IOAPT
INTERNATIONAL ORGANISATION OF AQUATIC PHYSIOTHERAPISTS

World Physiotherapy
SPECIALTY GROUP

AQUATIC PHYSIOTHERAPIST'S SKILLS PROFILE

Date of publication: 22 March 2025

Datasheet

Title:	Aquatic Physiotherapist's Skills Profile
Publisher:	IOAPT
Date of preparation:	2024
Pages:	19

General coordination: IOAPT Executive Committee

Document development and editing teams

Authors:

- César Sá (Portugal)
- Julie Dixon (United Kingdom)
- Yara Humaran Martinez (Puerto Rico)
- Karen Molares Soler (México)
- Gloria Aravena Okuinghttons (Chile)
- Konstantinos Chandolias (Greece)
- Billy So (Hong Kong)

Reviewers:

- Argentina
- Australia
- Brazil
- Canada
- Costa Rica
- Denmark
- Italy
- Malaysia
- Portugal
- Puerto Rico
- Rwanda
- United Kingdom
- United States of America
- Uruguay

Index

Framework

The International Organisation of Aquatic Physiotherapists (IOAPT), the aquatic physiotherapy specialty group of World Physiotherapy, created this document entitled: "Aquatic Physiotherapist's Skills Profile" with the aim of defining the profile of the physiotherapist working in the aquatic environment and to provide a framework for the development of specific training to achieve competency in this role. This document's framework based on international academic and professional competencies, focused on the specification of professional competences according to academic levels [1, 2]. This profile serves as a guide for ensuring safety and adherence to professional ethics, with a focus on perpetual improvement in the quality of services offered to the public.

A specialised physiotherapist is recognised as possessing a comprehensive knowledge base, skills and attitudes, in addition to a specialisation recognised and validated by their profession. This recognition enhances their effectiveness and efficiency, setting them apart in their area of expertise. The designation of specialist in this specific field of intervention entails a process of specialisation, acknowledgment, attribution, and validation, which is managed by the relevant professional regulatory body.

It is a general consensus that in recent decades, scientific worldwide advances have provided evidence to support the application of aquatic physiotherapy to different health conditions. The scientific evidence shows that working in the aquatic environment can facilitate an intervention or rehabilitation to achieve functional results and a better quality of life for individuals with different clinical conditions.

In most countries, the Aquatic Physiotherapist has become a professional with specialised and differentiated skills, with specific strategies to intervene in conditions that affect movement, function, health and well-being. They are highly trained in the use of the properties of water and fluid mechanics, assessing and developing effective interventions in the water, in

rehabilitation and community pools, individually or in groups, in a profile of public or private practice [3].

Aquatic physiotherapy intervention incorporates clinical reasoning, based on individual assessment, diagnosis in physiotherapy and the prescription of a specific intervention program. The reassessment of the intervention necessitates the use of specific outcome measures for the aquatic environment and patient goals (preferably adapted and validated for the population of the country in question) as well as on land, with reference to evidence-based practice [4].

The IOAPT argues that, in addition to the general competencies acquired in the physiotherapy degree (in which aquatic physiotherapy should always be part of the academic program content), the physiotherapist with a specialty in aquatic physiotherapy, should have advanced skills. The skills obtained for the practice of the specialty are not limited to evolutionary courses of practice, academic training, scientific differentiation in the area and a Master's/PhD degree. Aquatic physiotherapists must recognise that a duty of care is owed to the selection of appropriate facilities and the form of service that is offered. In offering a service, the aquatic physiotherapist takes responsibility for the client's assessment and safety.

The IOAPT demonstrates the validation of scientific evolution and highlights the importance of specialisation in this area, worldwide. This specialty group has a vision to support, develop and promote worldwide excellence and unity in clinical and academic standards for aquatic physiotherapy, in order to maximise the impact in improving health and wellbeing.

This document aims to outline the clinical learning process, competencies and thus the skills required to attain the title of "Aquatic Physiotherapist". These competencies are based on the ethical principles defined by World Physiotherapy and the Quality Standards defined by the various members.

This profile was based on information from global education programs, best practices and the most recent evidence-based research that was provided by aquatic physiotherapists worldwide; it has been reviewed by the IOAPT members. It is the aim of this document to provide a global minimal acceptable standard of aquatic physiotherapy education and guidelines for the safe and effective practice of aquatic physiotherapy.

Definition of Aquatic Physiotherapy

A specific practice of physiotherapy in water can be defined as "Aquatic Physiotherapy". Aquatic physiotherapy is an exclusive area of physiotherapy, which is based on its own clinical reasoning, based on interventions and evaluation in the aquatic environment. It applies specific techniques and strategies, taking advantage of the properties of water and the physiological effects of immersion of the body, combined with the in-depth knowledge of human biomechanics in this environment. Aquatic physiotherapy treatment (individually or in groups) incorporates individual assessment, diagnosis and the use of clinical reasoning skills to formulate a treatment program appropriate to the client (based on water properties and patient's needs). Reassessment is undertaken at the appropriate time by the aquatic physiotherapist, with outcome measures recorded in keeping with evidence-based practice.

Aquatic physiotherapy may involve individual treatment in a one-to-one situation or may be undertaken in groups or classes. It may be used alone or in conjunction with other rehabilitation practices [1, 5]. Individual aquatic physiotherapy may utilise manual skills as well as the prescription and progression of exercises to facilitate desired movement patterns and motor relearning. Aquatic physiotherapy group programs are individually tailored providing supervision in small groups with specific exercise programs designed according to the condition/disease and patient goals.

Aquatic physiotherapy is presented under three aspects:

Therapeutic – Focuses on the recuperation/rehabilitation of sequelae of traumatic and/or acquired conditions; clinical conditions and/or surgeries with the objective of promoting the function and quality of life of the individual, among others; [5-8]

Preventive – Includes education related to the health condition of the individual, training of strategies of self-efficacy and self-management, prevention of the disease progression and health promotion, maintenance and improvement of well-being and quality of life**;** [5-7]

Recreational – Promotes community and social interaction, improvement of self-esteem and general well-being, including the training of memory stimulation activities and motor coordination, among others**.** [5-8]

The client's water safety and ability to carry out aquatic exercises independently must be ascertained. The client should participate in a physiotherapy prescribed exercise program in a pool that is safe and accessible.

A physiotherapy prescribed exercise program may be selected as the appropriate mode of aquatic physiotherapy intervention for many reasons. It may be the most effective intervention to progress rehabilitation at that specific stage of recovery and to promote independence. There may be limited access to an appropriate pool or pool sessions by both the client and the physiotherapist, or it may be more cost efficient for the client or compensable bodies. In some situations, it is desirable to discharge a patient to an appropriate community aquatic exercise programme managed by other trained personnel, e.g. exercise physiologist, aquatic fitness instructor or swimming teacher/coach. Documentation is essential as governed by our professional body.

Objectives and Competencies/Skills

The aquatic physiotherapist should be consistent with the objectives and competencies/skills that are specified below. The IOAPT has defined the skills profile of the aquatic physiotherapist, based on several documents written by IOAPT member countries. [1, 2, 3, 5, 9, 10]

Aquatic Physiotherapist Profile

The practice of an aquatic physiotherapist should adhere to the following specific set of skills [1, 3, 10-12]:

1. In order to carry out their professional practice, the aquatic physiotherapist should demonstrate the following skills:

1.1. How to apply the hydrostatic and hydrodynamic (fluid mechanics) principles of the aquatic environment considering the physiological and biomechanical adaptations that occur with immersion;

1.2. To know the contraindications, precautions, benefits and disadvantages of aquatic physiotherapy;

1.3. Have knowledge of the clinical reasoning model in aquatic physiotherapy;

1.4. Have theoretical and practical knowledge of aquatic physiotherapy techniques;

1.5. Evaluate within our scope on land and in the aquatic environment, interpret the special and functional tests, develop the aquatic intervention plan and reassess to adjust the intervention program;

1.6. To use appropriate outcome measures;

1.7. To know how to select the most convenient entry/exit method for the user/customer in the pool and necessary equipment for their safety;

1.8. Evaluate and address individual or group aquatic skills and adaptation levels to aid users in adapting to the aquatic environment;

1.9. Monitor cardiovascular, respiratory and metabolic parameters of the user/client whilst immersed in water and within the pool environment;

1.10. Develop and implement a progressive intervention program selecting the appropriate equipment or materials for a specific method or technique to be used with each user/client;

1.11. Develop and prescribe aquatic therapeutic exercise programs for each user/client;

1.12. Communicate, conduct and oversee aquatic physiotherapy sessions to groups of users/clients;

1.13. Employ aquatic physiotherapy to assist and train the user/client with the aim of enhancing its use in their functionality and community integration;

1.14. Promote teamwork with other professionals (physiotherapists, swimming technicians, operational assistants, etc.);

1.15. To know and have proficiency with emergency procedures, evacuation, first aid and basic life support in aquatic environment and receive regular training;

1.16. Guide and monitor the training of operational assistants, with the aim of ensuring that emergency/evacuation procedures and transfer techniques are properly understood and implemented;

1.17. Interpret and implement measures to control and prevent water contamination in the aquatic environment;

1.18. Ensure good practice adhering to safety and hygiene conditions of the pool management according to the International Guidelines and Good Practice Standards for Aquatic Physiotherapy Intervention – IOAPT);

1.19. Inform users/customers about the swimming pool/spas rules including self-hygiene care, accident risk prevention and their role in case of an emergency, incident or accident during intervention;

1.20. To assess a client's water safety and independent water mobility in order to progress their independence/function;

1.21. Ensure ethical principles and practice in the context of aquatic physiotherapy;

1.22. Provide respectable and informed reports and opinions in the field of aquatic physiotherapy;

1.23. Advocacy for accessibility to pools for all levels of mobility.

2. The aquatic physiotherapist could be able to perform the following functions/roles, in addition to others, with appropriate experience, training and education:

2.1. Coordination, supervision and technical responsibility, as well as management, administration and direction of services that involve aquatic physiotherapy;

2.2. Consulting and auditing of aquatic physiotherapy health and wellness services;

2.3. Clinical intervention;

3.3. Academic career;

2.4. Research.

3. The work of the aquatic physiotherapist is characterised by professional practice in all dimensions of health, in all phases of human development, with actions of prevention, promotion, protection, education, recovery and rehabilitation of the user/client, in the following aquatic environments, among others:

3.1. Hospital (inpatient or outpatient clinic);

3.2. Home;

3.3. Public (Community Pools, Thermal Resorts, Rehabilitation Centres, ...)

3.4. Private (Clinics, Community, Rehabilitation Centres, Thermal Resorts/Thalassotherapy, Health-Clubs, Physiotherapy Units, Sports Teams...);

3.5. Education (Higher Health Schools/Universities);

3.6. Social Organisations.

Aquatic Physiotherapy Education

The educational approach in the field of aquatic physiotherapy has experienced a notable evolution. This approach involves the evolution of knowledge and skills from a perspective focused on techniques and methods towards an integrated and holistic intervention. At the heart of this change lies an intervention model in physiotherapy supported by clinical reasoning and a careful selection of interventions to promote functional movements for life.

Aquatic physiotherapy as a therapeutic discipline, has moved beyond a simple application of techniques in an aquatic environment and has expanded to evidence-based practice with a thorough understanding and utilisation of hydrodynamics to attain patient goals/achieve rehabilitation goals. It has become a comprehensive approach that harnesses the unique benefits offered by the aquatic environment to improve the health and well-being of patients. This integrated approach is based on a profound understanding of the individual needs of the patient and the adaptation of interventions based on those needs.

Through clinical assessment and understanding of the patient's condition, aquatic physiotherapists design specific interventions that maximise the benefits of immersion and the hydrodynamics to effectively address movement and function impairments. This involves not only the application of traditional physiotherapy techniques in the water, but also the integration of other therapeutic modalities as needed, such as therapeutic exercise, manual therapy, and patient education.

Clinical reasoning, based on evidence (on their physiotherapy training in pathology, physiology and rehabilitation) and clinical experience, guides therapeutic decision-making, and enables aquatic physiotherapists to adapt and adjust treatments based on each patient's individual response.

Aquatic physiotherapy has emerged as a versatile therapeutic discipline that can positively impact various healthcare scenarios. From health promotion to disability prevention and process rehabilitation, its application encompasses a wide spectrum of needs. This therapeutic modality finds viability in its application across various areas of physiotherapy, classified

according to types of dysfunctions, age, and specific needs affecting movement. Among these areas, its application in neurological, orthopaedic, and other patient populations stands out.

Aquatic physiotherapy continues to develop as a highly beneficial therapeutic option for patients with diverse health conditions, thanks to the unique properties of the aquatic environment that allow exercises with less impact on the joints and facilitates functional recovery. This therapeutic approach promotes pain reduction and an improvement in mobility, balance, muscle strength, cardiovascular function and quality of life, thus contributing to the overall improvement of the patient.

The IOAPT recognises the importance of integrating the development of aquatic physiotherapy with professional competencies spanning not only the clinical practice but also within research, teaching, and management. This implies not only mastering the ability to manipulate hydrodynamics relative to the desired patient outcome but also acquiring skills in the managing and administrating spaces where this therapeutic modality is conducted. This multidimensional integration ensures an effective patient-centred practice, while also promoting the ongoing expansion of aquatic physiotherapy as a high-quality therapeutic tool.

Aquatic Physiotherapy Specific Training/Formation

Training in aquatic physiotherapy is essential in order to ensure that previously defined competencies can be acquired and developed throughout the physiotherapist's professional path [1].

Academic degree training

At the level of degree conferring training, it includes the degree of Bachelor, Master and Doctorate in Physiotherapy.

At Bachelor's degree level the inclusion of basic contents of aquatic physiotherapy in the curricular program is necessary with associated clinical practice. This inclusion can be made either as an independent or integrated curricular unit (Table 1- Training). [1, 12].

At Master's level it is important to qualify the physiotherapist who performs functions in the aquatic environment and who can develop research work to support evidence-based practice.

The Doctor's degree promotes the expansion/development of the community of aquatic physiotherapists clinically, supporting the ongoing integration of the aquatic modality, in the field of research and evidence-based practice.

Table 1. Training/Formation

1.1. At physiotherapy entry level training, have a curricular unit / module of aquatic physiotherapy - this must have a theoretical and practical component, ideally covering the key safety and clinical applications of aquatic physiotherapy (with a total of not less than 30 hours of contact);

1.2. At the end of the entry level, the physiotherapist should have knowledge and skills in order to provide a safe and effective performance with its users/clients in the aquatic environment;

1.3. Guided by the Quality Standards of World Physiotherapy and its members, in the evolutionary course of clinical practice, and by the regulations that govern the profession in the country.

Non-academic training/formation

The training necessary for the practice of aquatic physiotherapy that doesn't confer a degree, which is integrated in continuous professional development, is recommended to be structured/organised in three levels of training (Table 2 - Levels of non-conferring degree training/formation) [1, 13]. Any training should be taught by credible and peer-recognised entities. The training includes an evaluation of knowledge or skill, which may involve an exam, internship, dissertation or thesis. It is recommended to maintain a regular active clinical and/or pedagogical practice, with theoretical and practical components, which should not exceed more than a three-year interval between the updates.

Table 2. Non-conferring degree training levels

Course title	Level	Number of hours (IOAPT proposal)	Number of Trainees	Main Objectives / Content	Qualification of teachers	Suggestions for Evaluation of Trainees
Meeting (study) of Aquatic Physiotherapy	0	4 to 14 hours	All physiotherapists and students	Exchange of experiences, help between colleagues, exchange of bibliography, training of practical aspects, etc.	Physiotherapists with experience in aquatic physiotherapy (with more than 2 years of regular experience in aquatic physiotherapy)	No evaluation
Aquatic Physiotherapy Conferences / Journeys	0	7-14 hours	All physiotherapists and/or students and/or other professionals	Theoretical presentation and/or with some aquatic physiotherapy workshops in certain areas of physiotherapy	Physiotherapists who are dedicated to the practice of aquatic physiotherapy in these specific areas	No evaluation
Basic Course of Balneotherapy/ Thermalism	1	21 hours. (minimum)	Physiotherapists and/or last year physiotherapy students	Theoretical and practical presentation of the various balneotherapy / thermal techniques	Physiotherapists who detain the practice or investigation of aquatic physiotherapy in balneotherapy/ thermalism	Theoretical-Practical Evaluation

Basic Course of Aquatic Physiotherapy	1	24 hours (minimum)	Physiotherapists and/ or last year physiotherapy students	Basic concepts on hydrostatic and hydrodynamic (fluid mechanics) principles, physiological effects of immersion, precautions and contraindications, bases of various physiotherapy techniques in the aquatic environment	Physiotherapists who have the "Advanced Course of Aquatic Physiotherapy" or post-graduation studies and practice for more than 5 consecutive years and/ or who are teachers of aquatic physiotherapy in recognised universities/schools	Theoretical-Practical Evaluation
Intermediate Course of Aquatic Physiotherapy	2	48 to 60 hours (minimum)	Physiotherapists who have the Basic Course	More "advanced" or specific concepts of certain areas of aquatic physiotherapy intervention, specific techniques, etc.	The same as the previous one but also with international physiotherapists or specialists from other areas	Case Study
Advanced Course in Aquatic Physiotherapy	3	80 hours (minimum) With internship	Physiotherapists who have the Intermediate Course	Aquatic physiotherapy under specific conditions (musculoskeletal, paediatrics, neuromuscular, etc.), specific techniques and case studies	The same as the previous one but also with international physiotherapists or specialists from other areas of physiotherapy intervention	Case Study
Basic Life Support Course (applied to Aquatic Physiotherapy)	1	15 hours (minimum)	All physiotherapists and students	Basic life support in aquatic physiotherapy	Recognised technicians of basic life support and/or physiotherapist specialised in this field	Theoretical-Practical Evaluation

Aquatic Physiotherapy Research

1. The aquatic physiotherapist should be aware of the importance of promoting clinical research, promoted both by universities/schools and by institutions/swimming pools where aquatic physiotherapy is practiced. Research work should be developed in synergies between academic and clinical practice. The need to find answers to the clinical challenges that arise in their daily practice should be a goal of all aquatic physiotherapists. Dissemination and sharing of knowledge should always be fostered [1].
2. Research provides the scientific evidence needed to support and guide the practice of aquatic physiotherapy. It helps determine the efficacy and effectiveness of different interventions, techniques, and approaches used in the aquatic environment. This evidence allows physiotherapists to make more assertive and evidence-based decisions about the best treatment options and relevant outcome measures for their patients.
3. Research optimises clients' outcomes by identifying the most effective techniques and interventions. Research helps ensure that patients receive the best possible care and achieve optimal results. It also helps in the development of new and innovative interventions and techniques. This could include exploring new exercises, equipment, or technology specifically designed for the aquatic environment.
4. Research contributes to the advancement of aquatic physiotherapy practice to help determine the most effective interventions to achieve therapeutic goals in any conditions. This knowledge can provide valuable insights into the physiological, biomechanical, and psychological processes involved in aquatic physiotherapy. Such understanding can lead to enhanced effectiveness of treatment protocols and the development of targeted interventions.
5. Research in aquatic physiotherapy helps build the body of scientific literature specific to this field. This expands the knowledge base and contributes to the overall advancement of the profession. It also allows for comparisons and meta-analyses/meta-regression of studies, leading to more robust and reliable conclusions about the efficacy/effectiveness of aquatic interventions.

References

1. Grupo de Interesse em Fisioterapia Aquática – Hidroterapia (GIFA) da Associação Portuguesa de Fisioterapeutas (APFisio). Perfil de Competências do Fisioterapeuta Aquático. São Domingos de Rana; 2021. http://gifa.apfisio.pt/index.php/sobre-o-gifa/perfil-de-competencias-do-fisioterapeuta-aquatico-gifa/send/2-organizacao/199-perfil-de-competencias-do-fisioterapeuta-aquatico-gifa
2. Associação Portuguesa de Fisioterapeutas. *O Perfil de Competências do Fisioterapeuta*. São Domingos de Rana; 2020. http://www.apfisio.pt/wp-content/uploads/2020/09/APFisio_Perfil_Compet_Fisio_rev2020.pdf
3. Conselho Federal de Fisioterapia e Terapia Ocupacional (COFFITO). Disciplina a Especialidade Profissional de Fisioterapia Aquática. Resolução Nº 443, de 3 de Setembro de 2014. https://www.coffito.gov.br/nsite/?p=3205
4. Vicente S., Murta H., Sá C. & Oliveira J. Cross Cultural adaptation of the Water Orientation Test Alyn (WOTA) 1 and 2 - Portuguese version. *Annals of Medicine*, 2019; 51 (Suppl. 1): 214.
5. Australian Physiotherapy Association (APA) - Aquatic Physiotherapy Group. Australian guidelines for aquatic physiotherapists working in and/or managing hydrotherapy pools. 2 nd ed.; 2015. https://australian.physio/sites/default/files/tools/Aquatic_Physiotherapy_Guidelines.pdf
6. Murta H., Palmeira A. Analyses of the motivation for hydrotherapy in users with chronic pain. Master's Thesis in Exercise and Wellness, Faculdade de Educação Física e Desporto - Universidade Lusófona. Lisbon; 2013.
7. Sá C., Palmeira A. Results of an Aquatic Exercise Program on Balance, Risk of Falls, Fear of Falling, and Quality of Life in Older Adults. *JAPT*. 2019; 27: 2-11.
8. Graça M., Alvarelhão J., Costa R., Fernandes R. J., Ribeiro A., Daly D., & Vilas-Boas J. P. Immediate Effects of Aquatic Therapy on Balance in Older Adults with Upper Limb Dysfunction: An Exploratory Study. *Int J Environ Res Pub Health*. 2020; *17*(24): 9434. https://doi.org/10.3390/ijerph17249434
9. Grupo de Interesse em Fisioterapia Aquática – Hidroterapia (GIFA) da Associação Portuguesa de Fisioterapeutas (APFisio). Orientações Globais da Intervenção do Fisioterapeuta em Fisioterapia

Aquática – Hidroterapia. São Domingos de Rana; 2017. http://gifa.apfisio.pt/index.php/sobre-o-gifa/orientacoes-gerais/send/2-organizacao/3-orientacoes-globais-interv-fisioterapeuta

10. Aquatic Therapy Association of Chartered Physiotherapists (ATACP) from the Chartered Society of Physiotherapy (CSP). Guidance on Good Practice in Aquatic Physiotherapy. London; 2021. https://atacp.csp.org.uk/system/files/documents/2018-08/completed_purchase.pdf

11. Grupo de Interesse em Fisioterapia Aquática – Hidroterapia (GIFA) da Associação Portuguesa de Fisioterapeutas (APFisio). Normas de Boas Práticas para a prestação de serviços de Fisioterapia Aquática – Hidroterapia. São Domingos de Rana; 2017. http://gifa.apfisio.pt/index.php/sobre-o-gifa/normas-de-boas-praticas/send/2-organizacao/2-normas-de-boas-praticas-para-a-prestacao-de-servicos-de-fisioterapia

12. American Physical Therapy Association (APTA). Specialist Certification. Process Consulted in May 2020. https://specialization.apta.org/about-specialist-certification

13. Australian Physiotherapy Association (APA) - Aquatic Physiotherapy Group. https://australian.physio/membership/national-groups/aquatic