World Physiotherapy
Europe region

Briefing Paper –
Promoting Research in Physiotherapy in the Europe Region

Education & Research Matters Working Group (E&RMWG)

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BRIEFING PAPER -
PROMOTING RESEARCH IN PHYSIOTHERAPY IN THE EUROPE REGION
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CONTENTS

SUMMARY

This briefing paper on research in physiotherapy in the Europe Region presents an overview of the current situation, policy dimensions and implications, and provides recommendations for the Member Organisation (MOs).

Specifically, the paper highlights the importance of research for professional development and aims to 1) give background to and stimulate high quality research initiatives in physiotherapy in Europe, and 2) encourage member organisations of the Europe Region to promote research for the benefit of professional development.

It reflects the research strategies of the World Physiotherapy and emphasises the aim of the profession to base clinical work on evidence-based practice prioritising patient safety and ethics.

Informed by health policies and European Frameworks, this paper strives to identify important and relevant research areas without being specific or exclusive to particular research topics, which is beyond the scope of this document.

The paper emphasises the strong links between education, research, development and innovation in the European Higher Education Area (EHEA) and European Research Area (ERA).

1. PURPOSE

The purpose of this briefing paper is to promote and support research initiatives and efforts in physiotherapy in order to contribute to the development of the profession and high quality of physiotherapy in the Europe Region. It aims to highlight the importance of an evidence-based profession towards clinical efficiency and patient safety in clinical settings and to inform Member Organizations (MOs) and others on important relevant issues.

Promoting research also implies/refers to the development of research career pathways and such relevant positions for physiotherapists, and contributes to an on-going discourse about current research priorities in the professional field. A “briefing paper” within the context of the World Physiotherapy describes and analyses the current situation, policy dimensions and implications. It provides recommendations for action by the Europe Region and Member Organisations.

The specific purpose of the document is:

1. To promote the importance of conducting and disseminating research in physiotherapy in the Europe Region and, to provide the strong links between high quality physiotherapy research, education and clinical practice and the current situation of evidence-based physiotherapy practice in the international arena. This is in line with the World Physiotherapy’s policy statement of research and on evidence-based practice.

2. To promote a research culture in physiotherapy across the Europe Region.

3. To present recommendations regarding the role of the Europe Region and the Member Organisations in promoting and supporting research, including guiding and facilitating research career pathways within physiotherapy.

4. To provide a source of information for policy makers, budget holders and other relevant national and international stakeholders interested in physiotherapy and research related to physiotherapy.

2. INTRODUCTION

Physiotherapy is both an academic and a professional healthcare discipline. The World Physiotherapy has adopted the "Description of Physical Therapy" to have a common international platform for the profession[1]. In Europe, the classifications and competences of the profession are formulated in the European Skills/Competences, Qualifications and Occupations (ESCO)[2]. World Physiotherapy's description states that physiotherapy should be based on academic education, specific knowledge and autonomous professional responsibility aimed at the best possible service for the individuals in all ages and society. Physiotherapists work with people to identify and maximise their ability to move and function. Physiotherapists provide services to individuals and populations to develop, maintain, restore and enhance health and quality of life, and to prevent diseases throughout the lifespan. This includes providing services in circumstances where movement ability and function are threatened by for example ageing, injury, disease or environmental factors. Functional movement is central to what it means to be healthy and independent. Physiotherapy plays a key role in enabling people to maximise their movement potential, function and quality of life within the spheres of promotion, prevention, treatment/intervention and rehabilitation. This encompasses physical, psychological, emotional, and social wellbeing. Physiotherapy involves the interaction between physiotherapists, patients/clients, other health professionals, families, caregivers and communities in a process where movement potential is assessed and goals are agreed upon, using knowledge and skills unique to physiotherapists. Physiotherapists also have a key role in health policies and in communications with policy makers to guide new regulations in health care and health promotion for global health.

The foundation for this process should be based on evidence-based physiotherapy/evidence-based practice (EBP), which consists of a combination of research, clinical experience and patient/client opinion, as well as cost-benefit[3].

Furthermore, according to ESCO[4], physiotherapists should undertake different levels of engagement in research activities to improve the quality of physiotherapy.

2.1 Research as defined in this document

Research may be defined as a scientific systematic search of knowledge, which best generates new knowledge that might be transferred into practice[5].
Scientific research relies on the application of scientific methods and therefore requires education, guiding and training. A researcher in physiotherapy, as in any other profession,

is defined as a person with recognised academic qualifications at an evidence-based educational institute/university, and who is affiliated to a university for using /institution/centre/organisation that is conducive to research. This institution should ensure that ethical approval is obtained, where it is required and often provided by a national legal entity or by committees at the higher educational institution. Research undertaken by physiotherapists should comply with the ethical and governance requirements of the country in which the research is conducted. Physiotherapy researchers follow research ethical standards such as The Declaration of Helsinki[6]. The World Medical Association developed the Declaration, as a set of ethical principles for the medical community regarding human experimentation, and is widely regarded as the cornerstone of human research ethics. There are, also, other relevant international organisations and tools to consider, such as those provided by the Council for International Organisations of Medical Sciences (CIOMS) and others[7].

Physiotherapists should be mindful of the need to depend on research and evidence to achieve and maintain their registration/professional membership and to reflect on their procedures and to evaluate their own work. There is an abundance of entry-level physiotherapy programmes offered by various organisations across Europe, which require careful consideration and selection of what to implement in clinical practice. In addition to reading research reports that guide clinical practice, the physiotherapist must be able to generate new ideas from clinical experience and observations that can be transformed into new knowledge and eventually become evidence-based practice.

It is in the best interest of the Member Organisations to support this by stimulating collaboration and facilitating communication between physiotherapists, in order to engage all physiotherapists in quality assurance in the practice and research matters, and to implement new research findings into clinical settings.

According to the survey conducted for member countries in the World Physiotherapy Europe Region, 42% (n=13) of MOs were involved in or carry out research studies or projects as coordinators or partners, while 58% (n=18) were not. 39% (n=12) of MOs had networks or networking groups for research, while 61% (n=19) had none. A total of 8 (26 %) MO's had special member/ members who promote research within the MO whereas 23 MO's (74%) had no special member or group members *(Europe Region of World Physiotherapy, Education & Research Working Group Survey Results, 2021 and 2022).*

Numerous studies in the past decade have documented that physiotherapists hold generally favourable attitudes to EBP and recognise the importance of using research findings to achieve a more evidence-based clinical practice[8-14].

However, there are many challenges and barriers to physiotherapists' research use, including time restrictions, limited access to research studies, difficulties finding financial support, lack of knowledge or poor confidence in skills to identify and critically appraise research, and inadequate support from colleagues, managers and other health professionals[2,14]. The most common barrier identified in MO's in the Europe Region is financial barriers (84%, n=16). For example, only 35% (n=11) of MO's can find financial support for the research, while 65% of them (n=20) have no support. According to the

survey results, financial barriers (84%, n=16) were followed by lack of knowledge (21%, n=4), lack of interest (37%, n=7) and other (21%, n=4).

Other barriers mostly included time constraints, as many members are already engaged in research, but required (ring-fenced) time for research within their institutions remains a barrier or a lack of time among physiotherapists working clinically due to high clinical workloads.

2.2 World Physiotherapy Policy Statements on Research and Evidence Based Practice

The MOs of the Europe Region have adopted the World Physiotherapy Policy Statement on Research[15] and the Policy Statement on Evidence-Based Practice[16]. The Research Policy emphasises the importance of conducting research, particularly through systematic reviews and meta-analyses, systematic research as it is essential for the development of evidence-based physiotherapy. The document also states that the physiotherapist shall "advance the science of physiotherapy by conducting and/or supporting research activities or by assisting those engaged in research", and that "the physiotherapist recognises research as an integral part in the continuing growth and development of the profession". The policy emphasises that "the physiotherapist conducting a research project has sufficient knowledge of research principles and methodology and adheres to international standards for performing research on human subjects". The World Physiotherapy policy statement on evidence-based practice[17] states that physiotherapists are responsible for using evidence to inform practice and to ensure that the management of patients/clients, their carers and communities is based on the best available evidence. Evidence is scientific knowledge integrated with clinical experience and patient opinion, taking into consideration beliefs and values and the cultural context of the local environment[18]. In addition, physiotherapists are responsible for avoiding the use of methodologies, techniques and technologies that have been shown to be ineffective or unsafe.

3. EDUCATION RESEARCH, DEVELOPMENT AND INNOVATION IN THE EUROPEAN HIGHER EDUCATION AREA (EHEA) AND EUROPEAN RESEARCH AREA (ERA)

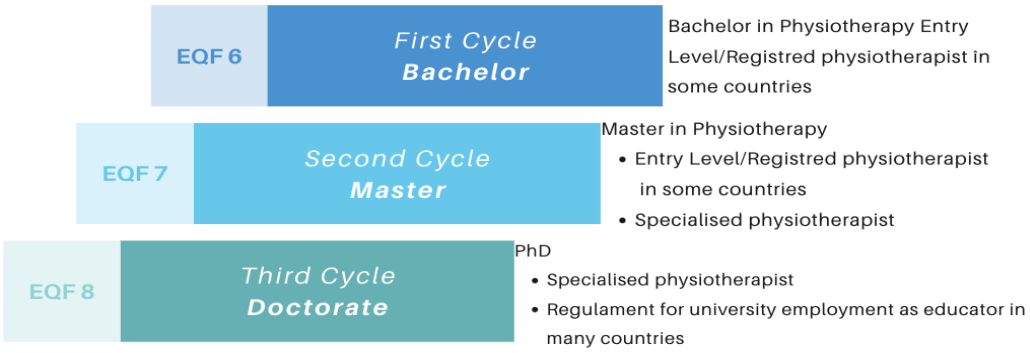
The Bologna Declaration[19] recognises that the relationship between higher education, research and innovation has an impact on creativity in society. Higher education in Europe should be based on basic and applied science. High quality undergraduate physiotherapy education is a prerequisite for the development of further high-quality education at master level and conducting postgraduate research. This is highlighted in "The statement on Physiotherapy Education of the Europe Region"[20], World Physiotherapy -Physiotherapists Education Framework[21] and World Physiotherapy Policy statement on education[22].

Physiotherapy education needs to be within Higher Education Institutes (HEIs) for opportunities for research training and career pathways progressing to professorial levels. In most countries in Europe, physiotherapy is part of higher education and the programmes are provided at university level. Nevertheless, there is heterogeneity of the educational systems

across Europe. Some countries are still striving for full transition of all of their physiotherapy educational programmes into the Higher Education institutes. Therefore, there are inequalities and/or differences in the opportunities for physiotherapists to pursue an education in research and to carry out research. An important role for the Europe Region is to work with the MO's to support the process of incorporating physiotherapy education into the university level and to strengthen this position in academic level academia. An established academic position of physiotherapy in all European countries is in line with promoting inclusion and mobility across nations in order to develop research and stimulate research career pathways as recommended by the European Union and emphasised by the Ministers responsible for Higher Education. An academic physiotherapy position established in all European countries serves to promote inclusion and mobility between countries to develop research and promote research career pathways, as recommended by the European Union and highlighted by the Ministers responsible for Higher Education[23].

The university as the base for physiotherapy education ensures the potential for master/doctoral programmes in physiotherapy, which are fundamental for a research career. Research methodology and research knowledge are essential at all levels of education, so they should be specifically embedded in physiotherapy education programmes and curricula (see Figure 1).

Figure 1:
Schematic overview of levels of education and corresponding qualifications which vary across countries.



Levels indicated according to the European Qualification Framework (EQF)

Furthermore, it is important that there are full professors/established researchers in physiotherapy in the universities in order to develop research environments so that research questions central to the practice of the profession can be addressed.

Through independent research in physiotherapy in a wide range of topics, the profession is able to demonstrate and improve what clinical practice in physiotherapy can not only offer to the patients but can also serve at different levels of society to promote health and wellbeing. Through independent research on a wide variety of topics in physiotherapy, the profession can demonstrate and enhance what clinical practice in physiotherapy can not only offer to the patients, but also serve to improve health and well-being at different levels of society.

World Physiotherapy recommends that the minimum entry-level for physiotherapy education should be university level studies, independently validated and accredited as being at a

standard that affords graduates full statutory and professional recognition[20-22]. However, as outlined above, there may be differences across Europe in programme delivery and in entry-level qualifications, including Bachelors/Baccalaureate/Licensed or equivalent, Masters and Doctorate entry qualifications. Specific courses for various physiotherapy fields at master's level education should be an option for the physiotherapists who have been qualified from previous educational systems, and who would like to upgrade their qualifications[24].

Effort is required throughout the European countries for alignment with regard to quality and quantity of the education in physiotherapy according to the intention of the Bologna declaration. An important goal is to incorporate all the competencies that are needed to achieve a state-of-the-art physiotherapy qualification, underpinned by research to meet the needs of the population. Entry-level educational programmes ensuring minimum competencies across the Europe Region also facilitates employability and mobility. A range of post-graduate education programmes should be available to support the development of clinical, academic and research career pathways as well as combined pathways such as clinical academic roles.

A way to facilitate an early research career may be to promote post-graduate programmes that are more focused on developing research methodology. Strengthening the relationship between research, teaching and innovation is also important from a lifelong learning perspective. The research and innovation aims of universities may be strengthened by having lifelong learning strategies, and the specific contribution of the universities to lifelong learning should be underpinned by research. Researchers should also be recognised as examples of lifelong learners who continually develop their own educational needs and take into account the changing skills required by the labour market. Lifelong learning can also be a source of new research methodologies and topics[24]. Document for "Advanced Physiotherapy Practice" in the Europe Region also outlines such pathways.

In the third stage of the Bologna process, reference is made to the concept of PhD degree (Doctorate degree) with supervised research training. However, the key component of the third cycle is the advancement of learning through original research, which differentiates the cycle from the previous two cycles. The possibility for physiotherapists to obtain a PhD degree is linked to the level of basic training, and therefore it is important that the quality of physiotherapy education is high and transparent in the first two cycles. Education for PhD degrees also facilitates mobility of students and teachers between the universities and related research laboratories[24].

Increased internationalisation and interaction within higher education and research environments supports global collaboration. This is important for sustainable development and for consensus of physiotherapy actions across different cultural and social contexts. Exchange of international researchers, educators and students between institutions is therefore encouraged in the Europe Region. The goal of the Europe Region is 20% of students to pursue some part of their education outside their home country[16]. A number of Europe Union (EU) programmes exist to support teacher and student exchange between Higher Education /research institutes across Europe, which may facilitate working towards common goals. The European Guidelines promoted by the Guidelines International Network (GIN) are a good example of action points that have a major impact on clinical treatment[25].

3.1 Health policies and European frameworks in relation to physiotherapy research priorities

Research in physiotherapy in Europe should be conducted with reference to national strategies for research and development in each country but also to the "EU's Research and Innovation Strategy for Europe " and in line with the "EU Health Strategy and Health Programme"[26]. The latter focuses on the major societal challenges such as increased elderly population, climate change, energy efficiency, migration, chronic diseases, cancer, obesity, sedentary lifestyle, increased health expenditure, healthcare burden or decreased resource efficiency. The ambition of the Common Strategic Framework (CSF) for European Research and Innovative Funding[27] to bring research and innovation closer together, aims to enhance the impact of EU funding, and relate it specifically to these societal challenges. The EU and the WHO have identified the worldwide health problems related to lifestyle and/or lack of physical activity i.e. the non-communicable diseases are global research priorities[28-29].

Current development trends affecting physiotherapy science and professional practice focus on globalisation and the demands of evidence-based physiotherapy, including cost-effectiveness, and a changing view of health, disease, dysfunction and impairment[30-31]. In addition to these issues, some changes seen in public health[23-24] and increased ageing society-particularly in Europe- create a need for physiotherapy research. Moreover, it will lead to interventions to maintain health, to treat and rehabilitate patients/clients with impairment or disability, activity limitations or participation restrictions (See International Classification of Function Disability and Health= ICF)[32], and with respect to gender, ethnicity and innovation[31].

An important challenge for the profession, in which physiotherapists have a special role and responsibility (based on professional competence), is to promote physical activity for all patients/clients and thus prevent a sedentary lifestyle, that is, primary prevention. Physical inactivity is a global health problem associated with development of many major non-communicable diseases and therefore is a major concern for all societies[27]. Health enhancing physical activity is a special field where physiotherapists are well qualified to engage in interventions, policy planning and research. Interventions should be community-based and tailored to community needs and for clinical cohorts. Physiotherapists do not appear so far to have been so involved in policy-making in many countries in Europe, although they possess the specific knowledge about human movement, functions, physical activity and exercise prescription. Research on promotive and preventive physical activity involves a wide range of methods and includes possibilities for collaboration with other professions, such as in the area of disability and rehabilitation, complex interventions and human resource planning[33-34].

Physiotherapists also have a role to play in the broader public health agenda, and occupational health field. Keeping the workforce healthy and helping people to return to work as early as possible in case of incapacity are crucial to improve overall quality of health, to reduce absenteeism from work and the economic burden of health care costs.

Research on identifying environmental barriers and providing environmental outdoor and indoor design for people with disability or functional limitation/ incapacity are also other important areas in physiotherapy research. Evidence-based research in physiotherapy is also needed to create accessible buildings, living areas and social environments for the individuals.

Identifying research priorities may be fundamental in trying to influence research funders as well. The Chartered Society of Physiotherapy (UK) prioritised research topics in the areas of musculoskeletal, neurological, older people, cardio-respiratory rehabilitation, and mental and physical health[35]. Similar research priorities have also been reported from other countries such as Switzerland[36], Ireland[37] etc. The range of prioritised topics illustrates how the evidence base for physiotherapy has developed and continues to develop. In addition to clinical effectiveness, other key priorities relate to value of physiotherapy and outcome measurements, the way of physiotherapy services delivered (e.g. seven-day services) and cost effectiveness, technology adoption and innovation, public health including physical activity and behaviour change, prevention of musculoskeletal injuries, providing safety workplace, facilitation of return to work and the improvement of health inequalities.

Finally, implementation of research and in particular, the translation of current scientific evidence into clinical practice is important[38]. In relation to many of the above research areas, current focuses for the future, such as individualised treatments (what works for the individual), self-management and the use of big data in public health, new technology for communication, clinical assessments and treatments are often referred to as e-health.

3.2 Progress of research in physiotherapy

The early scientific publications related to physiotherapy emerged in the first part of the 20th century and the first scientific randomised controlled trial (RCT) was reported in the year 1929[38]. Physiotherapy research has grown exponentially over the last four decades. The rapid development in the scientific knowledge base of the profession has emerged largely through increased access to research education in physiotherapy. Increased professional competence has also increased funding possibilities. Clinical guidelines, meta-analyses and systematic reviews of relevance to physiotherapy have rapidly increased since the 1990s[39]. Point-of-care resources like DYNAMED are especially important. They play a vital role in physiotherapy practice by providing immediate access to filtered and controlled information, supporting evidence-based practice and improving clinical decision-making. Electronic retrieval of health information may certainly assist in improving the clinical practice[40] and four comprehensive databases of trial reports evaluating physiotherapy interventions are CENTRAL, PEDro, PubMed, and EMBASE[41]. There is also an ongoing discussion on how, and by which means, individuals interpret the results presented in systematic reviews and implement them into practice[42]. The number of randomised controlled trials (RCTs) within physiotherapy has increased substantially over the last few years as indicated in the PEDro database[41, 43]. High quality RCTs, but also other types of studies such as well-designed clinical case reports, cross sectional and longitudinal studies etc., (see below) are important in order to provide evidence and thus

provide bases for appropriate recommendations for physiotherapy presented in national and international clinical guidelines.

Thus, an increasing number of physiotherapists worldwide have engaged in research during the last decades and their research projects have addressed areas ranging from basic research to specific clinical questions in different fields. In order to increase research competencies, physiotherapists sometimes pursue their PhD-training within other academic disciplines and with supervisors/advisors who are not physiotherapists.

While this approach is valuable, there is an urgent need to promote the advancement of physiotherapy research areas that are closely linked to relevant clinical questions and practice implications, particularly where they have not yet been implemented. Such progress should ideally be facilitated by supervisors/advisors who possess specialised knowledge in physiotherapy and research projects that originate within a physiotherapy research environment.

3.3 Dissemination and implementing research knowledge

Disseminating research is of course essential. There is an ever-growing number of scientific journals that publish research relevant to physiotherapy, and with different quality indicators (impact factors, Web of Science, FRIDA ranking of journal level, Norwegian system for ranking[44]. Some MOs have a specific physiotherapy journal that publishes in the appropriate language (e.g. Poland, Spain) or some MOs have their official scientific journal (i.e. Physiotherapy Practice & Research of the Irish Society of Chartered Physiotherapists, Italian Journal of Physiotherapy, Turkish Journal of Physiotherapy and Rehabilitation) to provide research more accessible to individual members. For example "Physiotherapy" is the official journal of the CSP in the UK and is indexed in MEDLINE.

The MOs in the Nordic countries supported the launch of the “European Journal of Physiotherapy”. The Swedish MO subscribes to the journal providing electronic access to all its individual members in Sweden. Open access is an important principle where there should be no fees for the user to be able to download articles. There is also often a publication fee and awareness should be encouraged also of the researcher and reader of financial interests of publishers[45]. SHERPA RoMEO is an online resource that aggregates and analyses publisher open access policies from around the world and provides summaries of self-archiving permissions and conditions of rights given to authors on a journal-by-journal basis[46]. For dissemination of research, social media can nowadays be used to communicate information about ongoing research or research results.

It is a challenge and a continuing process to implement research evidence into daily practice. There is no single factor to facilitate change in clinical practice, but multiple practice change strategies are needed[36].

The development in physiotherapy research is reflected in the content and quality of scientific international congresses of World Physiotherapy and speciality groups of World Physiotherapy in addition to the national level congresses. The Europe Region also

organises a scientific congress in the field of physiotherapy every four years and with an emphasis on education in every second one. An increased engagement and quality of the congress content demonstrates that research dissemination and exchange are really important and that peer-review, networking and collaboration are all vital to sustaining research efforts and evidenced-based practice. Although scientific presentations at international meetings are a part of the scientific process of publishing articles, the value of congresses in terms of bringing change in clinical practice is debated. The majority of participants nevertheless are clinicians and the congress aims to provide state-of-the art knowledge, clinical implications transferred from research results to practice and clinical take-home messages.

3.4 Research methodology and study designs

Utilising research methods to evaluate the cost of physiotherapy service, how they are delivered, outcome measurements and collection of data in routine practice is increasingly important. While randomised controlled studies (RCTs) are still considered a higher standard for evidence of efficacy of treatments, it is important to promote a wide range of research studies and methodologies, both qualitative and quantitative in order to achieve evidence-based physiotherapy[43]**.** For example, clinical case studies and various types of studies that target individualised/tailored treatment are crucial in increasing efforts to understand what treatment works for whom and under which conditions. Thus, very useful information can be provided by observational studies and descriptive studies, which are most common in physiotherapy[47]**,** and in medicine in general, well-conducted case reports or case-control studies[48] may be of particular use.

Further systematic reviews and meta-analyses are needed in physiotherapy research to evaluate the measurement properties of various outcome measures, including specific and sensitive outcome measures customised for different health conditions and how they are used and interpreted in specific patient groups.

It is therefore essential that physiotherapy is positioned within the research contexts for different scientific approaches: applied, natural and social sciences inquiries. Physiotherapy research is not only about which treatment is effective, but also about education, social issues, global health, health promotion, prevention, disaster management, patient experiences, ergonomics and environmental designing, professional interaction, service delivery, ethics, e-health, administration and management, health in relation to cultural and religious aspects etc. The recent increase in migration and refugees in Europe also calls for a readiness of physiotherapy treatment and research initiatives. Furthermore, strategies to implement research findings are crucial in order to transfer clinical guidelines into factual clinical practice[49]**.**

3.5 The importance of clinical research

The particular relevance of clinical research should be emphasised. As the evidence base develops, more studies that directly answer clinical questions and facilitate clinical implementation can be undertaken. Only around 40-50 % of the publications in the physiotherapy journals *Physical Therapy, the Australian Journal of Physical Therapy, Physiotherapy* and *Physiotherapy Canada, Journal of Orthopaedic and Sports Physical Therapy* were related to clinical research and patient care before 2012[50-51]*.*

There is a strong positive trend of conducting high quality research in physiotherapy in Europe and worldwide, and there is a substantial body of evidence about the effects of physiotherapy. However, there still remains scope for improvement in the quality of the conduct and the reporting of clinical trials[52] and related research in order to promote the continuous development of evidence that can be applied in clinical practice.

3.6 The role of Member Organisations (MOs) and Higher Education Institutions in supporting clinical academic and research careers

Quality research with high standards of education in close combination with clinical competence is crucial, especially considering the present health care systems and the economic difficulties experienced in many countries. Therefore, Member Organisations should support a range of research training and career pathways, which include clinical academic pathways. The MOs have a crucial role working with governmental departments, policy makers and health care organisations/authorities and research funders to establish training schemes and research positions. The Chartered Society of Physiotherapy (CSP), as part of a Research Forum of Allied Health Professionals, has worked collaboratively with nurses and the UK Clinical Research Collaboration to produce a report *Developing the Best Research Professionals.* The report contains recommendations to facilitate the development of a clinical academic training pathway and career framework. This report has been very influential and contributed to the launch of four research training schemes with funding from the Department of Health and Higher Education Research Councils. The four levels of the clinical academic training pathway are: Masters in Research or Clinical Research; Clinical Doctoral Research Fellowship, Clinical Lectureship and Senior Clinical Lectureship[53]*.*

Member Organisations should also strive for initiatives that lead to increased clinical research (see above), and to facilitate career pathways, that is to work towards differentiated clinical positions related to competence in research (Master of science, PhD). This is a necessary step towards creating strong clinical environments that work in collaboration with academic centres/institutions involved in education as well. Patients and users of physiotherapy services should preferably be involved in all aspects of physiotherapy research, including the prioritisation of research questions.

The necessity for all physiotherapists to be critical consumers of research is recognised together with the responsibility of the organisation and management to develop conditions favourable for an evidence-based profession. These are important stepping stones to reach

high quality clinical research that require further development. For instance, there is still a shortage of positions for physiotherapists with research knowledge in clinical settings as well as in public health. This is also true where clinical and research work is combined to create a research culture that includes the majority of colleagues in different settings.

The Europe Region is registered in Belgium with the goal of tendering and securing funding for EU-related projects. Through this, the Europe Region can do the overall management/co-ordination of projects to ensure that the highest standards of research and best physiotherapy practices are integrated into any EU project in which physiotherapists are involved. A further aim is the promotion and enhancement of physiotherapy research at European level in the countries of the MOs by means of acquiring support for research activities/projects relevant to the profession, as approved by the Europe Region.

Several MOs provide examples of how to finance and stimulate research efforts, and have also documented the significance of these contributions. In the UK as an example, the CSP has dedicated much effort to developing an overall strategy for research, including previously mentioned research priority setting exercises, staffing structure to provide support and guidance to members, networks and support hubs. In many countries the MOs have implemented strategic campaigns to increase research and support education in research. This has resulted in for instance financial support to expand the numbers of professors (Denmark, the Netherlands) with a chair in physiotherapy or guest professors (Sweden). Several MOs (e.g. Denmark, Netherlands, Sweden, UK) have established funds to support research in physiotherapy. In addition, in some countries there is an annual award for the best academic thesis in undergraduate physiotherapy programmes (e.g., the Netherlands and Ireland). Some MOs have their own research strategic programmes. In Sweden, funding has been available from the MO to support an initial research career including a contribution to present at scientific conferences, mainly supporting physiotherapists involved in master studies or PhD programmes. There is also an initiative to support research efforts by private practitioners. Several MOs have also established scientific professional councils for research policies and support of research networks. These councils serve as advisory boards for research questions.

4. CONCLUSIONS

This paper focuses on making recommendations to the member organisations regarding the role of the Europe Region to highlight principles and encourage processes that promote research in physiotherapy in Europe. Research in physiotherapy is essential for the legitimacy of the profession and in order to develop and to remain an independent, autonomous profession with its own knowledge base. This will lay the foundation for professional practice. Research should be conducted in close connection with education and clinical practice, to ensure the relevant development of knowledge in physiotherapy, which will result in the highest quality health care for the patient.

5. ACTIVITIES BY THE EUROPE REGION

The Europe Region shall continue to promote research and evidence-based physiotherapy by:

- Providing information on the website related to these topics including links to relevant stakeholders and sites, and in particular to the World Physiotherapy's website dedicated to EBP: http://www.wcpt.org/ebp. This includes a section on databases, journals, EBP learning resources, guidelines, research methodology and ethics. The Europe Region should encourage use of point of care sources such as Dynnamed and databases such as (PEDro, Cochrane, Allied Health Evidence) and to follow established clinical international guidelines as well as in participating in building new ones;

- Organising an European Scientific Congress every 4 years where a peer-review process in line with World Physiotherapy standards is applied and where the topic of promoting, delivering and implementing evidence based physiotherapy/evidence based practice will always be a feature;

- Taking initiatives in other professional or multi-professional contexts to discuss opportunities and trends of research in physiotherapy including European perspectives; and

- Supporting research activities.

6. RECOMMENDATIONS FOR ACTION BY THE EUROPE REGION AND THE MEMBER ORGANISATIONS

1. **Promote networks for physiotherapy research.**
   Research projects should be undertaken by experienced researchers and in established research environments across the Europe Region. The Europe Region should promote the establishment of networks or collaborative groups of efforts in physiotherapy research with appropriate channels. The Europe Region could also encourage and support such networks to apply for established EU sources like the Framework Programmes.

2. **Increase the number of people with research competencies**
   (i.e., PhD and higher levels), both specific to the discipline and interdisciplinary in each member country. The Europe Region and the MOs should **facilitate research careers**, by encouraging, stimulating and rewarding people to go for Masters or PhD exams. This may include offering support and resources or funding/stipends to initiate early stage research careers, or other initiatives for such progress. It is important to advocate the value to the clinical workplace alongside clinical roles to pursue these opportunities. Furthermore, it is equally important to invest in post-doctoral opportunities as well as experienced scientist initiatives to stimulate research development.

3. **Encourage Intradisciplinary and interdisciplinary cooperation and networking** around promotion, prevention and treatment for various diagnoses and endorsement of interdisciplinary collaboration is strongly recommended throughout all stages of research development and implementation where appropriate.

4. **The Europe Region and MOs would be aware of the priorities of relevant bodies** such as national governmental departments, funding bodies, non-governmental organisations, municipalities, WHO and EU that might guide the choice of research or topics for research.

5. **The Europe Region should work to stimulate areas of research relevant for physiotherapy.**

6. **The Europe Region, would explore the feasibility of facilitating the access to point of care sources on a EU level.**

On a Member Organisation level, it is recommended that:

1. **MOs establish a committee** (or similar depending on internal structures) **that has responsibility for strategy and priorities for research** and to provide advice on issues related to research and development. Such a committee may for example act as primary instance for the health authorities for referrals, submissions for comments and/or general advice on various matters of importance to physiotherapy in a societal context.

2. **MOs encourage participation in World Physiotherapy and Europe Region, congresses** which promote knowledge dissemination based on research and evidence-based practice.

3. **MOs ensure that the programme for their national congresses is based on the principles of EBP**, that this is highlighted and that networking opportunities are provided in relation to clinical based research. MOs should require that their clinical interest groups/sections raise the profile of implementing research activities as a key tenant of their agenda.

4. **MOs should support publication in peer-reviewed journals.** The MOs should consider supporting national journals in physiotherapy to stimulate research development, especially in early phases of expansion. Such efforts have played an important role in the initial development of research initiatives in physiotherapy and support to individuals in their development by publishing bachelor's and master's reports for instance.

5. **MOs should consider establishing awards and funding to stimulate quality research initiatives in physiotherapy.**

6. **MOs encourage the development and use of clinical guidelines** and the initiatives to conduct systematic reviews and meta-analysis of the literature, with standard criteria scrutinising the reliability and validity of method and moreover, support rigorous process of quality assurance. It is important that professional representatives for physiotherapy take part in the national processes of development of national multi-professional clinical guidelines for best available medical care or physiotherapy interventions for various health problems, disorders or impairments.

7. **MOs make use of the Guidelines International Network** (GIN; http://www.g-i-n.net/) which has a multi-professional approach to health care, and likewise that the MOs encourage and support participation in conferences arranged by GIN.

8. **MOs encourage conducting research that is in accordance with ethical and research standards.** There are several databases, checklists and accepted standards for quality research, several of these are on the Europe Region website. Physiotherapy research should likewise be conducted according to good research governance, which is incorporated in national law procedures in most European countries**.** The Europe Region and MOs should encourage and advocate for national legal procedures that facilitate international collaboration and research involving students at undergraduate level.

9. **MOs work with existing national or international multi-professional registers, or for the establishment of national and international databases** of researchers within physiotherapy as well as national registers of relevance for physiotherapy research. Such databases for professions within the health care sector are valuable resources to investigate what kind of research is being conducted and to readily find research experts in different fields when required.

10. **MOs support and participate in initiatives and discussions regarding research priorities in physiotherapy at a national level.**

11. **MOs encourage collaboration with other stakeholders and organisations on both national and international level for research development and implementation of evidence-based physiotherapy/evidence-based practice** by emphasising the need for education programmes to meet the **World Physiotherapy** guidelines of entry-level education. This includes efforts for high quality research-based curricula in physiotherapy in the Higher Education Institutes and should equip physiotherapists for research and EBP. Initiatives to support Continuous Professional Development (CPD) opportunities should also be taken into consideration

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