

1. Could you provide us with some information about your educational and scientific background? Where do you come from scientifically and how did you get into the field of behavioral medicine?

In 1968 I graduated with "summa cum laude" at the Semmelweis Medical University in Budapest, Hungary.

During my medical studies I was interested in stress research. As a student researcher I worked in the Institute of Physiology and became interested in the effects of oxytocin and vasopressin on the cardiovascular system. I was invited to continue my work in this Institute after finishing university, but since I had been among the winners of the National Mathematical competition for secondary school students, the director of the National Institute of Occupational Health invited me to organize the first Clinical Epidemiological Working Group in Hungary. This was a great challenge. I accepted it on the condition to include the psychological and sociological factors in clinical epidemiological studies. From 1970-1973 I was the head of the Clinical Epidemiological Working Group of the National Inst. of Occupational Health. We organized surveys among coal miners. My late husband, Árpád Skrabski, was an informatics engineer, one of the first leaders of large computer centers in Hungary. We decided to work together. There was an official cooperation between our institutes and we spent many nights working in Árpád's computer center with the best computing possibilities at the time. This was the beginning of our common epidemiological studies.

In 1973 I was appointed to be the head of the Department of Clinical Epidemiology at the Semmelweis Medical University, and we worked hand in hand with the Institute of Psychiatry of this excellent university.

During these years I completed my clinical psychology studies as well. In 1977 I received my Clinical Psychologist's Diploma at Eötvös Lóránd University, Budapest, and in 1982 my specialist's qualification from clinical psychology.

In 1982 I finished my Ph.D. in Medical Sciences. My PhD thesis was on "Autonomic regulation disturbances in early stage of hypertension and duodenal ulcer." This was a psychophysiological study. Some results:

Kopp, M. S., Korányi, L. (1982) Autonomic and psychological correlates in hypertension and duodenal ulcer. *Pavlovian J. Biol. Sci.* 17, 178-187.

Kopp, M. S. (1984) Electrodermal characteristics in psychosomatic patient groups. *Int. J. Psychophysiol.* 2, 73-85.

Kopp, M. S., Mihály, K., Linka, E., Bitter, I. (1987) Electrodermally differentiated subgroups of anxiety patients I. Autonomic and vigilance characteristics. Int. J. Psychophysiol. 5, 43-51.

Kopp, M. S. & Gruzeliér, J. H. (1989) Electrodermally differentiated subgroups of anxiety patients II. Relationships with auditory, somatosensory and pain thresholds, agoraphobic fear, depression and cerebral laterality. Int. J. Psychophysiology, 7, 65-75.

Kopp, M.S., Arató, M., Magyar, I., Buza, K. (1989) Electrodermal correlates of cortisol dysregulation in panic patients. Int. J. Psychophysiology, 7, 266-267.

Kopp, M. S., Arató, M., Magyar, I., Buza, K. (1989) Basal -adrenocortical activity and DST in electrodermally differentiated subgroups of panic patients. Int. J. Psychophysiology, 7, 77-83.

We organized our first so-called Hungarostudy survey in 1983 with about 6000 people who were representative of the adult Hungarian population and published international papers about these results as well, for example:

Kopp, M.S., Skrabski, Á., Magyar, I. (1987) Neurotics at risk and suicidal behaviour in the Hungarian population. Acta Psychiatr. Scand. 76, 406-413.

From 1982 till 1993 I worked in the Dept. of Psychiatry, Semmelweis Medical University as the head of the Psychophysiology Laboratory and the organizer of the Behavioral Medicine Outpatient Clinic. On the basis of my PhD results I contacted the Oxford group on cognitive behavioral treatment of panic disorder (Paul Salkovskis and David Clark) and I introduced this therapy in our department, second in the world.

See: . *Kopp, M.S., Temesvári, Á. (1991) Respiratory control treatment of panic patients. Int. J. Psychophysiology, 9, 48.*

In 1993 I founded the Institute of Behavioral Sciences at the Semmelweis Medical University.

2. Ever since your research has emphasized social factors, such as stress and social status, in health. Which of your results do you consider the most important for future research – but also for the public?

The paper which best summarizes the interdisciplinary model of my research activities might be: **Kopp, M.S., Réthelyi, J: Where psychology meets physiology: Chronic stress and premature mortality - The Central-Eastern European health paradox** (2004) *Brain Research Bulletin*, 62 (5), pp. 351-367. The summary of this paper is as follows:

A substantial and still growing body of research tries to link different psychological models and chronic diseases, with special emphasis on cardiovascular disease. These efforts have established several conceptual bridges that connect psychological alterations and psychosocial factors to the risks, onset and prognosis of chronic disorders. However, several different models have been suggested. Depression and learned helplessness are two central psychological models that have been shown to have major explanatory power in the development of chronic diseases. In this respect the so called Central-Eastern European health paradox, that is the morbidity and mortality crisis in these transforming societies can be regarded as a special experimental model.

In this review chronic stress is proposed as an integrating theory that can be applied to different psychological models. Chronic stress has been shown to lead to typical pathogenetic results in animal experiments. Chronic stress theory is applicable to the explanation of the suddenly changing patterns of premature mortality rates in transforming societies. Literature and the different models in the field of psychology, behavioural sciences, and epidemiology are reviewed in terms of the chronic stress theory. The applicability of these results are investigated for further research, clinical and policy implications.

I am convinced that our results on social capital, hierarchy position, family relations, meaning in life and health would be fundamental in modern, consumer society and became more and more accepted by the public as well.

Some of these papers are:

Kopp MS, Skrabski Á, Székely A, Stauder A, Williams R (2007) Chronic stress and social changes, socioeconomic determination of chronic stress, *Annals of the New York Academy of Sciences*, 1113:325-338.

Skrabski, Á., **Kopp, M.**, Kawachi, I.: **Social capital in a changing society: Cross sectional associations with middle aged female and male mortality rates** (2003) *Journal of Epidemiology and Community Health*, 57 (2), pp. 114-119.

Kopp, M.S., Skrabski, A., Szedmák, S.: **Psychosocial risk factors, inequality and self-rated morbidity in a changing society** (2000) *Social Science and Medicine*, 51 (9), pp. 1351-1361.

Skrabski, Á., **Kopp, M.**, Kawachi, I.: **Social capital and collective efficacy in Hungary: Cross sectional associations with middle aged female and male mortality rates** (2004) *Journal of Epidemiology and Community Health*, 58 (4), pp. 340-345.

3. Which of your activities, which piece of your career, are you most proud of?

The foundation of Institute of Behavioral Sciences at the Semmelweis Medical University in 1993, and after that at the other three medical universities in Hungary. Since then we have taught compulsory courses in medical psychology, medical sociology, medical communication and bioethics for medical students and there is a final exam in behavioral sciences, which is the integration of these studies. There are several elective courses of the Institute, for example behavioral medicine, which is very popular among medical students or gender medicine- I am the course leader of both these courses. We published a paper about this process with one of my most talented former PhD student, Bettina Piko: *Piko BF, Kopp MS (2003) Behavioral Medicine in Hungary: Past, Present and Future, Behavioral Medicine, 28, 2, 72-78.*

Until now 19 PhD students have finished their PhD studies in behavioral medicine under my supervision, and they have published excellent and innovative papers in this field in international journals.

Some examples:

Réthelyi J., Berghammer R., Kopp MS.(2001) Comorbidity of pain-associated disability and depressive symptoms in connection with sociodemographic variables: results from a cross-sectional epidemiological survey in Hungary, Pain, 93, 2, 115-121.

Purebl Gy, Birkás E, Csoboth Cs, Szumszka I, Kopp MS (2006) The relationship of biological and psychological risk factors of cardiovascular disorders in a large-scale national representative community survey, Behavioral Medicine, 22, 1-7.

Konkoly Thege B, Kopp MS (2009) Relationship between meaning in life and smoking status: Results of a national representative survey, Addictive Behaviors 2009 34 117-120.

Martos T, Konkoly Thege B, Kopp MS (2010) "Health aspirations in the context of age and self-rated health. Findings from a representative Hungarian sample" Journal of Health Psychology, 15, 2, 269-278.

3. As an international Society and an international readership of this newsletter, we are of course very interested in the specifics of Behavioral Medicine in Hungary. How has Behavioral Medicine been situated in Hungarian research and society in the past - and where do you see the future scope of our discipline in your country?

In the twentieth century, Hungarian born scientists (Franz Alexander, János Selye) significantly contributed to the development of psychosomatic medicine, which is the basis of behavioural medicine as well. Sandor Ferenczi was a close associate of Freud, whose concepts, therefore, had a great impact on his views. He was the founder of the first Department of Psychoanalysis in the world in 1919 at our university which became the famous 'Budapest School'.

Later on, in the early 50s, during the communist rule, for some years there was no psychology education at the Hungarian universities, because even mentioning the psyche was regarded ideologically incorrect. Therefore, after the change of the political system, the most important step in the development of medical education in Hungary was the establishment of departments of behavioural sciences. It was the natural consequence of my earlier activities that I wanted to include behavioral sciences and behavioral medicine into the curriculum of medical and other health professionals. During my years in the Department of Psychiatry I developed very good relations with the leaders of the students' community and we discussed and agreed that these aspects would be very important for their education. This was the basis of our successful attempts to establish this new institute at our university. The student leaders were very instrumental in this process.

I do hope that in the future our education and clinical work and the traditional medical faculty will be more closely connected. Another very important achievement is the development of the behavioral medicine outpatient clinic of our Institute, respectively that we participate and initiate several preventive and health promoting activities as community based actions. In 1994 the János Selye Hungarian Behavioral Medicine society was founded, and I was elected as the first president of the society.

In the last two years we have been working intensively in the frame of the WHO Commission for a European Review of Social Determinants of Health and the Health Divide in the WHO European Region (EURO). I am the leader of the working group on Gender and health task group. Among the social determinants of health the ways of coping with changing gender roles seem to be of central importance in behavioural medicine as well. For strengthening gender equity in health it is fundamental to find new forms of combining the work and family life of women and men in a harmonious way. The disturbances in these processes are important risk factors of the premature morbidity and mortality, first of all among men, and of impoverished mental health among women. In close connection with this topic I initiated the so-called Demographic Roundtable which develops recommendations to help intergenerational cooperation, to strengthen social capital, and to help young people to combine family and professional life in a healthy way.

Recently, I have become the work package leader of **Depression, Suicide, E-Mental Health** project within the EU Joint Action on Mental Health and Well-being. Earlier we participated with good results in community based EU projects in depression and suicide prevention. This topic is especially important in our country, where suicide rates are among the highest, but further seven countries will be involved in this project as well. Especially e-health is an important new possibility to reach at risk young people.

4. Your career and scientific focus have been intertwined with the political changes in your country. How would you evaluate has this influenced your ideas, your career, and your interpretation of findings?

This is a very interesting question. Originally I wanted to study humanities. I had won a national youth competition with my poems in my last year of secondary school. Since I completed the secondary school in the only Catholic girls' school in Budapest, it was impossible for me to apply to study humanities with such a background. Despite scoring high on the university-entrance exams, I was not accepted to the medical school for three years. Later on, in the last year of my medical studies, I got an invitation for a conference on "Personality in medicine" from France, offering me to pay all of my expenses, but my passport was withdrawn, maybe because this topic was regarded politically unacceptable. Until 1983 I couldn't travel to Western countries. However, the Department of Psychiatry had a very good library, where we could read the international journals, and from the distance we could trace the most important directions of science. I have been very much interested in mind-body interactions ever since I was a child, because my father, Dr. Jenő Kopp, founder and first director of the National Picture Gallery, was fired in 1949, and we had to leave Budapest to live on a farm. During these years my father got glaucoma, and later on he became blind, got depressed, and died of a myocardial infarction.

In the early 90s, the enthusiastic years after the change from the dictatorial system, we started to rebuild the civic society. The new rector at our university, Professor Miklós Réthelyi, supported our plans to change the medical curriculum in the direction of behavioral sciences.

We organized very broad national representative studies in 1983, 1988, 1995, 2002, and a follow-up study in 2006, which was a unique opportunity to follow the connections among social, economic and political changes and mental and physical health of the population. In Hungary there is much interest in these results, and I do hope that our results influenced the attitudes of people, at least in Hungary.

5. Which topics do you consider most relevant in our field, and where do you see our activities going in the next 10 years?

The connections between epidemiology and epigenetics point out a most promising field, because these connections might explain the physiological and even genetic changes as results of psychological interventions.

The other important field would be to understand the health consequences of the consumer society and to analyze the evidence based positive psychological and behavioral aspects of mental and physical health.

6. Based on this, is there any advice that you would give to young scientists and practitioners in our field?

The main strength of our field is interdisciplinarity. My advice is to try to understand the human health and existence in the broadest possible sense.

7. On a more personal note, do you have personal heroes – in and perhaps outside our field? Who are or were they?

Professor Pál Juhász was my professor at the Department of Psychiatry. He was a very open minded, excellent person, both as director and research leader.

8. And finally, for all of us who are excited about coming to Budapest for the upcoming ICBM: are there places that you like most and that you would recommend to us?

For several years we lived in the castle district with our two children, and for me this is one of the nicest places in the world. The congress will be in the Hotel Hilton situated in the castle district near Mathias Church, with unique view to the Danube and the Parliament. In the castle district you can also find the old royal palace which hosts the National Gallery as well with medieval historic exhibition and the excellent picture gallery. On the other side of the Danube, in the Pest side, is the Heroes' Square, another impressive place with the Museum of Fine Arts. The panorama of the two sides of the city from the bridges on the Danube always fills me with wonder and amazement. Budapest, famous for its healing hot springs since medieval times, has many health spas and baths that are worth while discovering during your stay here. A warm welcome to you! Hungarian hospitality is well known, and I do hope that all of you yourselves will experience it and that you will enjoy your stay.