

ABSTRACT OF THE HABILITATION THESIS

The present habilitation thesis, entitled “Scientific and Professional Contributions in the Field of Physical Education and Sport Concerning Motor Performance, Health, and Psychosocial Development”, synthesises the scientific, teaching, and professional activity carried out during the period 2015–2026, following the defence of the doctoral thesis entitled “Improving the Quality of Life of Adults in the Bio-Psycho-Social Domain through Swimming Practice.” During this period, research activities were conducted within interdisciplinary teams bringing together specialists in physical education and sport as well as experts from related fields, including medicine, psychology, and social sciences. This collaborative framework endowed the research with an integrative character, marked by originality, methodological complexity, and practical applicability, aspects acknowledged at both national and international levels.

The thesis is structured into three main sections: (1) scientific, professional, and academic achievements; (2) the evolution and development of the author’s professional, scientific, and academic career; and (3) the bibliography.

The first section highlights the essential contributions to professional and academic development, as well as the principal research interests, systematised into two chapters. The first chapter addresses the evolution of the professional and academic career, including milestones of continuous professional development, the valorisation of scientific research activity, scientific and academic recognition, as well as experience gained in research projects and in the implementation of activities dedicated to the inclusion of persons with special needs and to sports performance. The second chapter presents the directions of research, dissemination, and exploitation of the results obtained, oriented towards improving quality of life, developing motor abilities, enhancing sports performance, and analysing the psychological dimensions of personality development during adolescence. A major thematic core of the research concerns the use of swimming and aquatic activities as a means of health promotion and quality-of-life improvement. The studies conducted analysed the effects of physical exercise in the aquatic environment on cardiovascular and respiratory parameters, the musculoskeletal system, and psychological well-being, particularly among adults and individuals with chronic conditions. In parallel, another major direction focused on optimising motor ability development and sports performance through modern methods of assessment and training, including the analysis of performance determinants and the role of functional

monitoring in individualising training programmes. Particular attention was devoted to sports selection and early talent identification, especially in aquatic disciplines, where performance is influenced by the complex interaction of anthropometric, physiological, and technical factors. Additionally, research addressed the psychosocial dimensions of adolescent development and the role of sport in shaping identity and personality, highlighting beneficial effects on self-esteem, motivation, behavioural self-regulation, and social integration, especially among young people from vulnerable backgrounds. Overall, these research directions reflect an integrated approach to physical activity and sport, in which biological, motor, and psychosocial dimensions are analysed complementarily, with emphasis on transferring scientific knowledge into practice and on developing applied solutions for health promotion, sports performance optimisation, and social inclusion through physical activity.

The second section outlines the guiding principles and strategic directions for professional, academic, and scientific development, establishing concrete objectives aimed at improving the quality of educational processes and research in the fields of physical education, sports performance, and sports management. Teaching activity is considered a central pillar of professional development, oriented towards delivering specialised knowledge in a manner adapted to the current requirements of higher medical education. In this respect, continuous modernisation of teaching methods, the use of educational technologies, and the development of updated teaching materials were pursued in order to facilitate active and participatory learning. Particular emphasis was placed on integrating theoretical components with practical applications, enabling students to acquire competencies relevant to their future professional activity. Moreover, involvement in assessment and mentoring processes contributed to the development of an educational environment conducive to academic performance. In parallel, scientific research constituted a defining element of professional evolution, focusing on contemporary issues in physical activity, sport, and health. Participation in research projects, publication of results in specialised journals, and collaboration with experts from related fields contributed to consolidating interdisciplinary expertise and increasing academic visibility. Research was conceived as a continuous process of knowledge generation and validation, with direct applicability to educational and medical practice. Professional development was further supported through participation in continuing education programmes, scientific conferences, and professional training activities at both national and international levels, which facilitated the updating of knowledge, the expansion of collaborative networks, and integration into prestigious academic communities. At the same time, involvement in educational and sports projects enabled the transfer of knowledge to the practical environment, strengthening the

relationship between the university and society. An important component of career development also involves assuming academic and administrative responsibilities, including participation in educational management activities, the organisation of scientific events, and contributions to institutional development strategies.

The final section is devoted to the bibliographical references used in the preparation of the thesis, including relevant theoretical and empirical sources that underpin the scientific work.