

**"CAROL DAVILLA" UNIVERSITY OF MEDICINE
AND PHARMACY, BUCURESTI**



**HABILITATION THESIS
SUMMARY**

**ADDRESSING HEALTH DETERMINANTS THROUGH
INTEGRATED RESEARCH, EDUCATION AND
IMPLEMENTATION ACTIVITIES FOR AN IMPROVED
HEALTH STATUS**

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Introduction

Habilitation thesis with the theme: “ **The boarding determinants health by integrated research and teaching activities and implementation for a state of health improved** ” developed by Assoc. Prof. Dr. Cucu Maria Alexandra addresses the scientific activity carried out during the last 24 years, after achievement of the title of doctor in medical sciences , and also the academic and professional experience for the last 32 years. The thesis briefly presents the accomplishment in the field of prevention focussed on behavioral risk factors and environmental health as main determinants of population health. The thesis is structured in two main chapters.

Chapter 1 refers to scientific and professional achievements and contains the main results of my professional, scientific, academic and managerial activity since graduating Faculty of General Medicine in University of Medicine and Pharmacy "Carol" Davila".

Subchapter 1.1. Describes the experience acquired and the results of professional and managerial activity as a specialist and primary physician in the specialty of Hygiene and in the specialty of Public Health and Management. The professional career started as a research assistant in 1992 continued with the confirmation as a scientific researcher of the III degree in 2005. In parallel, I obtained the title of specialist and primary physician in hygiene followed by that of specialist and primary physician in public health and management. The main stages and achievements as a coordinator of national programs and manager of various structures in the field of activity within the National Institute of Public Health and at the level of the Minister of Health. Thus, as Deputy General Director of the General Directorate of Public Health and State Sanitary Inspection in the Ministry of Health, during the period 2001-2005, I contributed to the modernization and updating of the normative and institutional framework of hygiene activities in accordance with the requirements of the *acquis communautaire* whose transposition was carried out during this period, in view of the accession to the EU in 2007. During this period, 57 normative acts were developed and approved in the coordinated field, including the Drinking Water Law., Governmental Decisions and ministerial orders in the field of food, tobacco, cosmetics, school hygiene, inspection, drinking water.

As Director of the National Center for Health Assessment and Promotion from INSP, during the period 2010-2022, we laid the foundations for new activities and developed an annual calendar of health promotion activities, which led to predictability of the activities

to be carried out and facilitated the conclusion of partnerships, for implementation, a unitary methodology for carrying out promotion activities and common, standardized materials, addressing target groups specified in the activities carried out in each of the 12 campaigns; I we coordinated the development and approval within the national programs framework of a specific new sub-program for health promotion and evaluation which currently ensures the regulatory framework for carrying out activities by INSP and DSPs; I also initiated and developed the first comprehensive health status reports, both for the general population and for adults, these being materialized in the Adult and Child Health Status Reports, located on the INSP website, which integrate information from reports by family doctors, specialty offices (diabetes, oncology) but also data from specific surveillance, such as child development, health status, chronic morbidity.

As coordinator of the Radiation Hygiene Laboratory within CRSP Bucharest of the National Institute of Public Health, I coordinate the development of methodologies, interventions and reports on health and ionizing radiation. In collaboration with the laboratory team we realized the accreditation of the laboratory for determinations of radionuclides in water and food and biological dosimetry, we carried out trainings, conferences and collaborations with the Vienna Atomic Energy Agency and participated in international projects.

From 2010 to the present, I am involved as expert at the Ministry of Health, coordinator or member of working groups for the development of technical points of view on documents under debate at the community level for the areas: Radiation Hygiene, Health Promotion, High Level Group for Public Health, Tobacco Control, Information Systems, Health System Performance, High Level Group on Nutrition and Physical Activity.

Subchapter 1.2. Academic achievements describes the professional evolution in teaching activity, from lecturer in 2007 to associate professor in 2014, which allowed me to coordinate over 50 diploma and dissertation theses, develop books and learning support tools, as well as the opportunity to involve students, resident doctors and doctoral students in research projects.

At UMF Carol Davila I began my teaching activity within the Department of Public Health and Management within the Department of Preclinical Education III of the Faculty of Medicine of the University of Medicine and Pharmacy "Carol Davila" Bucharest and since 2012 I have continued at Faculty of Assistance Medical and Midwifery. In this capacity I delivered courses and practical activities in the following fields of public health.: courses

and practical work in public health for students of the Faculty of General Medicine, year 6, Romanian and English language module, courses and practical work for students of the FMAM section, specializations, medical assistants, midwives and BFKT for the disciplines of: public health and management, medical sociology, social medicine, social and health legislation, legislation for the exercise of the profession, health education and preventive medicine.

The teaching activities were an opportunity to combine research with practice, their results consisting of guides, manuals, methodologies and reports used in health research and assessment even today.

The results of the studies of the coordinated projects have been published in journals indexed in international databases and/or communicated at congresses or conferences in the country or abroad. These have valorized the results of the **27 international and national projects** in which I have been or am currently involved, of which **18 as coordinator**. I have contributed to the writing of **28 books** (as sole author or co -author) published by national publishing houses recognized by CNCSIS and in international publishing houses. I have **37 publications indexed in the Web of science** (core collection) **and a Hirsch index of 18** (ISI web of science , core collection , Thompson Reuters). The articles in which I am the author or co-author have a number of **7726** citations in Web of Science . I was and I still am a Member of the Commission of Hygiene and Public Health Commission and Management of the Ministry of Health . In 2015 I was **the coordinator of the development of ARACIS accreditation documents** for FMAM.

Subchapter 1.3. Accomplishment on scientific and research area provide a snapshot of my scientific and of research activity. There are presented the key areas of research developed during my academic activity. These are alligned by the following research directions :

- ***Osteoporosis is a current public health problem*** . Aspects were addressed regarding the influence of osteoporosis on the quality of life, risk factors for osteoporosis, both vitamin D deficiency at the population level and the situation of vitamin D intake, but also the accessibility of services for the diagnosis and treatment of osteoporosis during the Covid-19 pandemic.
- ***Health and behavioral risk factors*** was the second theme addressed. The results of studies and published works were presented that addressed the issue of tobacco, as a priority, pressing public health issue, but also the assessment of the nutritional and

developmental status of children, as well as physical activity and the factors that determine professionals to participate in health promotion activities.

- The third research direction targeted the spectrum of preventive interventions under the responsibility of public health in the field of ***protection against ionizing radiation***. Topics such as assessing the capacity of the radiation hygiene laboratory network, increasing response capacities in radiological emergencies, patient protection in medical exposure to ionizing radiation, monitoring the radioactivity of drinking water and food, and the health status of the population around major nuclear facilities were explored.
- The fourth research direction included ***the health profile of vulnerable populations***, with a focus on the differences between urban and rural populations, but also on exploring vulnerable communities.

Chapter 2 Present strategy, directions and priorities of evolution and of career development professional, scientific and academic, as well as ways of implementing in practice of these plans. My goals for research are:

1) Assessing health literacy and associated factors that determine access to and use of health services as a foundation for health promotion interventions.

2) Evaluation of oral health through active examination, a study that is ongoing and involves the active examination of a group of over 5,000 children and the behaviors and perceptions associated with oral health in the parents of the evaluated children, according to WHO methodology.

3) Identifying new screening methods for cardiovascular diseases and diabetes so that the identification of people at risk and health promotion interventions are improved in vulnerable groups, served by community health nurses.

4) development of interdisciplinary clinical pathways for diabetes and cardiovascular disease that ensure multidisciplinary collaboration of professionals in the prevention and treatment of patients with diabetes, prediabetes and heart failure.

5. Participation to international and national research projects allowing development of knowledge and networking with international research and practice fora.

I will continue activities of related to creating instruments and capabilities for assessing behavioral determinants of health and in the design and development of health promotion interventions, with a focus on prophylaxis primary and secondary prevention of non-communicable diseases, as one of the main issue of the contemporary public health.