PHYSIOTHERAPY VERSUS KINESIOLOGY: A HISTORICAL, REGULATORY, AND CULTURAL-SCIENTIFIC OVERVIEW

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ABSTRACT

This article examines the historical, regulatory and educational development of physiotherapy and kinesiology in Italy through a documentary comparison. It analyses their institutional origins, university pathways and professional identities. A contextual comparison with the University of Sport of Tirana illustrates a different relationship between movement sciences and rehabilitation. The analysis identifies distinct processes of professionalisation and complementary contributions to prevention, functional capacity and health promotion, highlighting the importance of interdisciplinary collaboration grounded in clearly defined competencies.

KEYWORDS

Professional regulation; prevention; public health; professional competencies; educational pathways.

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1. Introduction

Physiotherapy and kinesiology share an interest in human movement, functional capacity and health, yet their professional identities have developed through different historical, regulatory and educational pathways. In Italy, physiotherapy has been consolidated within the healthcare professions, while kinesiology has developed through physical education and sport sciences, with a specific focus on exercise, prevention and movement education. Understanding these trajectories is necessary to distinguish professional responsibilities and identify the conditions for interdisciplinary collaboration.

This article presents a historical and documentary analysis of the development of the two professions, drawing on the legislative sources and educational frameworks discussed below. It examines their institutional origins, compares the organisation of university education, and considers a university model from the Balkans as a contextual point of comparison. The discussion distinguishes academic recognition, educational qualifications and professional regulation, treating these as related but analytically separate dimensions. The comparison is interpretative rather than a systematic review or an exhaustive survey of European professional systems.

2. Historical and regulatory development

The institutional development of physiotherapy forms part of the broader professionalisation of rehabilitation within public healthcare. Training pathways progressively moved from professional schools and university special-purpose schools, regulated by Presidential Decree No. 162/1982, towards university diplomas and subsequently qualifying degree programmes. Legislative Decree No. 502/1992 provided a central framework for university-

based healthcare education, while Ministerial Decree No. 741/1994 defined the professional profile of the physiotherapist. Subsequent reforms, including Law No. 42/1999, Law No. 251/2000 and Law No. 43/2006, consolidated the autonomy and responsibility of healthcare professions. This trajectory connected physiotherapy education with clinical assessment, prevention, treatment and rehabilitation, within the responsibilities established by the relevant professional framework.

The formal recognition of the kinesiologist within the Italian regulatory system is more recent. Legislative Decree No. 36/2021, subsequently amended by the corrective decrees of 2022 and 2023, defined professional profiles within the Sports Reform. This recognition nevertheless rests on a longer educational and scientific tradition, developed through physical education, human movement studies, exercise methodology and sport sciences.

The unified educational pathway of Physical Training and Sports Sciences presents a historical continuity with the previous system of the Higher Institutes of Physical Education (ISEF), established by Law No. 88 of 7 February 1958, whose diplomas represented higher education qualifications with a fully university-level status, aimed at training physical education teachers and those intending to pursue technical roles, including in the sports field. This position derived from the earlier Physical Education Academies of Rome (male) and Orvieto (female), established in the period preceding the Second World War and subsequently incorporated into the higher education system pursuant to Royal Decree No. 1592 of 31 August 1933 (Consolidated Law on Higher Education), within the framework of the system of higher university institutes. The subsequent transformation of the ISEF into faculties and degree programmes in Physical Training and Sports Sciences, together with the academic qualification of graduate replacing that of diploma holder, initiated

by Legislative Decree No. 178 of 8 May 1998, and subsequently regulated by the university frameworks introduced by Ministerial Decree No. 509/1999 and Ministerial Decree No. 270/2004, recently updated, did not therefore represent the entry of physical education into the university system. Rather, it constituted the reconfiguration of an already established higher education pathway into a structured university system based on three-year bachelor's degrees and master's degrees, founded on university teaching autonomy and the integration of methodological, biomedical, pedagogical, and psychological knowledge.

This evolution has led to a cultural transformation of the discipline, shifting from a model primarily oriented towards the training of physical education teachers and technical-sport preparation towards an interdisciplinary scientific field focused on the study of human movement, physical exercise and their preventive and adapted applications. The regulatory recognition of the kinesiologist therefore represents the outcome of an ongoing professionalisation process, based not on integration into the National Health Service, but on the enhancement of physical exercise as a tool for prevention, health promotion, maintenance of physical efficiency and adaptation of movement to different individual conditions.

Within this framework, the kinesiologist of preventive and adapted physical activities (AMPA) represents a specialised professional profile concerned with structured exercise, health promotion and the maintenance of functional capacity. The relationship with physiotherapy should be examined through the purposes, settings and responsibilities of interventions, rather than through an absolute division between movement and healthcare. Physiotherapy includes prevention and active rehabilitation, while preventive and adapted exercise requires attention to individual functional conditions and, where appropriate,

collaboration with healthcare professionals. The historical comparison therefore identifies distinct processes of professionalisation without establishing a hierarchy between them. Table 1 summarises their principal institutional and regulatory milestones.

***Table 1**. Different historical and regulatory pathways of the physiotherapist and the kinesiologist.*

Dimension	**Physiotherapist**	**Kinesiologist**
Historical educational pathway	From healthcare professional schools and special-purpose schools to university diplomas in healthcare professions and subsequently to qualifying university degrees	From the Physical Education Academies and the ISEF system to bachelor's degrees in physical training and Sports Sciences and master's degrees in preventive and adapted physical activities
Main regulatory milestones	Presidential Decree No. 162/1982, regulation of special-purpose schools for post-secondary professional training; Legislative Decree No. 502/1992, healthcare reform and establishment of university diplomas for healthcare professions; Ministerial Decree No. 741/1994, definition of the professional profile of the physiotherapist; Law No. 42/1999, overcoming the concept of auxiliary profession and	Royal Decree No. 1592/1933, inclusion of higher physical education institutions within the higher education system; Law No. 88/1958, establishment of the ISEF system; Legislative Decree No. 178/1998, initiation of the transformation of ISEF into university degree programmes in Sport Sciences; Ministerial Decree No. 509/1999 and Ministerial Decree No. 270/2004, establishment and reform

Dimension	Physiotherapist	Kinesiologist
	recognition of professional autonomy; Law No. 251/2000 and Law No. 43/2006, further consolidation of the autonomy and regulatory framework of healthcare professions.	of university educational frameworks; Legislative Decree No. 36/2021, formal regulatory recognition of the kinesiologist within the Sports Reform and definition of the related professional profiles.
Regulatory framework	Regulated healthcare profession with competencies in prevention, treatment and rehabilitation, exercised in public and private settings	Profession within the field of movement, sport and prevention, based on the planning and management of structured physical exercise
Main purpose	Functional recovery of individuals with diseases, injuries, or limitations of motor function	Health promotion, prevention of chronic diseases, and maintenance and improvement of functional capacity through physical exercise programmes

3. University education and professional preparation

The different institutional trajectories are reflected in university education. Physiotherapy is a three-year first-cycle degree programme within class L/SNT2, corresponding to 180 European Credit Transfer and Accumulation System (ECTS) credits. Its curriculum integrates biomedical, clinical and rehabilitation disciplines with psychological, organisational and legal knowledge, alongside supervised professional training in healthcare settings. The final examination qualifies graduates for professional practice. The defining

feature of this pathway is the integration of theoretical learning with clinical and rehabilitation competencies, rather than the exclusion of knowledge concerning exercise or motor learning.

The AMPA kinesiologist, on the other hand, develops their education through a university pathway structured into two cycles, ordinarily consisting of a three-year bachelor's degree in Sport Sciences (L-22, 180 ECTS credits) followed by a master's degree in Preventive and Adapted Physical Activities (LM-67, 120 ECTS credits), for a total of 300 ECTS credits. The LM-67 educational pathway, developed within the university framework before the formal establishment of the profession, represents the university pathway that the legislator subsequently identified in Article 41, paragraph 3, of Legislative Decree No. 36/2021 as the qualification requirement for access to the role of AMPA Kinesiologist, highlighting the substantial continuity between university education and professional regulation. A distinctive element of this pathway is the significant presence of courses belonging to the Scientific disciplinary groups and related academic disciplines of movement and sport sciences and pedagogy, which constitute the cultural, scientific, and methodological core characterising Physical Training and Sports Sciences. These areas develop competencies related to educational planning, movement teaching, motor learning, physical exercise methodology, and health promotion throughout the lifespan. This component is complemented by biomedical education, characterised by the inclusion of specific ECTS credits related to biological, medical and clinical disciplines, aimed at providing knowledge of physiological processes, functional changes associated with ageing, major chronic diseases, and conditions that may benefit from structured physical exercise programmes. This preparation represents a qualifying element of the LM-67 pathway, as it enables the future AMPA kinesiologist to design and supervise

exercise-based interventions for populations with different levels of functional capacity, operating appropriately within interdisciplinary contexts and in collaboration with healthcare professions, in accordance with current regulations.

The revision of first- and second-cycle degree classes through Ministerial Decrees No. 1648/2023 and No. 1649/2023 strengthened the practical orientation of these pathways. The relevant educational frameworks provide for at least 25 ECTS credits in L-22 and 20 ECTS credits in LM-67 devoted to technical-practical activities. Within LM-67, practical learning supports the planning, delivery, supervision and evaluation of preventive and adapted physical activity programmes. Curricular internships connect this preparation with exercise, sport, university, community and, where appropriate, healthcare settings. These activities can support collaboration with physicians and other healthcare professionals while retaining the responsibilities associated with each professional profile. Table 2 compares the principal educational features of the two pathways.

Table 2. *Comparison of the university and educational pathways of the two professions.*

Dimension	**Physiotherapist**	**AMPA Kinesiologist**
Degree class	L/SNT2 – Healthcare Professions in Rehabilitation	LM-67 – Preventive and Adapted Physical Activities, ordinarily following L-22 – Sport Sciences
Standard duration of the pathway	Three-year bachelor's degree (180 ECTS credits)	Three-year bachelor's degree (180 ECTS credits) + master's degree (120 ECTS credits), for a total of 300 ECTS credits

Dimension	Physiotherapist	AMPA Kinesiologist
Educational purpose	Training of a licensed healthcare professional specialised in rehabilitation treatment	Training of an exercise professional oriented towards the design, delivery and evaluation of preventive and adapted physical exercise programmes
Predominant Academic Fields and Disciplines	Biomedical, clinical, and rehabilitation domains	Movement and sport sciences and pedagogy, integrated with biological, medical and psychological disciplines
Practical activities	Professional training internships in healthcare facilities, hospitals, Scientific Institutes for Research, Hospitalisation and Healthcare (IRCCS), territorial services, and rehabilitation centres	Technical-practical activities and internships in exercise, sports, preventive, university, and community-based facilities
Professional qualification	Final examination with qualifying value for the practice of the healthcare profession	Access to the profession of kinesiologist according to the requirements established by Article 41 of Legislative Decree No. 36/2021

4. A comparative perspective from the Balkans

A contextual comparison with university education in the Balkans helps to illustrate that the relationship between movement sciences and rehabilitation can be organised in different institutional ways. The theoretical traditions discussed here include Bernstein's work on motor control, Anokhin's theory of functional systems, and the rehabilitation approaches associated with Vojta, Lewit and Janda (Bernstein, 1967; Anokhin, 1974; Janda, 1983; Lewit, 1985;

Vojta & Peters, 1992). Although these approaches differ in their assumptions and applications, they provide a broader context for examining the relationships among motor function, learning, adaptation and rehabilitation. They should not, however, be treated as evidence of a single educational or professional model shared by all Eastern European and Balkan countries.

The University of Sport of Tirana provides the institutional example considered in this comparison. Its Faculty of Rehabilitation Sciences places rehabilitation education within a university traditionally associated with physical education and sport sciences. This configuration offers a point of comparison with the Italian distinction between healthcare degree programmes and degree programmes in sport sciences. The location of a programme within a particular faculty or university illustrates an organisational choice; by itself, it does not establish equivalence between qualifications or professional scopes across national systems.

The Bachelor's programme in Rehabilitation Sciences considered here brings biomedical and rehabilitation knowledge into contact with movement sciences. From an educational perspective, this arrangement directs attention to the connections between anatomical and physiological knowledge, exercise methodologies and the learning processes involved in functional recovery. Its relevance to the present analysis lies in the integration of disciplinary contributions within a training pathway, rather than in the assumption that rehabilitation and kinesiology constitute interchangeable professions.

Active participation provides a useful conceptual link across these domains. In rehabilitation, individuals may participate actively in the recovery and management of function; in preventive and adapted exercise, they engage in programmes designed to maintain or improve functional capacity and support health. Neither context can be adequately described through a simple

opposition between a passive patient and an active participant. The educational and clinical purposes of an intervention, the person's needs and the practitioner's professional responsibilities remain essential to understanding the role of movement in each setting.

The comparison consequently supports a distinction between disciplinary integration and professional equivalence. Different university arrangements can connect movement education and rehabilitation while retaining nationally defined qualifications and responsibilities. A wider comparison would require systematic examination of curricula, accreditation requirements and professional regulations in each country.

5. Discussion and conclusions

The historical and educational comparison identifies two related but distinct trajectories of professionalisation. Physiotherapy developed within the institutional organisation of healthcare and rehabilitation, whereas kinesiology emerged from physical education and sport sciences and subsequently acquired an explicit professional definition. Their shared interest in movement does not erase these differences, but it creates opportunities for collaboration around functional capacity, prevention and quality of life. The comparison also shows why academic status, duration of education and professional competence should not be used as interchangeable measures of professional value or authority.

The academic development of kinesiology is an additional dimension of this process. The former disciplinary sectors M-EDF/01 and M-EDF/02 provided references for research and university teaching in physical education and sport sciences. Ministerial Decree No. 639/2024 reorganised this framework within

Scientific Disciplinary Group 06/MEDF-01, with the disciplinary sectors MEDF-01/A and MEDF-01/B. This recognition supports the disciplinary identity of movement and sport sciences, but academic classifications do not, on their own, define the legal scope of a profession. Physiotherapy likewise combines a regulated professional identity with research contributions across rehabilitation, biomedical and clinical fields.

The educational comparison should be interpreted with the same distinction in mind. The qualifying physiotherapy degree and the pathway leading to the LM-67 qualification pursue different professional objectives. The number of ECTS credits describes the organisation and duration of education; it does not provide an independent basis for ranking professions or inferring exclusive competence. Biomedical knowledge, exercise methodology and pedagogical approaches contribute in different ways to both professional preparation and interdisciplinary practice. Their application must be considered in relation to the purposes of the intervention and the responsibilities attached to each qualification.

Taken together, these findings support a model of collaboration grounded in clearly articulated competencies and reciprocal recognition. Structured exercise is relevant to rehabilitation as well as to prevention and health promotion, and its use should be understood within the appropriate professional and organisational context. The historical and documentary scope of this article does not permit conclusions about comparative clinical effectiveness, nor does the example from Tirana support generalisations across national systems. Further comparative research should examine curricula, supervised practice and regulatory arrangements through explicit and

consistent criteria. Such work could clarify how distinct professional contributions can be coordinated across rehabilitation, preventive exercise and long-term support for functional autonomy.

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