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The theses of the doctoral (PhD) dissertation:

**The Role of Public Education in the Improvement of Health
Care**

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1. The precedents of the research

The fact that public health is a crisis sector seems to be a world phenomenon. There is no country in the world where the subsidy of health care does not raise problems. This is so partly because of the poor material resources, partly because of the problems of unfair redistribution. There is a sharp contrast between what is “technically possible” and “economically admissible”. The conflict, due to the decrease in resources as well as to the prolongation of life span, has become permanent.

The possible ways of troubleshooting are in the crossfire of economical disputes. It seems that problems cannot be remedied within the health sector only. This is also supported by the results of a research completed by “WHO”, according to which the responsibility of the health care system is only 11% with regard to people’s state of health. The way of life they lead is much more dominant, it is 45%. Consequently, it is very important to make people health conscious.

The first part of the dissertation highlights the conceptual definitions of such notions as “welfare state”, “health care” and “public education” as well as their relations and interrelations.

It is pointed out how the roles of services have changed as regards economic development. The third sector has become the drawing sector of the economy. Well trained manpower has become the key figure of economic activity. As far as labour force is concerned, the higher the qualification, the better the employment and carrier-making possibilities are. These possibilities, however, open up before the individual only in case he is blessed with good health. To achieve this, the first step is investment, both on the individual and the social levels. There are no highly qualified human resources without preliminary investments.

The author outlines what health is supposed to mean for people of the 21st century. She takes the stand, from among the numerous views defining the concept of health, according to which it is the way of life a person leads through which his state of health can be influenced. These effects insert their influence through an intricate system of social and communal relations and form people against the background of general socio-economical, cultural and environmental conditions.

The author casts light upon the relationship between the state of health and the quality of life. Durable sickness and deficiency obviously influence the quality of life taken in the broad sense, as well as the capacity for work and the conduct of living. The quality of life as connected with health includes, apart from the length of the life span, also damages suffered by one's health. Recent decades have brought along a considerable improvement of life span indices, but it makes a big difference if these prolonged years are lived with or without disability and pain.

A summary based on Hungarian and international sources is provided on the relationship between learning and health through the demonstration of the results of international research of recent years. The writing refers to the fact of the key position of women in the formation of a health conscious attitude. It calls attention, at the same time, that ignorance detains the individual to ask for medical help in right time. Consequently, the teaching of people of how to prevent sickness may result in economic benefit.

The study devotes distinguished attention to the fact that the deterioration of the state of health endangers the effectiveness of the operation of the assets of human resources, which constitutes our most considerable capital. Thus health processes, which is a larger concept than pure healing, are obliged to take care of our most precious national capital and they are obliged to protect its effective operation. This emphasizes the economical importance of the possibly best quality operation of the service system. Because human resources constitute not only an external element of the national economy, but they represent its key factor.

Theoretical research points out, that the loss of potential life years add to the calculable costs of the society, which mount up to milliards, in terms of money. The “production” of human capital is the result of individual and social investments. Therefore its negligence as well as the non-consideration of the costs of its maintenance are both against the individual and the society. Illustrative calculations justify that the above said represent individual, social and economical interests. To define health capital as private property causes damage to the society as a whole.

The definition of the development of health, the purpose of health education and a brief survey of the history of Hungarian health education are discussed in a separate chapter. It is shown that there has not been anything similar in the public education of our country in recent years, nowadays the acquisition of some minimal knowledge is prescribed by the law. With respect to this the author makes an effort to reveal the connections of current mortality and morbidity indices in Hungary. She points out that functional illiteracy has bearings on the knowledge concerning health, affecting the doctor-patient relationship in this way.

Knowledge aimed at the preservation of health and that connected with the application of first aid in necessary cases such as the occurrence of accidents, for example, are separated in this study. An international outlook as well as an internal analysis of the situation is provided as regards willingness to give first aid, and the Hungarian practice of the teaching of first aid as well as Hungary’s position taken in international statistics of this respect are also discussed.

Research started with secondary groundwork based on professional literature, which contributed, to a large extent, to the precise definition of the aim of the research. The collection of professional literature involved not only Hungarian resources but also resources published in English and German languages, and was extended to the electronic media, such as publications found on the internet.

Special emphasis is laid on highlighting the fact that health is to be regarded as an essential part of human resources. This kind of capital must be generated and continually maintained likewise, so that human resources can, with its help, produce the highest possible profit for the whole of economy.

2. The aims of the research

It clearly turns out from the most recent professional publications, that there is a tight connection between learning and health. The more learned somebody is, the better health he enjoys, as compared to his less learned counterparts.

The aim of the empirical research is, on the one hand, to support it with data gained in an exact way, that the knowledge of the teenage population as regards health and first aid is not satisfactory, on the other hand, to control the hypothesis according to which learning, by itself, does not by all means accompany an increase in the knowledge connected with health and first aid. In other words, the author tries to find an answer to the question, whether it is enough to be learned “only” in order to possess a health conscious, health oriented behaviour, or the education of special health and first aid as well as accident preventive knowledge is necessary to reach the goal. It is also the aim of the research to take account of the willingness of the individual to devote energy and time in order to deepen his knowledge of this kind.

A further aim of the research is to obtain empirical data about the character of communication between doctor and patient, whether this communication is satisfactory and efficient, that is, if the intention and meaning of the doctor’s instructions reaches the patient.

The research is concentrated on three basic topics. The following things are being examined:

1. the knowledge of health;
2. the knowledge of first aid;
3. the efficiency of communication between doctor/pharmacist and the sick.

The author carried out a questionnaire-oriented survey in four target groups: secondary school pupils, college students, secondary school teachers, and adult population undergoing medication.

Concretely, we had the verification of the following hypotheses in view:

1. The level of the knowledge of secondary school pupils is lower, concerning health and first aid, than it could be expected.
2. Compared with secondary school pupils, college students and teachers are in possession of more knowledge, but even the level of this knowledge is far from being satisfactory.
3. The level of first aid application was not satisfactory in either of the examined groups.
4. The knowledge of first aid, in groups with driving licences, considerably exceeded the knowledge of those who did not have one.
5. Women in general were more familiar with knowledge of health and first aid, than men were.
6. In the case of adults undergoing medical treatment and medication, the research came to the conclusion of a non-satisfactory doctor-patient relationship.

A basic assumption of our research is that people are ignorant of things they have never been taught. No health conscious behaviour can be expected of someone who simply does not possess this kind of knowledge.

3. Applied methodology

The methods of primary research are of a revealing, quantitative character based on questionnaire method, whose aim is to draw attention to a possible background factor of a severe social problem - reflected by the bad health and mortality indices of the population - namely, the insufficiencies of education in this respect.

Two questionnaires were needed for the verification of the hypothesis. The first one evaluated the level of knowledge connected with health and first aid among 415 primary and secondary school pupils, 235 college and university students, 25 teachers, which adds up to 675 people, altogether.

The second questionnaire explored the nature of communication between doctor and patient. The taking of samples and personal interviewing took place in three busy drugstores of three large cities, in two Budapest drugstores and in one in Debrecen and one in Székesfehérvár. 371 people were interviewed. All of them were under medical treatment combined with medication, because the questions were compiled specially for this kind of sample. The date of the recording of the data was the period between the 12nd and 19th of April, 2005.

We wanted to know the reasons why sick adults visited the doctor; whether the instructions of the doctor were intelligible for them, and to what extent these people kept the doctor's instructions.

4. The basic statements of the study

It is widely accepted by now that it is the person himself who can do most for his own health. This has a special importance since health is, in the economic sense, a specific phenomenon, an "article" which cannot be substituted by anything else.

- its absence destroys the person's ability to acquire an income,
- its demand is not defined by solvency,

- the date of its reproduction, quality and length of time cannot be predicted.

The most effective and most obvious way to achieve our goal lies in the extension of people's knowledge of health, which can briefly be summarised as health education. In the positive formation of people's health consciousness, which can best be defined as "taking consciously care of myself and also of others", health education must occupy the central place.

We know that education is special in that sense that its profitability - with regard to space, time, and quality- is different from other investment constructions. The profit of investment into human resources returns years, sometimes generations later, in most cases in another sector of the economy, and not only in terms of money, but in human quality, living standards, and in the quality of life. What is produced as a result of education is knowledge capital embodied in human capital. What can be said of human capital is, that

- Human capital is part of the human being, it cannot be separated from itself; investment in ourselves is always with us, it is where we are, we even "carry it to the grave with us".
- Human investment is for the long run, therefore it is exposed to a number of risk factors.
- It is capable of reactions and of making decisions.
- During labour it changes, develops, and accommodates to its environment.
- Human capital is the only factor in the process of production which becomes more experienced and, as such, more precious, too.
- As opposed to physical capital, human capital needs motivation. Corresponding motivation is a strategic question.

The point is not only that a number of benefits can be attributed to education, the problem is, that there is such a long time gap between investment and the realisation of these benefits, that the investor might not live to the return of the profit. Since an investor thinking rationally would never invest into a business like that, we cannot be mistaken to say that a contrary way of thinking presumes some communal obligation, what is more, a certain extent of altruism, in the current social practice.

This “phase delay” of the returns can be detected in health education, too. Despite this fact, health development has a particular topicality, because

1. the state of health of the Hungarian population is not in accordance with the economic situation of the country, it is worse than that. This fact is also supported by the data of “The World Health Report 2000”, published in the summer of that year, which compared the health care systems of the WHO member states.
2. The number of the population is continuously diminishing; in the decrease the fall of productivity as well as the high mortality play an important role. While the decrease of productivity is also general in the highly technical countries, as far as mortality is concerned, our position is exceptionally bad. According to international and Hungarian studies of the '90ies, disadvantageous social factors insert a negative influence on the state of health of the population. In 2001, in Hungary, out of 100 thousand people nearly four hundred more died, than it was the average within the Union.
3. The problem we have to face is not only that we, Hungarians, have an eight-year-shorter life span compared with the inhabitants of the countries surrounding us, but also, that even these years are not lived in good health. So we not only have a shorter life span than the European average, but, compared with data from the leading countries, our fellow

citizens spend nearly one year more of their lives suffering from some kind of disease.

4. A further problem is, that these sick years fall, presumably, on the still active years, which means that we are not only sicker than other nationalities, but also drop out of work for this time.
5. According to statistics, while following the proper principles in our way of life will probably lead to an improvement of its quality, we still have to calculate, unfortunately to an increasing extent, with the occurrence of accidents. As WHO predicts, by the year 2020, we have to calculate with radical changes concerning the quantitative indices of burdens caused by morbidity. Within the loss of life years caused by morbidity (DALY), the number of road accidents will double, according to prediction.
6. When there is an accident, most people would like to help but cannot, because they do not possess the adequate knowledge to do so.
7. Most of the Hungarian population has reading and interpretation problems, which makes an efficient health care even more difficult and problematic.

With regard to the above described problems the intention of the author is to point out, by way of empirical research, the possible contribution of public education to the solution of these problems.

4. Novel results of the research

Through the evaluation of the results of the questionnaires it has been proved, that

1. the level of the knowledge of secondary school pupils with regard to health and first aid was much lower than previously expected. Perhaps the most considerable of the results gained in the course of the empirical research was the verification of the assumption according to which none of the samples representing any of the levels of learning exhibited even that minimal knowledge that can be expected in the fields of health and first aid.

The knowledge of college/university students as well as those of teachers shows less deficiency compared with the knowledge of school pupils, as it has previously been predicted. The extent of the deficiency also turns out, however, and this is definitely shocking (teachers gave wrong answers to 10-15% of the questions!). It must be noted, that first aid answers lag behind answers given to general health questions, and there is a difference between the sexes, women are better, with the exception of teachers.

2. The higher level of learning automatically entails a better knowledge in the field of health and first aid.
2. However, the level of education does not provide a thorough picture about the knowledge of people concerning health and first aid.
3. The course required to get a driving license significantly affected the level of knowledge of those who have passed the exam.
4. Unfortunately this level was very low, though.
5. Health indices can be improved not only by raising the costs assigned to health care, but also by extending the contents of the curriculum.
6. To achieve this goal, well trained health educators (teachers) are needed, in the first place.

7. The currently existing health teacher training does not provide its students with a satisfactory level of knowledge of first aid suitable for handing down.
8. Not even a well trained and publicly financed health care system is able to fully fulfil its health preserving duty if there is a communication gap between the supplier and the supplied.
9. Neither do graduates of higher education find their knowledge of health satisfactory.
10. A large number of people with high or medium qualification justify the introduction of a health curriculum into the public educational system.
11. The unfavourable morbidity and mortality indices of the Hungarian population can be traced back not only to social- economic factors, but to the low level of our knowledge connected with health, as well.

5. The practical applicability of our results

At last, with regard to the results obtained, the author puts forward her suggestions concerning the future. She finds that the introduction of a health and first aid curriculum is equally important from the point of view of the individual, of the society, and from that of the economy. Her standpoint is justified as follows:

1. In this way the acquisition of knowledge would be available for everyone, the whole population of the country would be covered.

2. Unfair opportunity would be reduced in the preservation of the health of those people who had an accident.
3. All this would call forth the reduction of the physical overload of the health care system
4. Health care costs could be reduced in the long run.
5. It would contribute to the improvement of the life quality of the population.
6. The healthy years of the predictable life span could be prolonged (HALE).
7. This measure would result in the decrease of the informative dissymmetry of the health market as well as in the relief from the contradiction between the output of educational and health investments financed by public revenue, represented by the human capital, and between individual decisions.
8. The training of health teachers and the content of a health curriculum would be renewed.
9. The above said would contribute to the maintenance of the value of human resources and, indirectly, to an upward trend of the economy.

The introduction of the curriculum as a school subject in an ascending system would offer a relatively cost saving and still effective way for the improvement of the life prospects and life quality of the population. The introduction itself calls for a measure within the sphere of authority of the policy on education.

5. Publications in the subject matter of the dissertation

PASSAGES FROM A VOLUME OF ESSAYS AND STUDIES

Edina Éger – Gyula Lakatos, dr.: *Social Losses in the Human Capital: Endemic Diseases and Mortality*
In: The Human Capital. The Economy of Self- Knowledge
Volume of monographs, essays and studies . Chapter II,
pp.149-187
Publisher: Balassi, Budapest, 2005

PROFESSIONAL ARTICLES IN REVISED JOURNALS

1. *Review on Human Resources*, Jan., 2003
Edina Éger: The development of human resources and the education of foreign languages on the eve of joining the EU
2. *Review on Human Resources*, March, 2003
Edina Éger: Know English, Learn German
3. *The New Journal of Pedagogy*, March, 2003
Edina Éger: Should the Learning of English be Compulsary?
4. *Health Management*, May – June, 2003
Edina Éger: Is Health Our Most Precious Treasure?

PROCEEDINGS

1. *Ist Regional PhD Conference* "European Integration - Challenges of Joining the Union"
Siófok, 14 Dec., 2002

Edina Éger: How to resolve European lingual chaos?

2. *The prospects of smallholders in the European Union, EU - day conference*
Mosonmagyaróvár, 8-9 May, 2003

Edina Éger: The development of human resources through first aid, with regard to the joining of EU

3. *Countrywide Conference on Human Resources*,
Balatonföldvár, 22-23 May, 2003

Edina Éger: Problems of the involvement of human capital into the sphere of values within the activity of a countrywide health organisation

4. *Lumeăa Fininciara – Present și Perspective*
Sesiune de comunicări științifice cu participare internațională
pp. 87-90
Cluj – Napoca, 12-13 Nov., 2004

Edina Éger: Eine mögliche Quelle des Humankapitalverlustes in Ungarn

LECTURES:

1. *Ist Regional PhD Conference* "European Integration – Challenges of Joining the Union"
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Edina Éger: Problems of the involvement of human capital into the sphere of values within the activity of a countrywide health organisation

4. *Symposium on Human Resources, Sopron, 13-14 Oct., 2003*

Edina Éger: “Non-profit” health care, as a possible source of the loss of human capital

5. *Lumeăa Fininciara – Present și Perspective*

Universitatea “Babes-Bolyai” Cluj – Napoca 12-13 Nov., 2004

Edina Éger: Eine mögliche Quelle des Humankapitalverlustes in Ungarn

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Lakatos Gyula, dr: Discussion on bringing theory and practice nearer In: Review on Human Resources, Volume XIV, issue nr.12, Dec. 21003, pp. 4-19.