APTA POSITION ON RESEARCH

The American Physical Therapy Association has had several long-standing policy statements about research. In a recent effort to update policies and positions, the House of Delegates (HOD), APTA's policy making body, created a Special Committee to review all of its documents. The Special Committee identified that the then existing policies related to research needed to be updated to reflect the current breadth and depth of research that can support improvement in physical therapy practice and education. To that end, they asked the Section on Research to assists in development of new language. Other researchers with expertise in the behavioral sciences also provided input. The new policy was presented to and adopted by the 2019 HOD (see policy below), and is available at the APTA website <http://www.apta.org/Policies/>.

A Support Statement (see below) that explained the current research environment and supported the motion language was also written by the same group. According to typical HOD procedures, support statements are not recorded in the final Minutes of the House nor are they part of the policy pages at the APTA website. The support statement for this policy has very useful language for all those interested in teaching about and conducting research on physical therapy. Therefore several groups, including the Section on Research, the Academy of Physical Therapy Education, and the American Council on Academic Physical Therapy, agreed to share the full language at their web sites.

HOUSE OF DELEGATES (RC 63-19)*

The American Physical Therapy Association (APTA) supports rigorous scientific inquiry as an essential requisite for developing and advancing the physical therapy profession. Research in physical therapy focuses on creating an evidence-based body of knowledge to advance practice and education, shape health policy, maximize integrity of care, and promote positive health of people worldwide.

Those involved in physical therapy research are encouraged to be innovative and progressive, and to adopt a comprehensive approach to research, which involves independent and interprofessional collaborative efforts that include 1 or more of the following domains: biobehavioral, social science, basic science, health service, and education. Research in the profession must address efficacy, effectiveness, implementation, and translational science. Ethical integrity, rigor, and transparency are imperative in scientific methodology, dissemination, and protection of human subjects.

Preparation of basic and applied scientists in physical therapy as well as growth in funded physical therapy research opportunities are necessary to address APTA's vision for the profession. APTA supports rigorous scientific inquiry through outreach and advocacy for research funding; collaboration with the Foundation for Physical Therapy Research and other funding sources; development of national data repositories, including a national clinical outcomes data bank; and other evidence-based resources.

SUPPORT STATEMENT

One important, broad domain of research is grounded within rehabilitation research, defined as the science of mechanisms and interventions that prevent, improve, restore, or replace lost, underdeveloped, or deteriorating function.[1] Rehabilitation research is multidisciplinary, focused on creating an evidence-based body of knowledge to advance physical therapy practice, shape health policy, maximize integrity of care, and impact the health of people and populations worldwide. The scope of research must be broad to develop, grow, transform and increase public recognition of physical therapists as professional experts in movement science, examine learning processes to shape educational, patient and client outcomes as well as determine how social factors, financing

*Post House Packet: June 28, 2019 - Required for Adoption: Majority Vote. PASSED [Consent Calendar]

systems, organizational structures and processes, health technologies, learning and personal behaviors affect access, quality ,cost of health care and well-being of individuals, institutions and populations across the life span.[2-4] These research domains provide a base for the best practices in professional and post-professional education, professional development and practice delivery.

Mandates and Areas Needed for Continued Growth

The vision of the APTA is to transform society by optimizing movement to improve the human experience.[5] As such, the mandate of the profession is to enable society to optimize the health, well-being, quality of life, and advancement of excellence in health care through scientific research and the integration of evidence into the professional education and practice of all physical therapists. Researchers in physical therapy bring a patient centered perspective to studying individuals, families, communities and populations.

To address current and future research efforts in rehabilitation research, physical therapy researchers must be forward thinking. To meet these demands, the areas of need include, but are not limited to the following:

- Growth of collaborative, interprofessional, and interdisciplinary research[6]
- Expansion of available funding
- Integration of increased academic research faculty in professional doctoral programs
- Increased number of postprofessional academic doctoral education programs to prepare well qualified researchers
- Expansion of mentorship resources in all settings
- Increased engagement of physical therapy leaders to advance the needs for research in the profession
- Focus on mechanisms and basic science foundations of physical therapy interventions
- Expansion of strategies for clinical implementation of research discoveries
- Development of big data sets and repositories that would permit deeper understanding of clinical outcomes, policy, and educational outcomes
- Assessment of technology to identify its role in achieving optimal functional outcomes across a wide spectrum of health, disease, practice environments, and education
- Advancement of teaching and learning across the physical therapy education continuum to develop a diverse, 21st century workforce

Scope of Research

Independent and collaborative scientific inquiry by physical therapy researchers must be based on fundamental, basic science, and applied sciences including educational, implementation, health services and translational investigations. Research queries must be comprehensive in nature and include exploratory, descriptive, epidemiological, ethnographic, educational, administrative, implementation, explanatory, analytical, translational and evaluative questioning. To accumulate high levels of evidence, investigations need to incorporate systematic, well-controlled designs appropriate to specific aims and hypotheses. The methodologies for these investigations could range from descriptive (survey, case studies), descriptive-quantitative (correlational/regression analyses, predictive), quasi-experimental (integrating controlled nonparametric designs based on probability analysis), implementation science (teaching and learning, evidence based practice, use of technology, evaluation of innovative models of health care delivery and education), experimental (basic science, clinical, and translational studies with random assignment), to systematic reviews, meta-analyses, and clinical practice guidelines. Details on study methodology and results should be deposited in protected data banks to permit adequately powered studies including heterogeneous and homogeneous cohorts as well as cross-sectional samples of participants with objective measurements of outcomes to clearly define basic mechanisms, preventive strategies and effectiveness of interventions. Clinical trials should follow best practice in design and operations, as exemplified in recent National Center for Medical Rehabilitation Research documents.[7] Other types of high-level evidence are best found using mixed methods or qualitative investigational approaches including, but not limited to, grounded theory, ethnography, phenomenology, case study and narrative research.

Training the Next Generation of Physical Therapy Researchers

The promotion of research in physical therapy is critical for the advancement of the profession. It is researchers with formal training in both clinical practice and research domains such as rehabilitation research, education, and health services research who are uniquely qualified to ask and answer the important clinical questions which can drive our practice forward.[8] To fulfill this need, we must address the critical shortage of physical therapy researchers. One responsibility of APTA, the American Council of Academic Physical Therapy, and the Academy of Physical Therapy Education (both components of APTA), and the Foundation for Physical Therapy Research, should be to promote and enable academic doctoral training of basic, clinician, education, implementation and health services scientists. Thus, knowledge of active research programs and academic doctoral training opportunities across a range of research paradigms should be promoted. APTA advocacy is critical to the ongoing development of research resources for faculty.

Ethical Integrity, Rigor, Transparency, and Dissemination

Scientific integrity is a vital aspect of creating an evidence base for the physical therapy profession. "Without scientific integrity, there can be no evidence base."[8] As defined by the National Institutes of Health, scientific research integrity encompasses using "honest and verifiable methods" in designing and conducting research, reporting results with attention to guidelines and regulations, and following professional codes such as the scientific shared values of honesty, accuracy, efficiency, and objectivity.[9] Physical therapy research is guided by this commitment to ethical integrity, rigor, and transparency.[10] Physical therapist researchers must adhere to scientific and research integrity by ensuring protection of subjects, addressing conflicts of interest, maintaining appropriate boundaries between research and practice, and taking action if misconduct occurs. Ethical principles on the inclusion of human subjects must be adhered to as outlined in the Declaration of Helsinki[11]; the Belmont Report[12]; and the general principles outlined in the United States' Department of Health and Human Services policy regarding protection of human subjects, also known as the "Common Rule".[13]

Dissemination of new science, knowledge translation of research, and clinical implementation are critical to the future of physical therapy education and practice. Efforts should target physical therapists via physical therapy sources and through those of other health professionals and scientists in related topic areas. These sources include but are not limited to professional conferences, publications in scientific journals, professional magazines, webpages, and social media. Research findings should be published in reputable peer-reviewed journals with the highest impact possible to increase visibility. Predatory journals that bypass the peer-review process must be avoided.[14]

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