správanie v rodinnom prostredí.

Kľúčové slová: adolescenti, delikvencia, rodina, rovesníci, sociálne väzby

SMOKING AND THE INTERNET IN SCHOOLS, OR USEFUL LINKS FOR SMOKERS

Veronika ŠIKOLOVÁ

Abstract: *Reliable information is an important precondition both to prevention and to giving up smoking. The Internet is the source of information most widely used by contemporary students. The information available on the Internet is, however, of extremely varying quality. Our aim was to choose the best websites devoted to smoking. Our pilot group contained a total of 20 freely available websites shown in the leading positions by search engines in response to the inquiry “smoking”. The assessors were 41 students in year five of general medicine competent to make an assessment from the specialist viewpoint. In addition to their expertise, the other aspects assessed in terms of the quality of these websites were their topicality, their clarity, understandability, contacts, graphics, comprehensiveness, specificity, originality, links, advertising and overall effect. 29 students considered the pages at <http://www.kurakovaplice.cz> the website of the highest quality.*

Key words: *websites about smoking, smoking, giving up smoking, the Internet*

Introduction

An increasing prevalence of smoking among the young has been seen since the beginning of the nineteen nineties, in complete contrast to the trend seen among the adult population, which is characterised by a fall in the number of smokers (Sovínová and Csémy, 2000).

An individual's decision as to whether to begin smoking, give up smoking, or what method to choose when trying to give up smoking is based on the information available to him or her. The Internet serves as the primary tool in looking for information among contemporary schoolchildren, which makes it likely that they will also look for information about smoking on the Internet too.

Ever-increasing numbers of quitting programmes around the world are using the Internet environment. Intervention over the Internet would appear to be more effective than self-treatment (Huttone, Wilson, Apelberg et al., 2011), though it has not yet been proven to be more effective than traditional forms of therapy (Szatkowski, McNeill, Lewis et al., 2011). No study has, however, as yet made a comparison of the quality of Czech Internet pages targeted against smoking.

Our aim was to map out this unexplored area. We wanted to find the best information on smoking designed for the general public. The quality of individual websites is, however, a relative term, as the significance of the assessment criteria is dependent on the purpose for which we are making our assessment. In a similar way as web designers will place higher demands on the appearance of their website and its functionality, with the actual content being less important to them, so we have focused in particular on the specialist aspect of the information presented, how topical and understandable it is, its structure and comprehensibility, while playing down the importance of the graphic design of these sites.

The characteristics of the research group

Our group was comprised of a total of twenty anti-smoking websites, which were assessed during our research. These pages were freely accessible and appeared in the leading positions when the keywords smoking, quitting smoking and cigarettes were entered into commonly used Internet search engines (Google and Seznam).

Assessment

The assessment of these websites was part of the practical coursework for the subject Preventative Medicine for students of general medicine at Masaryk University. The assessors were students in year five who had already become acquainted with the issue of smoking during the course of their studies, meaning that their assessment carried more weight in expert terms than an assessment by members of the general public. At the start of the week, before completing their questionnaires, the students were given detailed instructions regarding the method of assessment. Their attention was, in particular, drawn to Internet pages focusing on bioresonance – a method of helping people quit smoking that is extremely widespread commercially, though whose effectiveness has not been scientifically proven. During the week, the students then looked at the individual sites, made an assessment of them, and handed in their assessments at the end of the week.

Criteria assessed

All the sites were assessed individually with respect to a number of aspects. These various quality aspects were marked differently according to their importance. The maximum score resulting from the sum total of all these items was 100. The number in brackets given in the following enumeration of qualitative indicators represents the range of scores the students were able to give in the assessment of the given item. The questions the students asked themselves in making their assessment are given after the individual items.

- Expertise (0 – 9 points): Does the site reflect the latest scientific knowledge? Is it based on scientific facts?
- Topicality (0 – 7): Is the information given on the site regularly updated? Does it

follow the latest trends and knowledge?

- Contacts (0 – 6): Does the site offer the possibility of consultation with an expert? Does it provide the possibility of making an on-line order with a clinic? Are contact details given here (address, telephone, e-mail)?
- Clarity (0 – 5): Is there a clear web structure? Can I find the necessary information easily, or is it difficult to find my way around the pages, meaning that searching for information takes a long time?
- Understandability (0 – 5): Is the information presented in a sufficiently clear and understandable way for the public? Does the site contain too many specialist terms that are not explained?
- Comprehensiveness (0 – 5): Does the site provide a comprehensive overview of the issues (the composition of cigarette smoke, the mechanism of effect, the consequences of smoking, giving up smoking, the legislation, history, etc.), or does it have merely a limited focus?
- Specificity (0 – 4): Does the site offer special sections for specific groups (pregnant women, children, parents)? Is an emphasis placed on specific information for each of these groups?
- Graphics (0 – 3): Does the site make good use of typeface, colour and images, or is the overall design of the site hopeless or old-fashioned?
- Links (0 – 3): Does the site offer a good number of links (including links to foreign language pages) related to smoking and everything associated with smoking, or is this area entirely neglected?
- Originality (0 – 2): Is the information presented in an original way? Is the site full of ideas and other items of interest, or is the method of presentation entirely ordinary?
- Advertising (0 – 1): Is the principal aim of the site the promotion of a commercial preparation, or does it feature minimal advertising?
- Overall effect (0 – 50): Does the site offer everything it should and can it be recommended to others? Or is it just a waste of time to look at this site?

Results in figures

The following table presents aggregate results (averaged values are displayed for each site assessed):

	Expertise (0 – 9)	Topicality (0 – 7)	Clarity (0 – 5)	Understandability (0 – 5)	Contacts (0 – 6)	Graphics (0 – 3)	Comprehensiveness (0 – 4)	Specificity (0 – 4)	Originality (0 – 2)	Links (0 – 3)	Advertising (0 – 1)	Overall effect (0 – 50)	Total (0 – 100)
http://www.kurakovaplice.cz	8.2	6.2	4.4	4.6	5.3	2.2	4.6	3.8	1.5	2.3	0.8	44.6	88.7
http://www.odvykani-koureni.cz	7.5	6.3	4.6	4.6	5.3	2.3	3.8	2.1	1.0	2.0	0.9	38.3	78.4
http://stop-koureni.cz	7.6	5.9	4.4	4.6	4.4	1.9	4.3	3.5	1.0	1.1	0.9	38.0	77.6
http://www.dokurte.cz	7.1	4.6	3.9	4.2	4.5	1.7	3.3	1.9	0.8	2.7	0.8	33.9	69.8
http://jakprestat.cz	5.9	4.8	3.8	4.4	1.4	1.6	2.7	1.6	0.8	1.9	0.5	27.3	56.5
http://stopkoureni.cz	5.6	4.9	3.8	3.9	2.2	2.0	1.1	1.3	1.3	2.1	0.7	27.2	55.7
http://cs-cs.help-eu.com	5.4	4.7	2.5	4.1	3.9	1.7	2.1	1.8	1.1	1.3	0.7	24.1	53.4
http://www.nicorette.cz	5.1	4.8	3.9	4.4	1.7	2.3	1.5	1.5	0.9	0.4	0.3	22.0	48.6
http://www.nekourit.cz	4.5	6.2	4.0	3.7	5.0	2.5	1.2	0.5	0.8	0.7	0.3	19.2	48.4
http://www.koureni.biz	4.5	4.3	3.5	4.1	1.0	1.0	1.7	0.9	0.3	0.8	0.4	18.0	48.3
http://www.exnico.com	4.8	4.7	2.8	3.0	3.3	1.8	2.2	1.0	0.7	1.1	0.2	19.2	44.2
http://koureni.podrobneji.cz	4.2	3.9	3.0	4.0	0.7	1.4	1.7	2.1	0.6	0.6	0.5	16.8	40.1
http://koureni.sweb.cz	2.8	2.0	2.8	3.2	0.8	1.4	0.8	0.4	0.8	0.4	0.5	21.6	36.9
http://www.odvykani.info	4.7	3.3	3.7	4.2	0.2	0.5	1.3	0.2	0.0	0.7	0.5	16.2	35.3
http://www.stopnikotin.com	2.8	3.2	3.2	3.4	2.2	1.4	0.6	0.2	0.5	0.6	0.2	12.2	31.3
http://prestat.kourit.cz	2.1	2.0	2.0	3.6	1.6	0.6	1.4	0.4	0.3	0.3	0.4	15.0	30.9
http://www.kourenistop.cz	2.3	3.5	3.0	2.7	1.8	1.2	0.3	0.7	0.7	0.2	0.3	9.2	29.2
http://www.odvykani-koureni.snadno.eu	2.0	2.2	3.0	2.2	1.0	1.2	0.2	0.0	0.2	0.0	0.3	7.5	19.7
http://www.jaknekourit.cz	1.4	3.3	3.6	3.0	1.9	0.7	0.1	0.9	0.6	0.0	0.4	4.0	19.4

Kuřákova plíce was judged the site with the greatest expertise (8.2 points), followed by Stop-kouření (7.6) and Odvykání-kouření (7.5).

Odvykání-kouření (6.3 points) was judged the most topical site, followed by Kuřákova plíce (6.2) and Nekouřit (6.2).

Contacts were judged best on the sites Odvykání-kouření (5.3 points), Kuřákova plíce (5.3) and Nekouřit (5).

The best site in terms of clarity was Odvykání kouření (4.6 points), followed by Kuřákova plíce (4.4) and Stop-kouření (4.4).

The sites that were easiest to understand were Stop-kouření (4.6 points), Kuřákova plíce (4.6) and Odvykání-kouření (4.6).

The sites Kuřákova plíce (4.6 points), Stop-kouření (4.3) and Odvykání-kouření (3.8) were considered the most comprehensive.

Students considered Kuřákova plíce (3.8), Stop-kouření (3.5) and Odvykání-kouření (2.1) to be the most specific sites.

Dokuřte (2.7 points) featured the best links section, followed by Kuřákova plíce (2.3) and Stop kouření (2.1).

The sites with the greatest originality were Kuřákova plíce (1.5 points), Stop kouření (1.3) and Help-eu (1.1).

Advertising was least annoying on the sites Odvykání-kouření (0.9), Stop-kouření (0.9) and Kuřákova plíce (0.8).

Students considered Kuřákova plíce (44.6 points), Odvykání-kouření (38.3) and Stop-kouření (38.0) the most effective sites.

The sites holding the leading positions in the overall assessment were also the ones that came out best in terms of their overall effect – Kuřákova plíce in first place (with 88.7 points), Odvykání-kouření in second place (with 78.4) and Stop-kouření in third place (77.6).

The other sites were not always ranked in the same order in terms of their effect and their total score, which may have been the result of pronounced shortcomings in individual areas that were reflected in the overall assessment.

The site Kouření (19.4 points) was adjudged the worst site.

It is clear from these results that the sites Kuřákova plíce, Odvykání-kouření and Stop-kouření featured in the leading positions for all items assessed in the vast majority of cases, which provides further evidence of their high quality.

A comparison of the four best Internet pages on smoking

1. <http://www.kurakovaplice.cz>

More than half of the students consider Kuřákova plíce the best site (29 of 41 students). These pages were ranked in first place in terms of expertise, comprehensiveness, specificity, originality and overall effect. Their dark design and drastic images of organs damaged by smoking are striking and provide the greatest visual discouragement of smoking. A number of students were, however, put off by the look of these pages, though positive responses predominated. This site offers a large amount of information, other items of interest and videos presented in a clearly arranged manner. In addition to important information, it also offers quizzes and polls. The contacts given here represent something of a virtual clinic.

2. <http://www.odvykani-koureni.cz>

Odvykání-kouření finished in second place about ten points behind the site ranked in first place. It was ranked in first place for the individual criteria topicality, clarity, contacts, graphics and advertising.

These pages are divided into a section for the general public and a section for professionals that is devoted to the anti-smoking drug Champix (vareniclin), though this manages to retain a high degree of objectivity. These pages also feature a large number of other items of interest, games and competitions. They also feature striking smokers' stories and an ex-smoker's certificate, and calculators of money saved and the risks involved in giving up smoking. Their links to other pages on similar topics are, however, a weak spot.

3. <http://stop-koureni.cz>

Stop-kouření occupied third place with just a slightly smaller points total than Odvykání-kouření. It was ranked in first place in terms of understandability. These pages are also divided into a section for the general public and an expert section that is, however, markedly less sophisticated. These pages offer a detailed history of smoking and the legislation. The section Myths about Smoking is also interesting. Stop-kouření is also

one of the few sites to offer the possibility of registration. This site contains a minimum of advertising, and also lacks links.

4. <http://www.dokurte.cz>

Dokurte finished in fourth place with a significantly lower points total. This site's strong point is the greater clarity of links with a similar focus; its weak point its lower topicality. This site is operated by the Czech Coalition against Tobacco. It contains less information than the preceding pages. Certain students felt there was a lack of specific advice as to how to give up smoking, and assessed the site's design as old-fashioned. They welcomed the rapid and clear search for non-smoking restaurants.

Which pages cannot be recommended?

The Internet pages assessed here include many commercial pages promoting a new method of giving up smoking – bioresonance. This form of treatment using a BICOM instrument promises high effectiveness without the use of drugs, with no pain, minimal side effects and, most importantly, almost immediate effects. No breathtaking results have, however, ever been scientifically proven, and the effectiveness of this method is comparable with other alternative methods of treatment (Heřt, 2010).

Discussion

The fact that this is the first piece of research into the given issue provides wide scope for discussion. The methodology employing a points system may be one of the first points of discussion. Should the assessment criteria be supplemented to include other aspects? Do some of the items assessed overlap? Is the number of points awarded to the individual aspects balanced?

The validity of the results is another point for discussion. A basic feature of websites is their changeability over time with an impermanence of content. The question is, then, for how long the results presented will remain valid. Websites of a higher quality can, however, be generally said to show a tendency towards permanence and continual improvement.

We consider the use of the results to be the most important topic for discussion. What is the best way in which the results can be disseminated? It would be appropriate to acquaint doctors and teachers above all with the results, as they can influence their patients and pupils. In addition to the publication of the results in reviewed journals and their presentation at conferences, it would also be appropriate to disseminate them by means of fliers at doctors' surgeries and in schools or by e-mail. Below, we present a number of suggestions as to how to work with the results in the school environment.

Possible uses of the results in schools

The information obtained can be used in the school environment in various ways. If sufficient time is available we can perform a similar assessment at primary or secondary schools. Pupils would thereby obtain an overview, in an unforced way, of current

anti-smoking websites and the information they provide. As school pupils do not have the same level of education and grasp of the issues concerned as university medical students, it would, however, be extremely difficult for them to assess the professionalism of the information presented. This shortcoming could be alleviated by expert instruction emphasising recognition of the pseudoscientific texts that propagators of alternative methods are so happy to employ.

Joint projects, during which pupils would discuss smoking, could be a suitable opportunity for comparing the quality of individual websites.

If the assessment of websites proves demanding for pupils from the viewpoints of time and organisation, we could merely acquaint them with the results. In this case it would again be more useful to select an active form of processing the information, e.g. by means of biology essays about smoking, the basics of IVT, or subjects focusing on social education.

If even this method of passing on new knowledge and information proves impossible, we recommend at least presenting the results on school and classroom notice boards or other places where information for pupils is presented.

Conclusion

It can be far from easy to find your way around the sea of information on the Internet, particularly for the uninitiated. Our assessment of anti-smoking websites can save time, effort and maybe even money for those looking for information. Our tips for verified websites can provide help in giving up smoking (if we cannot, due to a lack of time, pass on information about smoking in person, which would be the ideal situation), strengthen people's resolve to give up smoking and, let's hope, also provide some much-needed motivation. Correct decisions are reached on the basis of the correct information, and this information, as our pilot assessment shows, is provided above all by the websites <http://www.kurakovaplice.cz>, <http://www.odvykani-koureni.cz>, <http://stop-koureni.cz> and <http://www.dokurte.cz>. Doctors can recommend these sites to their patients and teachers to their pupils.

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KOURENÍ A INTERNET VE ŠKOLE ANEB KAM ODKÁZAT KUŘÁKY

Abstrakt: Spolehlivé informace jsou důležitým předpokladem k prevenci i odvykání kouření. Nejpoužívanějším zdrojem informací, se kterým současní studenti nejvíce pracují, je internet. Informace, které tu můžeme získat, však vykazují velmi rozdílnou kvalitu. Naším cílem bylo vybrat nejlepší webové stránky věnované kouření. Náš pilotní soubor obsahoval celkem 20 volně dostupných webových stránek, které zaujímaly přední místa ve vyhledávačích při dotazu na kouření. Hodnotiteli bylo 41 studentů pátého ročníku všeobecného lékařství kompetentních k posuzování odborného hlediska. Kromě odbornosti byly dalšími posuzovanými aspekty kvality stránek aktuálnost, přehlednost, srozumitelnost, kontakty, grafika, komplexnost, specifická, originalita, odkazy, reklama a celkový přínos. Za nejkvalitnější stránky považovalo 29 studentů stránky <http://www.kurakovaplice.cz>.

Klíčová slova: webové stránky o kouření, kouření, odvykání kouření, internet

ONLINE SOCIAL NETWORKS AND THEIR IMPACT ON THE LIVES OF STUDENTS OF MEDICINE-RELATED STUDIES

*Magda TALIÁNOVÁ, Magdalena ŘEŘUCHOVÁ,
Vendula HOMOLKOVÁ*

Abstract: *The paper deals with the use of social networks in the daily lives of students of medicine-related studies and the potential impact of this activity on their psychosomatic condition. The research was conducted in a total of 200 students at secondary schools and universities aged 15 – 24 in the East Bohemian region. The results of the questionnaire survey were processed using the relative frequency and t-test with equal variance in two groups.*

Key words: *social network, health, school, relationships, health care professions, lifestyle*

Theoretical Points of Reference

Internet social networks are one of the most frequently used means of communication today. The social network can be generally defined as a community existing in the virtual domain. It links groups of people who interact with each other. Social networks are formed on the basis of interests, family ties or sharing of data and finding new contacts online. Social networks bring together people who are physically unable to meet. There are various purposes to social networks; some are used to share information and entertainment, others help to find jobs, for example, or they bring together ethnic or other groups of people. The most popular social networks in the Czech Republic are Lidé.cz (People), Spolužáci.cz (Schoolmates) or Líbím se ti.cz (Do you like me). Among international social networks the most popular are Facebook, Twitter, MySpace, and LinkedIn. As the popularity of social networking has increased enormously over the past few years, especially among young people, social networks have become one of the most highly used methods of communication. This was proved also by the EUKidsOnline organisation survey whose results were presented by the European Commission (1). Therefore, we decided to find out to what extent they influence the lifestyle of students of medicine-related disciplines.

Survey Objective

The aim of the survey was to identify the influence of online social networks on the psychosomatic condition of health professions students. We also aimed to determine the most frequently used types of online social networks, means used to get in contact with these networks and the average time spent on online social networks. We compared the place of residence, gender, and type of school with an average period of time spent on the online social network.

Survey Method

The research part of the paper outlines the influence of social networks and their use by students of medicine-related studies. The actual survey was conducted in May and June 2011. The aim was to obtain a sufficient amount of data relating to the students' use of social networks. In total the survey included 205 respondents studying in the Pardubice region; 5 incomplete questionnaires were excluded. We processed 200 questionnaires from 84 respondents from the secondary nursing school and 116 respondents from the university. The selection of respondents was random. The questionnaire contained 23 questions. The obtained data were evaluated through the t-test with equal variances (significance level 0.05), the Chi-square test of independence (significance level 0.05) and relative frequency. The survey was conducted in April-May 2011.

Results Interpretation

It follows from the questionnaire survey that 195 respondents (97.5 %) use online social networks. Of the total number of 200 students there were 82 (98.7 %) secondary school students and 113 (96.6 %) university students.

Representation of respondents by gender

Since the data were collected in schools focusing on medical disciplines, female respondents prevailed. Among secondary school students there were 77 (93.9 %) girls, among the university students there were 91 (80.3 %) girls, see Fig 1.

Relationship between type of school and spending leisure time in online social networks

By comparing the period of time spent on online social networks we discovered that university students spend 1.6398 hours / day (c. 100 mins) while secondary school students spend 2.1867 hours / day (c. 130 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Assuming that $T - Stat - 1,919 < T \text{ crit } (1) - 1,652$; $T \text{ crit } (2) - 1,972$, the statistically significant difference was not confirmed.

Relationship between place residence and amount of time spent on online social networks

If we relate the amount of time spent on online social networks to the place of

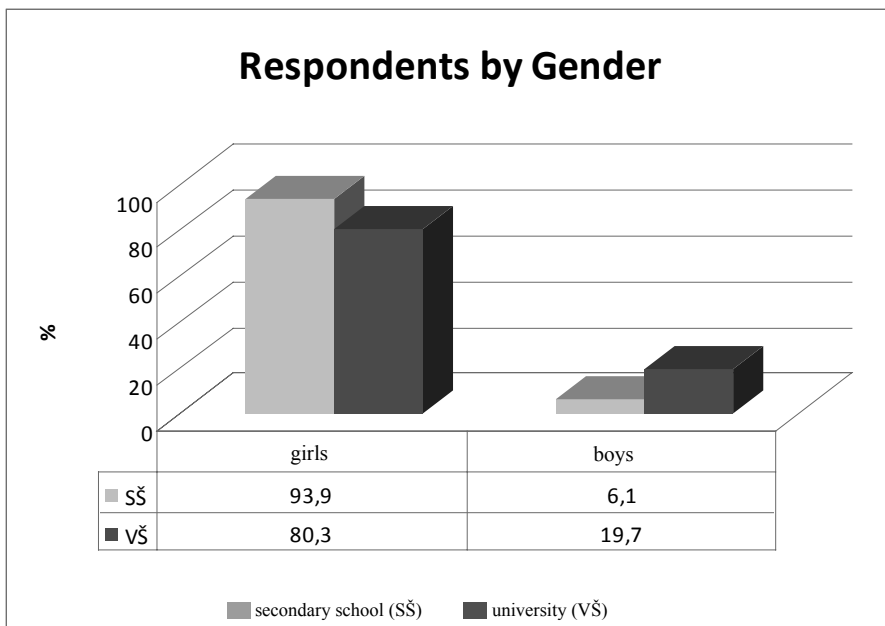


Figure 1: Respondents by gender

residence, we may conclude that students with a place of residence outside cities spend approximately 2.864 hours / day (c. 174 mins) on online social networks. In contrast, students living in cities spend 1.808 hours / day (c. 108 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Assuming that $T - Stat - 3339 > \text{crit } T (1) - 1.652; \text{crit } T (2) - 1972$ (level 0.05, 1 SV), the statistically significant difference was confirmed.

Relationship between gender and time spent on online social networks

When comparing the gender and amount of time spent on online social networks we can conclude that girls are in contact with the online social networks for c. 2.04 hours / day (c. 124 mins), and boys 1.27 hours / day (c. 87 mins). For the calculation we used the t-test with equal variance in two groups with the significance level 0.05. Based on the result $T - Stat - 1,986 > T \text{ crit } (1) - 1,652; T \text{ crit } (2) - 1,972$ (level 0.05; 1 SV) the statistically significant difference was confirmed.

Types of online social networks and types of school

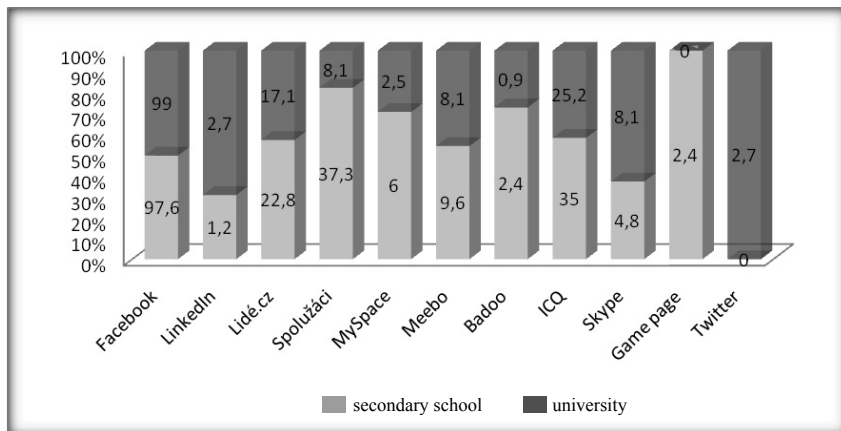


Figure 2: Use of online social networks by health professions students

It follows from Figure 2 that Facebook is the most frequently used online social network (used by more than 97 % students). There are some networks, however, that are preferred by only one group each – it is Game Page for secondary school students and Twitter for university students.

Means for contact with social networks

Figure 3 shows the types of means used in contact with the online social networks. While desktop computers are the most common means for secondary school students: 39 students (47 %), university students use laptops: 50 students (44 %), university students most often reported a combination of desktop and notebook: 28 students (24.3 %); secondary school students reported laptop, and mobile phone: 13 students (15.7 %).

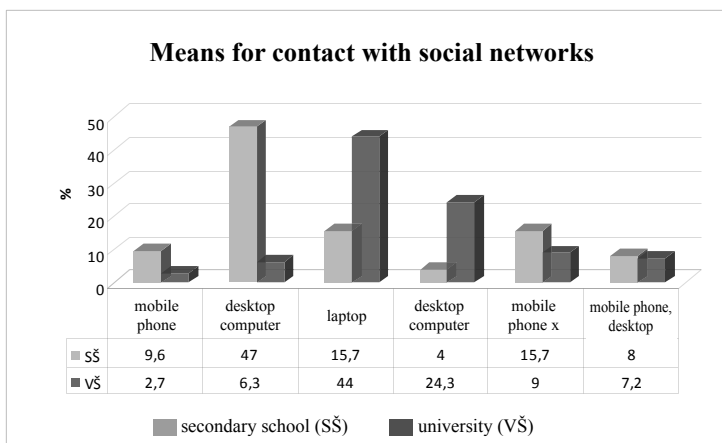


Figure 3: The most frequently used means for contacts with social networks

Influence of online social networks on the psychosomatic condition

Based on the answers obtained from respondents we tried to measure the impact of spending leisure time on nutrition, physical exercise, learning, physical and mental health. We compared the above-mentioned parameters with the type of school. For the calculation we used the Chi-square test of independence with the significance level of 0.05 and 2 SV. A statistically significant difference was confirmed in nutrition ($p = 0.000623$), physical health ($p = 0.008676$) and learning ($p = 0.002526$), see Figures 4, 5, 6. As regards the physical activity, both university and secondary school students agreed that spending time on the online social networks had a negative impact on their physical activity. No statistically significant difference was confirmed between the two surveyed groups.

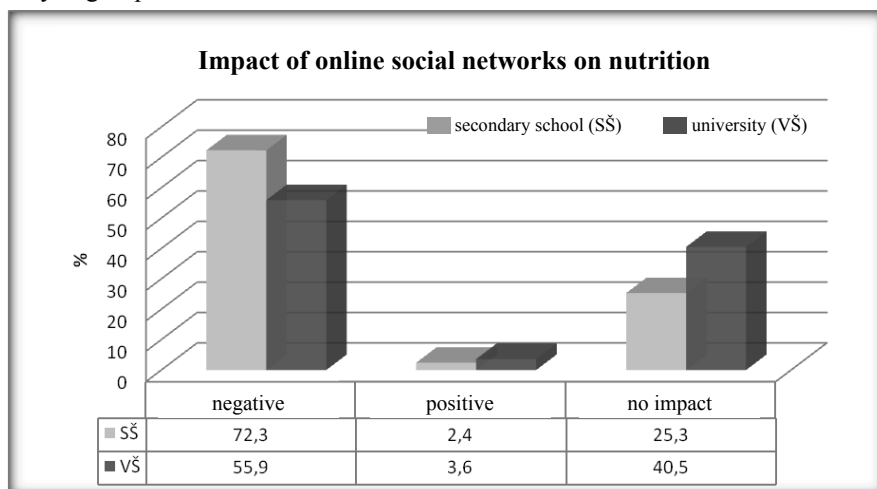


Figure 4: Impact of online social networks on nutrition

Figure 4 suggests that 60 (72.3 %) secondary school students and 63 (55.9 %) university students are convinced that spending time on online social networks has a negative impact on their nutrition and eating habits. Approximately one quarter (25.3 %) of secondary school students and less than one half (40.5 %) of university students believe that spending time on online social networks has no impact on their nutrition and eating habits.

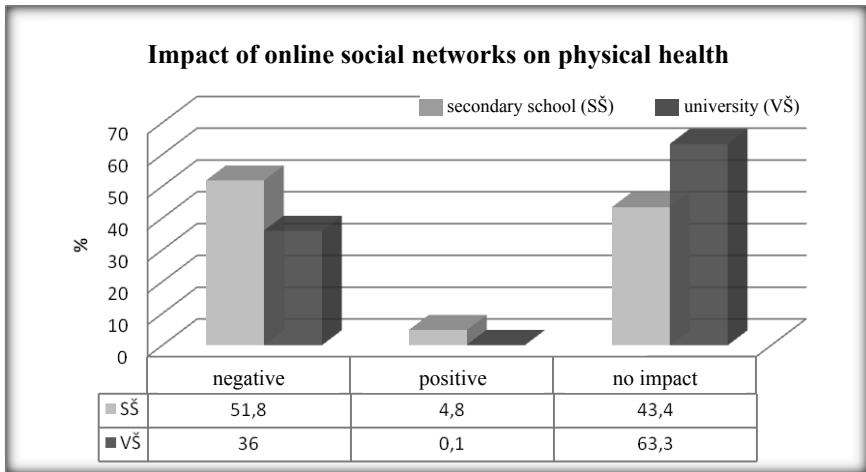


Figure 5: Impact of online social networks on physical health

Figure 5 clearly shows that the most common response from secondary school students (43 students, 51.8 %) is a negative impact of online social networks on their physical health. In case of university students, 72 (63.3 %) responded that online social networks had no impact on their physical health.

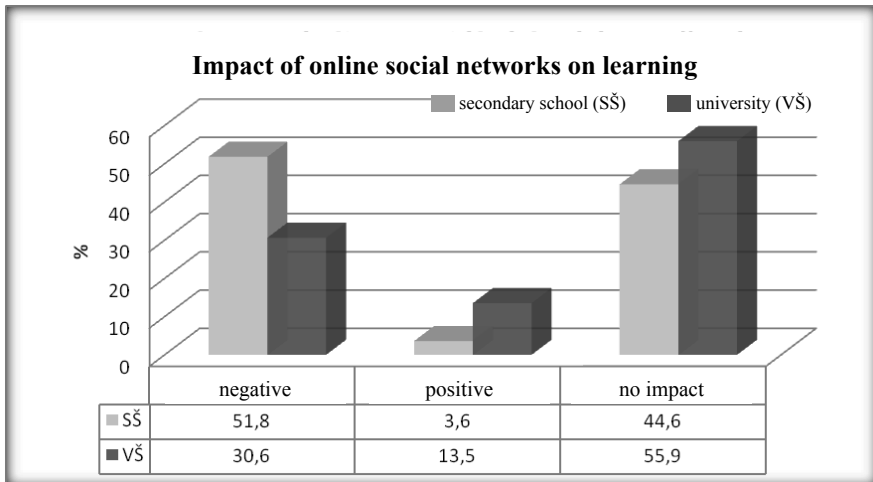


Figure 6: Impact of online social networks on learning

Figure 6 clearly shows that 43 (51.8 %) secondary school students are convinced that spending time on online social networks has a negative impact on their learning and, in contrast, 63 (55.9 %) university students answered that there was no impact.

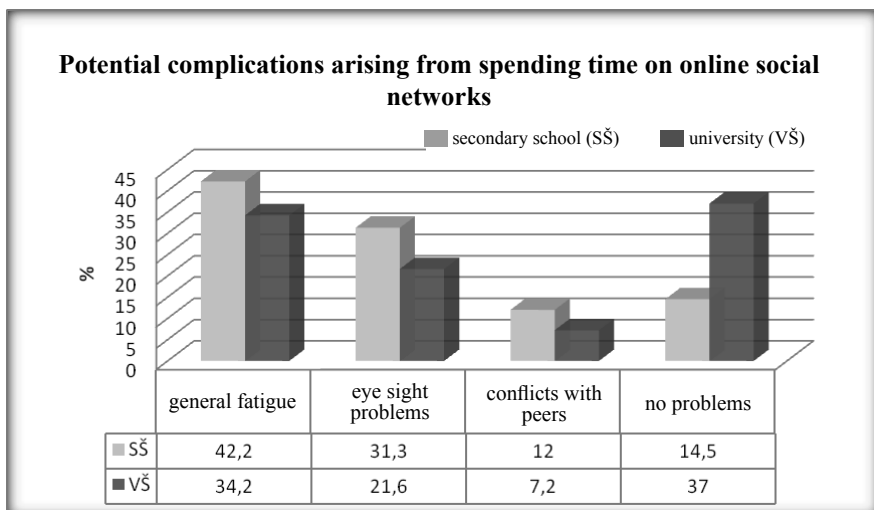


Figure 7: Potential complications arising from spending time on online social networks

Figure 7 above shows that only 12 (14.5 %) secondary school students and 42 (37 %) university students are free of any complications. The most frequently reported complications are general fatigue (35 secondary school and 39 university students), eye sight problems (27 secondary school and 24 university students) and conflicts with peers (8 secondary school and 8 university students).

Discussion and Conclusion

The results indicate that students of medical disciplines spend approximately 1-2 hours per day on online social networks, provided that for secondary school students it is 130 minutes per day and for university students it is 100 minutes a day on average. A statistically significant difference was confirmed in relation to the place of residence and gender, as it was confirmed that students with residence outside cities spend more time on social networks. As regards the gender, girls tend to spend more time on social networks – this fact was also confirmed in international surveys and in the survey by Aspectio Research (4). The most frequently used social network is Facebook - over 96 % of respondents. If we compare our result with the results of U.S. research by Pew Research Center's Internet & American Life Project (2, 3), we find that in our sample there are 4 % more Facebook users. While for secondary school students the prevailing networks are Spolužáci.cz, Skype, Lide.cz, Meebo, Badoo, for university students it is ICQ, Lide.cz, Skype, and LinkedIn. While Game Page was reportedly used only by secondary school students, Twitter was used only by university students. When comparing with the Pew Research Center's Internet & American Life Project results it is clear that social networks such as Twitter, LinkedIn, and My Space are more often used by students aged 20+ which is due to the orientation of these networks. In evaluating the impact of social networks on exercise, nutrition, physical and mental health and learning both groups agree that in terms of exercise the impact is rather negative but no statistical

significance was established between secondary school and university students groups. As regards nutrition, learning and physical health, university students believe that with the exception of nutrition, namely as regards bad eating habits, online social networks have no impact on their lifestyle. Secondary school students observe rather negative impacts in these categories. Both groups reported a positive impact namely in mental health; both groups of students are convinced that they can relax very well through social networks, however, statistically there was not a clear difference between secondary school and university students groups. Students in both surveyed groups believe that spending over 2 hours on social networks leads to problems. Most often they report general fatigue, eye-sight problems and conflicts with peers. Only 14.5 % university students and 37 % secondary school students are free of any difficulties.

In conclusion we wish to state that the obtained results are interesting. The specific feature of our survey is the fact that data were obtained mainly from girls which is due to the disciplines they study – medical professions where this gender prevails.

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VLIV INTERNETOVÉ SOCIÁLNÍ SÍTĚ NA ŽIVOT STUDENTŮ ZDRAVOTNICKÝCH OBORŮ

Abstrakt: Příspěvek se zabývá problematikou využití sociálních sítí v každodenním životě studentů a možným dopadem těchto aktivit na jejich psychosomatický stav. Výzkum byl proveden celkem u 200 studentů středních a vysokých škol ve věku od 15 do 24 let se zdravotnickým zaměřením ve východočeském regionu. Výsledky dotazníkového šetření byly zpracovány prostřednictvím relativní četnosti a dvouvýběrového t-testu se shodným rozptylem.

Klíčová slova: sociální síť, zdraví, škola, vztahy, zdravotnické obory, životopráva

PREVENTION OF CYBER CRIME IN THE PRIMARY AND SECONDARY SCHOOL

Jiří STRACH

Abstrakt: *The article discusses the current state of knowledge of pupils in primary and secondary schools on cyber crime and their attitudes towards it. Based on the survey, data was obtained on the attitudes of students to various illegal activities when using computers. The results of the evaluation data recommendations were then proposed for the preparation of teaching materials that teachers use in every teaching using computers and in computer science.*

Key words: *cyber crime, cyber crime prevention, types of cyber crime*

Introduction

I have been focusing on the influence of information technologies (IT) within the programme School and Health for long time. Currently there is a rising feeling in the society that, especially at universities and at schools, nothing is sufficiently protected and that Intellectual Property is not respected. Is information technology teaching a participant in this rather bad state at school? Does school do enough when educating to improve the said state? And what about the parents of the pupils? How do the school and parents influence the state of the art? What percentage of pupils committing this anti-social acts is alarming? Is the society interested in improving the state or is there a need to chase the attitude of the society to this phenomenon?

School is the one that offers the first official meeting of children with the computer systems. Many children currently have the possibility to use computer at home, however, it is the school that should teach children to use information technologies the right way and instruct them on the dangers that can lead to committing criminal acts by wrong usage. Especially, it is needful to show how easy it is to breach the copyright or commit a criminal act on the Internet.

Within the research School and Health we implemented a research focusing on this problem. We used an Internet questionnaire available on the website: <http://boss.ped.muni.cz/kriminalita>, by which we asked 120 pupils of 8th and 9th grades of elementary schools about their attitude to respecting Intellectual Property rights as well as about cyber crime generally. In researching this problem the following question arises:

What is the percentage of anti-social acting that we consider serious? Is it 5 %, 10 %, 50 %?

Cyber crime

There are no precise, reliable statistic data on the amount of cyber crime and economic losses of the injured parties, partly due to the fact that many of the said crimes have not been ascertained by the victims, plenty of the crimes have never been reported to the police, and partly due to the fact that the said losses are difficult to calculate.

Currently the term cyber crime does not have any officially defined content, nevertheless, there are more understandings according to which standpoint the authors take. Cyber crime must be understood as a specific criminal activity, which can be committed with the use of information technology and where information technology is the object of a criminal act and the offender's tool for committing a criminal act.

Types of cyber crimes

- Sabotage
- Identity card crimes
- Unauthorised usage of computers
- Frauds and forgeries
- Bank computer frauds
- Aircrafts
- Breaching copyright
- Computer viruses
- Abusing personal information of citizens
- Criminal activities connected with the Internet
- Information criminal activities

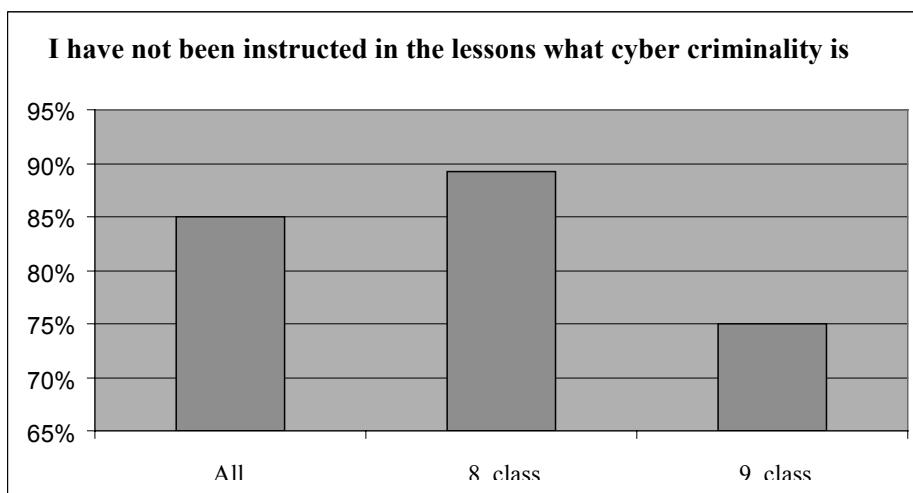
Research

Hypotheses:

- H1.** Schools do not educate pupils to correct attitude towards Intellectual Property protection and copyrights.
- H2.** Most of the pupils do not consider necessary to protect and respect copyright of software producers.
- H3.** Most pupils think that the existence of pirate servers offering music and films and without paying licence fees is right.
- H4.** Most pupils do not have proper orientation in the activities which are seriously anti-social.

Research results

H1. Question "I have been instructed in the lessons what cyber criminality is and what punishments are administered to those who commit the said crimes?"
85 % of pupils answered that they had not been instructed.

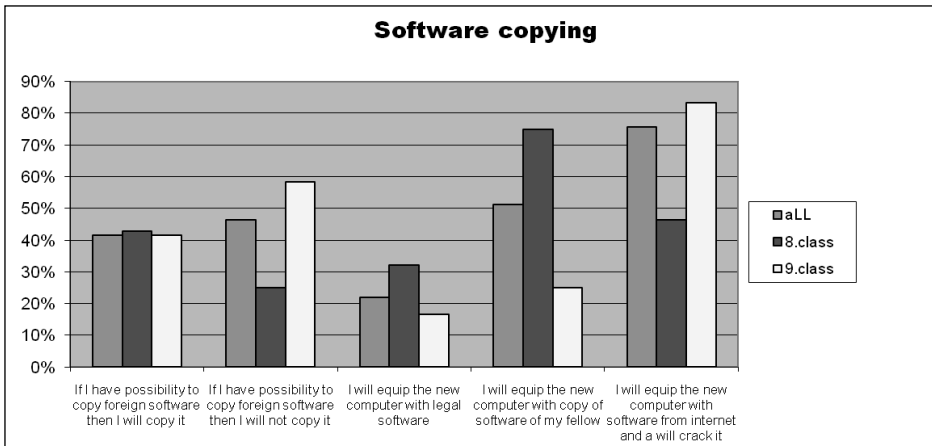


Graf 1.

The above stated result confirms the above mentioned hypothesis even though the difference in the answers of the eight and nine grades shows that the lessons brought certain improvements.

H2. Operatinalization:

- You have the opportunity to secretly copy some software, you have wanted for some time, will you copy it?
- Your parents bought you a new computer, which has only the operation system. How will you get the other needed software?
- What is a more serious act: setting up your computer with software you did not buy or stealing a box of chocolates in a shop?
- You have a software with a time limited licence, for example 60 days, after which the software should be bought otherwise it will stop working. You will find on the Internet that it can be solved without your buying the software. Will you choose this possibility?
- The software installed in your school is dedicated for use in schools only. You will get an offer to produce a paid application for market use. However you need to use the said school software. Will you take this opportunity even in case you know that the software can be used only for teaching purposes?

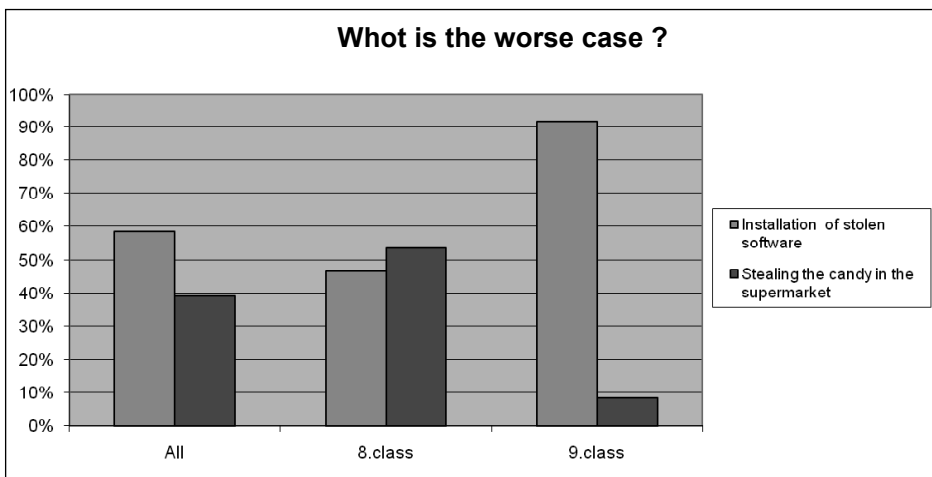


Graph 2

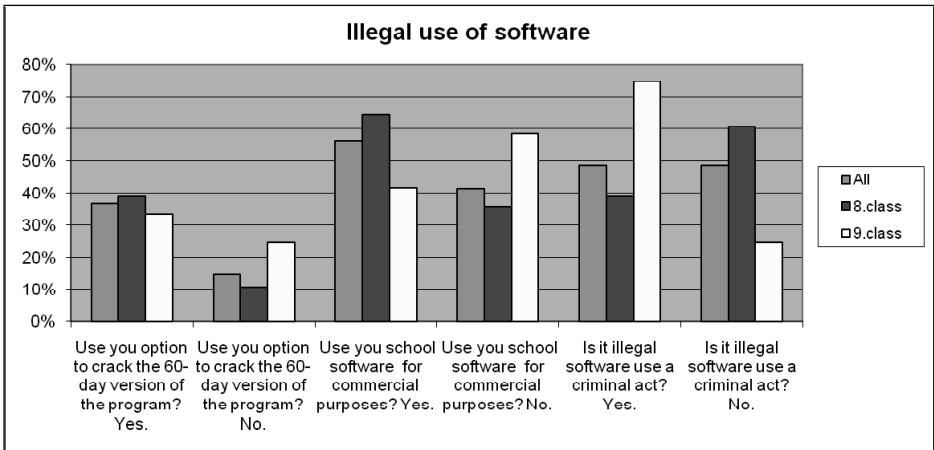
We came to a very serious finding that only about 20 % of pupils set up their computer with bought software and that nine grade pupils, probably due to higher IT literacy, set up their computer with bought software only in 17 % of cases. They try to get the needed software by stealing it in hackers' ways, i.e. by cracking the copied software.

The 9 grade pupils are aware of the fact, as clear from graph 3, that using illegal software is a serious act; however, the stated fact, as clearly showed in graph 2, does not influence their behaviour.

We need to realise that the attitude of pupils to using illegal software is very serious and reflects the attitude of a large group of IT users. This acting serious for the whole society releases the prior set and much better kept ethical norms regarding copyright and Intellectual Property. Making these values relative leads, in my opinion, to later plagiarism and not keeping copyright.



Graph 3

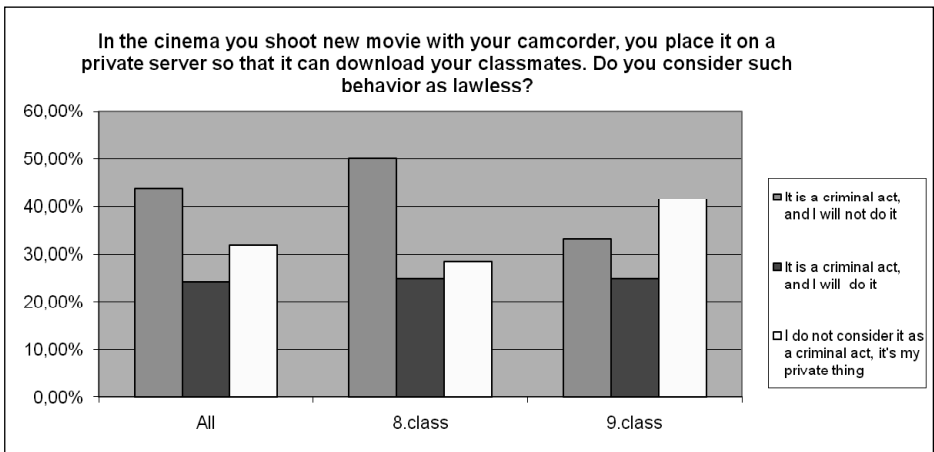


Graph 4

Graph 4 does not comply with graph 2: it is clear that 9 grade pupils are much more aware than 8 grade pupils that illegal use of software is a criminal act; however 82% of 9 grade pupils would use illegally gained software.

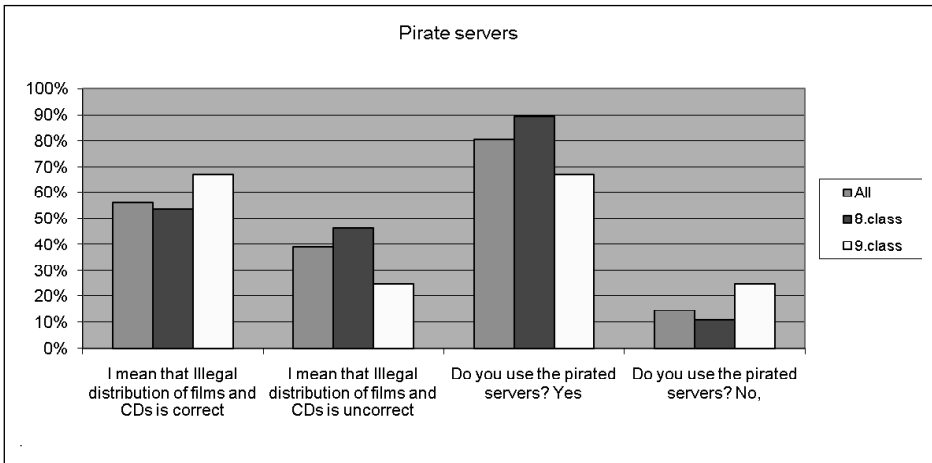
H3. Operationalization:

- You will record a new film by your video camera; you will place it on a private server for your schoolmates to download. Do you consider such acting illegal?
- Do you think it is right that there are servers on the Internet, which spread illegal copies of music CDs and films?
- Do you use that „pirate servers“ to obtain pirated copies?



Graph 5

It is interesting that with higher age the number of pupils who reject illegal copying and following posting films on the Internet even though they breach the copyright. 25 % of pupils do not mind stealing a film, although they consider such an activity to be a criminal act.



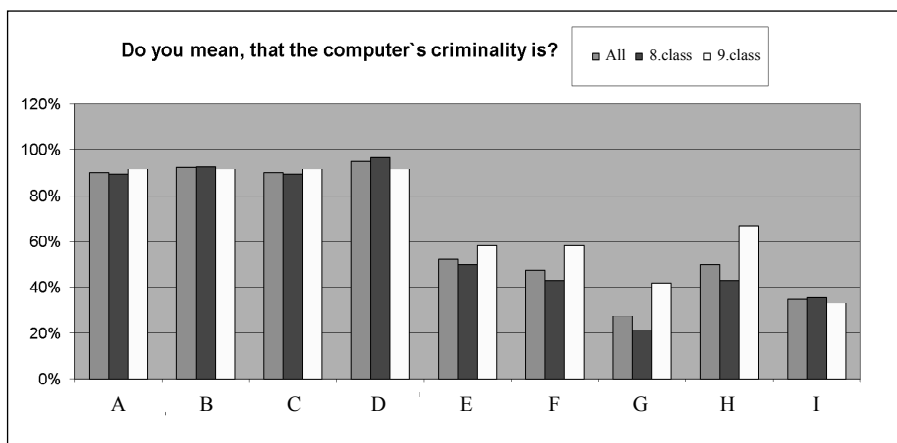
Graf 6.

About 30 % of pupils consider breaching copyright to be their private matter and they are not thinking over the incorrectness of such acting. Insufficient emphasis on introducing the existence of the Law on Copyright to the pupils as well as ethical point of view stealing Intellectual Property leads eventually to publishing other authors' texts, copying bachelor, diploma as well as dissertation theses.

80 % of pupils consider using music and films from pirate servers to be quite normal, which shows that pupils think that breaching copyright on the Internet is a common method for ascertaining audiovisual material. Both the stated facts can be seen in graphs 5 and 6, which confirms hypothesis number 3.

H4. Operationalization:

- What do you consider to be cyber crime:
 - A. Sending threatening and/or humiliating messages
 - B. Mediating the possibility to download film copies
 - C. Fraudulent financial transactions
 - D. Intentional spreading of viruses
 - E. Breaching licence regulations
 - F. Using others' citations without the awareness of the author
 - G. Reading someone else's e-mails
 - H. Copying personal data
 - I. Publishing personal data



Graph 7

The above stated responses of the pupils show that a high percentage of pupils is aware of the illegality of acts A,B,C,D (graph 7). Quite paradoxical can be viewed the comparison of graphs 6 and 7 showing that even though they are aware of committing criminal activity, 80 % of pupils uses the pirate servers. An interesting fact is that the pupils do not consider abusing personal information to be serious more than 50 % and that they do not attribute this phenomenon almost any character of dangerous nature, which corresponds with the overall situation in the society where the majority of people does not care much about the secrecy of their data.

Conclusion

This survey has shown that today's teenagers are not bothered by cyber crime. Nevertheless, its consequences as well as neglecting prevention in the said area can become a serious problem. Many young people are already in conflict with the law or school regulations and later these acts can lead to copying final, bachelor, and diploma and dissertation theses. Sometime the desire for greater transparency (publishing bachelor, diploma and dissertation works on the university websites) can paradoxically lead to the fact that in the situation of the fall in the respect towards copyright across the society, cyber crime is becoming simpler and is on the increase.

School of all types should intensively work out prevention measures for increasing awareness as well as moral responsibility of their students when using the Internet for their publication work. It is necessary that all the pupils and students were informed on the obligation to quote the used material and honour copyright.

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PREVENCE POČÍTAČOVÉ KRIMINALITY V ZÁKLADNÍ A STŘEDNÍ ŠKOLE

Abstrakt: Článek pojednává o současném stavu vědomostí žáků základních a středních škol o počítačové kriminalitě a o jejich postojích k ní. Na základě dotazníkového šetření byla získána data o postojích žáků k různým nelegálním činnostem při použití počítačů. Z výsledků vyhodnocení dat pak byla navržena doporučení pro přípravu výukových materiálů, které by učitelé využívali při každé výuce pomocí počítačů, zejména při výuce informatiky.

Klíčová slova: počítačová kriminalita, prevence počítačové kriminality, druhy počítačové kriminality

RADON, ITS PROGENY AND HUMAN HEALTH

Vladislav NAVRÁTIL

Abstract: *There is no doubt that radon, radioactive noble gas, is an important factor influencing environment. Sources of radon, their geological distribution and occurrence of radon and its daughter products (harmful for human health) are discussed in the article. The conclusion of our considerations and our research work (measurement of radon concentration) is very simple: the daughter products of radon are responsible only for cancer of human lungs.*

Key words: *radon, environments, influencing human health, responsibility for cancer of human lungs*

Introduction

Although radon was discovered at the beginning of 20th century, its effects have been known since 16th century. At Schneeberg in the Erz Mountains Agricola noted in 1597 a high frequency of fatal lung diseases occurred among local miners. Similar effects were seen in miners at Jáchymov as early as the 17th century. In these mines were copper, iron and silver ores accompanied by pitchblende – source of uranium and radium.

In 1879 two German physicians, Hartung and Hesle, pointed out that most of the Schneeberg mine deaths were lung cancers. The Schneeberg miners who had worked in the mines for more than ten years developed the Erz Mountain disease, called *bergkrankheit*, or *black death*. Here is the short historical chronology of radon:

1597 Agricola noted high level of what turned out to be lung cancer among Erz Mountain miners.

1896 Becquerel discovers radioactivity of uranium

1898 The Curies and Schmidt discover radioactivity of thorium and also elements radium and polonium

1898 Rutherford discovers alpha and beta particles

1899 Thomson and Rutherford demonstrate that radioactivity causes ionization

1900 Dorn discovers the emanation in the ^{238}U series, which is now called radon

1901 Rutherford and Brooks demonstrate that radon is a radioactive gas

1901 Discovery of active deposit of thorium by Rutherford and of radium by the Curies

1902 Rutherford and Soddy discover transmutation
 1902 Thomson discovers radon in tap water
 1903 Rutherford and Soddy develop equation describing radioactive decay
 1904 Geisel and Debierne discover actinon
 1913 Arnstein identifies squamous-cell carcinoma in autopsy of miner
 1913 Fajans discovers group displacement laws
 1914 First medical use of radon
 1925 First mention of the name radon in the literature
 1940 Causal link shown between radon and lung cancer
 1941 National Bureau of Standards advisory committee adopts an air radon standard
 (370 Bq.m⁻³)
 1955 Concept of a working level (WL) first suggested
 1957 Development of the Lucas cell for detection of radon

Physical properties and sources of radon

Radon is a naturally occurring, colorless, odorless, almost chemically inert and radioactive gas. It is the heaviest and has the highest melting point, boiling point, critical temperature and critical pressure from the other noble gasses. Radon is part of the naturally occurring radioactive decay chain from uranium or thorium to stable lead (Fig. 1). Radon decays with emission of α -particle to ²¹⁸Po which has a half-life approximately 3 minutes and because it is not electrically neutral, adheres to dust. The dust is then inhaled into lungs, where cell-damaging α radiation can occur when ²¹⁸Po decays. Similar situation repeats by decay of ²¹⁸Po to radioactive ²¹⁴Pb and then to radioactive ²¹⁴Bi.

Because radon is a radioactive, noble gas with no chemical reactivity, its concentration at any point of measurement is a function of three primary factors:

- concentration and distribution of its parent in the source material,
- efficiency of transport processes which bring it into the biosphere,
- its half – life.

Radon is a short – lived member of the ²³⁸U decay series and a progeny ²²⁶Ra, its concentration is a function of the levels of these elements in the source material. Because one of the most basic properties of uranium and thorium is the tendency to be enriched in rock which have a low melting point, their content is higher in granite than diorites, basalt or limestone. In the Fig. 2 there is radon situation in Czech Republic shown.

Radon gas enters homes in three main ways (Fig. 3):

1. It migrates up from soil and rocks into basements (cellars) and lower floors of houses.
2. Dissolved in groundwater, it is pumped into wells and then into homes.
3. Radon – contaminated material, such as building blocks, are used in the construction of houses.

The simplest way how radon can be reduced in our houses and other buildings is to locate the entry points of radon and seal them. This action however, is often not sufficient, so additional ventilation to the home, using fans and other device may be necessary. Increased ventilation is the primary remedy for radon problems. If these methods are not successful, a venting system may be constructed.

Health Effects

Once inhaled, radon gas quickly finds its way to the blood stream. It is a chemically inert gas and only a small fraction on that inhaled will be absorbed by the blood and not exhaled. Further, because the half – life of radon is relatively long compared to breathing time, only a small amount of it will decay while in the lung. Acute and subacute early effects, as well as late effects, can be expected following exposure of the respiratory tract to radon progeny. High concentrations of radon decay products in the lungs of animals can result in profound structural and functional changes that may produce lifespan – shortening, pulmonary emphysema, pulmonary fibrosis and lung cancer. Many of the more than 40 distinctive cell types of the respiratory tract could be affected. The nature and magnitude of biological effects that may occur following inhalation of radon decay products will depend on many factors, such as fractions deposited in the respiratory tract and their retention times, translocation to other tissues and rate of excretion to the body.

Inhaled short – lived radon decay product will, to a large extent, decay at their deposition site. Consequently, the tissues in the nasopharynx, the tracheobronchial tree and the pulmonary region receive the majority of the radiation dose. The dose to the bronchi generally predominates in humans. These sites contain precursor or stem cells that are particularly sensitive to the cytotoxic and carcinogenic properties of α - emitting radon progeny. They may be more sensitive to carcinogenesis because of exposure to other environmental agents (such as cigarette smoke) that may increase cell division.

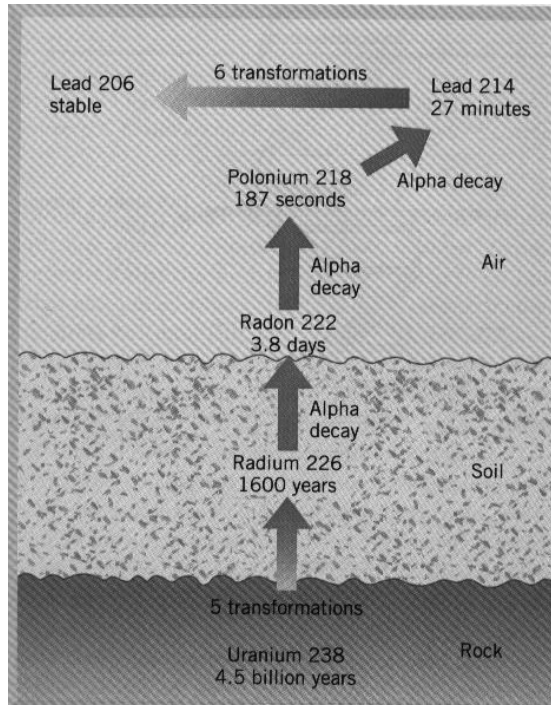


Fig 1.1. Simplified diagram of radioactive decay chain for radon

Experimental results and Conclusions

The concentration of radon and its daughter products in many parts of Moravia has been measured. For this purpose we used outstanding equipment Level Living Monitor LLM 500 (Münchener Apparatebau für elektronische Geräte GmbH, Germany). The monitor consists of a dealer large area proportional detector. The efficiency is enhanced by using a β -reflector. A mechanical code inside the filter mouth recognizes the correct insertion of the loaded side of the filter diskette. The reliable portable sampler consists of a powerful turbine with a precise readout. The sinter diskette with very low flow resistance supports the filter material and reduces the noise level.

All measurements has been made in all parts of Moravia from the year 1997 predominantly in nonventilated cellars. In the Fig4. There is shown as an example the result of a typical measurements (South – Western Moravia, the foot of Javořice Mountains, beginning of June

2010). The numbers means the highest and the lowest value of radon concentration in the measured place. Because the concentration of radon is time and place dependent, the error has not been counted.

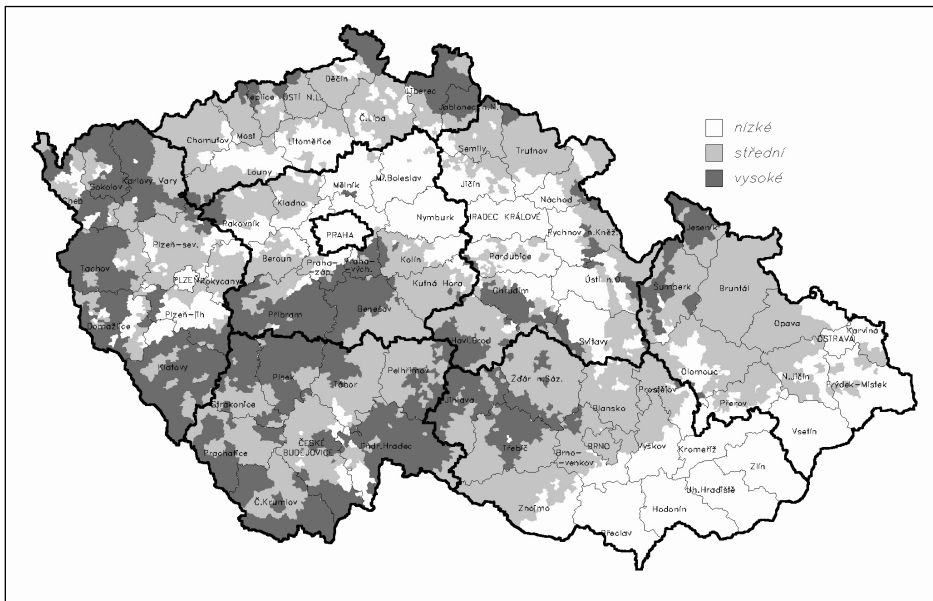


Fig. 2. Radon situation in Czech Republic

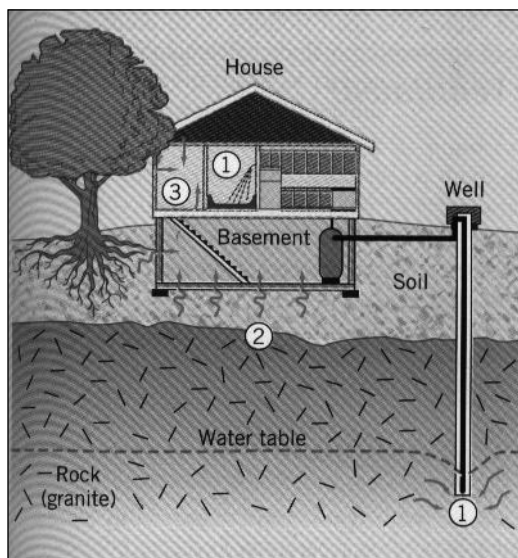


Fig 3. How radon may enter homes

From the figure we can see increasing of activity in left part of the map (granite bedrock) in comparison with right part of the map (gneiss bedrock). The highest concentration of radon was indicated on the boundary between granite and gneiss bedrocks –geological break . In the break deposits of uranium were found.

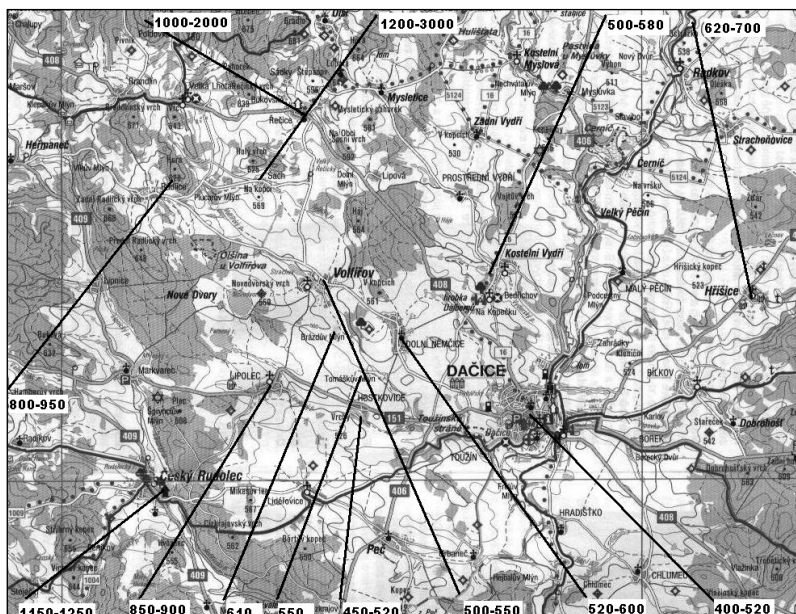


Fig. 4. Measurements of radon concentration (Southwestern Moravia, June 2010)

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RADON, JEHO PRODUKTY ROZPADU A LIDSKÉ ZDRAVÍ

Abstrakt: Radon, radioaktivní netečný plyn, je důležitým faktorem, který je třeba řadit k činitelům, ovlivňujícím životní prostředí. V našem článku je kromě historie zkoumání radonu a jeho účinků na lidské zdraví, diskutován mechanismus jeho působení na živé tkáně (radon a jeho dceřiné produkty způsobují rakovinu plic). Konkrétním přínosem našich měření a našeho výzkumu je mapa, udávající výskyt radonu v oblasti Jihozápadní Moravy.

Klíčová slova: radon, životní prostředí, vliv na lidské zdraví, rakovina plic

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