

Physiotherapy/Physical Therapy Journals: Earthing or Unearthing of Scientific Evidence

Nisha Rani Jamwal*, Senthil P. Kumar**

Abstract

The aim of this review paper was to highlight the role played by physiotherapy/ physical therapy (PT) journals through a preliminary search of PubMed to summarize the studies on analysis of reporting among PT journals. There were two studies on trial registration policies of journals, and seven studies performed content analysis of published articles: two for study design (randomized controlled trials, controlled clinical trials), three for types of published articles, one for core literature, one for gerontology and one for bibliometrics. There is a dearth need to produce more such reports of PT journals and their performance trend along disease-specific, treatment-specific, outcome-specific, population-specific and evidence-specific constructs in the future.

Keywords: Evidence-Informed Physical Therapy; Scientific Contribution; Publishing Policies; Critical Appraisal.

Introduction

Physiotherapy/Physical therapy (PT) is well recognized as an independent clinical profession with growing professional autonomy [1] that had paved its way to professionalism [2] and professionalization [3] in all fields of medicine, for evaluation and management of all health and disease [4] conditions for people of all ages [5]. PT journals play a comprehensive role in scientific evolution of research in an era of evidence-informed physical therapy [5]. The aim of this review paper was to highlight the role played by physiotherapy/ physical therapy (PT) journals through a preliminary search of PubMed to summarize the studies on analysis of reporting among PT journals.

Editorial Policies-Trial Registration

Costa et al [6] published the recommendations from the International Society of Physiotherapy Journal Editors (ICMJE) for clinical trial registration in physiotherapy journals with prospective trial registration being advantageous for avoiding unnecessary trial duplication and to facilitate public dissemination by reducing selective reporting and publication bias.

Babu et al [7] reviewed the 13 MEDLINE-indexed English-language physical therapy journals (Journal of Geriatric Physical Therapy, Journal of Hand Therapy, Journal of Neurologic Physical Therapy, Journal of Orthopaedic and Sports Physical Therapy, Journal of Physiotherapy [formerly Australian Journal of Physiotherapy], Journal of Science and Medicine in Sport, Manual Therapy, Physical Therapy, Physical Therapy in Sport, Physiotherapy, Physiotherapy Research International, Physiotherapy Theory and Practice, and Revista Brasileira de Fisioterapia) for their editorial policies regarding trial registration. Of the 13 journals, 8 recommended trial registration, and 6 emphasized prospective trial registration. 9% of the articles were clinical trials and 29% reported trial registration details, with a positive trend in reporting of trial registration observed from 2008 to 2012.

Author Affiliation: *Freelancer and consultant Physiotherapist, Udhampur, Jammu & Kashmir, India.
**Professor, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation (MMIPR), Maharishi Markandeshwar University (MMU), Mullana (Ambala), Haryana, India.

Reprint Request: Senthil P. Kumar, Professor and Principal, Maharishi Markandeshwar Institute of Physiotherapy and Rehabilitation (MMIPR), Maharishi Markandeshwar University (MMU), Mullana-Ambala-133207, Haryana, India.

E-mail: senthilparamasivamkumar@gmail.com

Content Analysis- Randomized Controlled Trials

Costa et al [8] reviewed to identify five core journals in physical therapy (Archives of Physical Medicine and Rehabilitation, Clinical Rehabilitation, Spine, British Medical Journal (BMJ), and Chest) by identifying those that publish at least 80 randomized controlled trials of physical therapy interventions, provide the highest-quality reports of randomized controlled trials, and have the highest journal impact factors. Their study had mixed findings that suggested that high-quality trials are not necessarily published in journals with high impact factors because there were no significant relationships among the rankings on the basis of trial quality, number of trials, or journal impact factor.

Content Analysis- Controlled Clinical Trials

Turrillaset al [9] reviewed 10 Spanish physiotherapy journals for describing 78 controlled clinical trials (CCT) into as follows; "Many of them were multicentric, and Traumatology and orthopaedics was the most studied field followed by neurology. The most reported health problems were back pain, fibromyalgia, arthrosis and stroke, and the outcomes reported included pain control, functional mobility and quality of life."

Content Analysis: Types of Published Articles

Miller et al [10] evaluated 179 articles in 6 consecutive issues of the Australian Journal of Physiotherapy (AJP), Physical Therapy (PTJ), Physiotherapy (P), and Physiotherapy Canada (PC) between 2000 and June 2001 to identify the type and purpose of each article and assessed the rigor of treatment and review articles. Majority of articles were original studies, on human healthcare, and on indirectly related topics on measurement properties or on asymptomatic subjects. PTJ had the highest pass rate followed by AJP, P and PC.

Paciet al [11] evaluated 1627 articles in nine physiotherapy journals to quantify the types of research and review articles and found 205 (12.60%) were randomized controlled trial (RCT). Observational studies were most common as validation studies and meta-analyses were least. High heterogeneity was found in terms of distribution over years and journals had an improvement of the number of RCTs among years.

Saragiotto et al [12] evaluated the 7-year bibliometric data, research design, research type (human or animal), and clinical area for 1458 articles

published in four Brazilian physical therapy journals (Revista Brasileira de Fisioterapia, Revista Fisioterapiaem Movimento, Revista Fisioterapia e Pesquisa, and Revista Acta Fisiatrica). Level-2 evidence was most common, followed by levels 3 and 1. Commonly, cross-sectional studies (38%), single-case or case-series studies, and narrative reviews were found, and mostly human studies on musculoskeletal, neurologic, and cardiothoracic conditions were found.

Content Analysis- Core Literature

Fell et al [13] analysed four databases to identify core journals in the literature of physical therapy, references cited in that literature, and the highest coverage rate of core journals. Their study findings were as follows; "journal articles were the most frequently cited type of literature, with sixteen journals supplying one-third of the cited journal references. Physical Therapy was the most commonly cited title. There were more cited articles published from 2000 to 2007 than in any previous full decade. Of the databases analyzed, CINAHL provided the highest coverage rate for Zone 1 2007 publications."

Content Analysis- Gerontology

Jones and Minichiello [14] analysed 144 articles in the field of gerontology/geriatrics published between 1980-88 in leading physiotherapy journals in America, Australia, Canada, New Zealand and the United Kingdom for source of publication and authors, research design and possible professional practice implications. The study found under-representation of gerontology in physiotherapy journals with a publishing trend towards data-based articles; with less interdisciplinary articles and limited inter-institutional collaboration.

Content Analysis- Bibliometrics

Teixeira et al [15] evaluated the frequency of citations of 13,009 references in 456 locally published papers in references of three Brazilian physical therapy journals (Fisioterapiaem Movimento, Fisioterapia e Pesquisa and Revista Brasileira de Fisioterapia). Nearly 22% of cited works were local articles and 7.89% articles did not cite national articles and 13.25% articles cited more national articles than international articles.

Discussion and Conclusion

There were two studies on trial registration policies

of journals, and seven studies performed content analysis of published articles: two for study design (randomized controlled trials, controlled clinical trials), three for types of published articles, one for core literature, one for gerontology and one for bibliometrics.

Previously published reviews on disease-specific (cancer pain [16], cancer-related fatigue [17] HIV/AIDS [18]), treatment-specific (death/bereavement care [19]), population-specific (pediatric [20]), outcome-specific (quality of life [21], attitudes [22], knowledge/awareness [23]) and evidence-specific (validation studies [24], randomized controlled trials [25], systematic reviews/meta-analyses [26]) constructs were on palliative care journals. Earthing of evidence implied the strong scientific foundation available for informed decision-making (provided by systematic reviews and meta-analysis) whereas unearthing implied the development of innovative research (through preliminary, laboratory and pilot studies). Both earthing and unearthing of scientific evidence is an essential recipe for evidence-informed PT [27] as was recommended in a similar review by Kumar et al which found three studies on PT journals [28].

In an era of exponential growth of volumes of evidence for PT [29], there is a dearth need to produce more such reports of PT journals and their performance trend along disease-specific, treatment-specific, outcome-specific, population-specific and evidence-specific constructs in the future through rigorous content analysis methodologies.

Acknowledgments: None

Conflicts of Interest

None identified and/or declared.

References

1. Kumar SP. (R)Evolution of professional autonomy in physical therapy practice- a century-long walk through Pubmed from 1910-2010. *J PhysTher.* 2010; 2: 1-10.
2. Kumar SP, Sisodia V, Jacob E. Levels of Professionalism among Physical Therapists in India- A National Cross-Sectional Survey. *J Sports Med Doping Stud.* 2013; 3: 123.
3. Kumar SP. Physical Therapy- A Review on Realization of the Need vs. Need for Realization. *Physiotimes.* 2011; 2(6): 12-5.
4. Kumar SP. Physical therapy: past, present and future- a paradigm shift. *J PhysTher.* 2010; 1(2): 58-67.
5. Kumar SP, Jim A. Physical therapy in palliative care: from symptom control to quality of life- a critical review. *Indian J Palliat Care.* 2010; 16(3): 138-46.
6. Costa LO, Lin CW, Grossi DB, Mancini MC, Swisher AK, Cook CE, Vaughn DW, Elkins MR, Sheikh U, Moore A, Jull GA, Craik RL, Maher CG, Guirro RR, Marques AP, Harms M, Brooks D, Simoneau GG, Strupstad JH. Clinical trial registration in physiotherapy journals: recommendations from the International Society of Physiotherapy Journal Editors. *J Orthop Sports PhysTher.* 2012; 42(12): 978-81.
7. Babu AS, Veluswamy SK, Rao PT, Maiya AG. Clinical trial registration in physical therapy journals: a cross-sectional study. *PhysTher.* 2014; 94(1): 83-90.
8. Costa LO, Moseley AM, Sherrington C, Maher CG, Herbert RD, Elkins MR. Core journals that publish clinical trials of physical therapy interventions. *PhysTher.* 2010; 90(11): 1631-40.
9. Turriillas M, Sitjà-Rabert M, Pardo H, VilaróCasamitjana J, Fort-Vanmeerhaeghe A, MorralFernández A, Cebrià I Iranzo MÀ, BonfillCosp X. Identification and description of controlled clinical trials published in Physiotherapy journals in Spain. *J EvalClinPract.* 2015 Sep 14; doi: 10.1111/jep.12441.
10. Miller PA, McKibbin KA, Haynes RB. A quantitative analysis of research publications in physical therapy journals. *PhysTher.* 2003; 83(2): 123-31.
11. Paci M, Cigna C, Baccini M, Rinaldi LA. Types of article published in physiotherapy journals: a quantitative analysis. *PhysiotherRes Int.* 2009; 14(4): 203-12.
12. Saragiotto BT, Costa LC, Oliveira RF, Lopes AD, Moseley AM, Costa LO. Description of research design of articles published in four Brazilian physical therapy journals. *Braz J PhysTher.* 2014; 18(1): 56-62.
13. Fell DW, Burnham JF, Buchanan MJ, Horchen HA, Scherr JA. Mapping the core journals of the physical therapy literature. *J Med Libr Assoc.* 2011; 99(3): 202-7.
14. Jones D, Minichiello V. A survey of gerontology articles in physiotherapy journals. *Aust J Physiother.* 1991; 37(3): 155-61.
15. Teixeira RK, Yamaki VN, Botelho NM, Teixeira RC. Citations of Brazilian physical therapy journals in national publications. *Braz J PhysTher.* 2014; 18(1): 88-92.
16. Kumar SP. Reporting characteristics of cancer pain: a systematic review and quantitative analysis of research publications in palliative care journals. *Indian J Palliat Care.* 2011; 17(1): 57-66.
17. Kumar SP, Prasad K. Reporting of 'cancer-related fatigue': a systematic review and quantitative

- analysis of research publications in palliative care journals. *Ibnosina Journal of Medicine and Biomedical Sciences*. 2013; 5(1): 22-30.
18. Kumar SP, Sisodia V, Ramapuram J. Reporting of HIV/AIDS: A systematic review and quantitative analysis of research publications in palliative care journals. *Int J Health Rehabil Sci*. 2013; 2(1): 56-65.
 19. Kumar SP, Sisodia V. Reporting of 'death and bereavement care': a systematic review and quantitative analysis of research publications in palliative care journals. *International Journal of Health and Allied Sciences*. 2013; 2(3): 176-84.
 20. Kumar SP. Reporting of pediatric palliative care: a systematic review and quantitative analysis of research publications in palliative care journals. *Indian J Palliat Care* 2011; 17(3): 202-9.
 21. Kumar SP. Reporting of quality of life: a systematic review and quantitative analysis of research publications in palliative care journals. *Indian J Palliat Care*. 2012; 18(1): 59-67.
 22. Kumar SP, Sisodia V. Reporting of 'attitudes': a systematic review and quantitative analysis of research publications in palliative care journals. *Asian J Med Res*. 2012; 1(4): 152-8.
 23. Jamwal NR, Kumar SP. Reporting of Knowledge and Awareness- A Systematic Review and Quantitative Analysis of Research Publications in Palliative Care Journals. *Indian J Med Health Sci* 2016; 3(1): 13-22.
 24. Kumar SP, Sisodia V. Reporting of 'validation studies': a systematic review and quantitative analysis of research publications in palliative care journals. *Saudi Journal for Health Sciences*. 2013; 2(3): 161-8.
 25. Kumar SP, Sisodia V. Reporting of randomized clinical trials- a systematic review of qualitative and quantitative analysis of research publications in palliative care journals. *Saudi J Health Sci*. 2013; 2(2): 93-102.
 26. Kumar SP. Reporting of systematic reviews and meta-analyses: a bibliometric analysis of research publications in palliative care journals. *International Journal of Biomedical and Advanced Research*. 2012; 3(6): 502-10.
 27. Kumar SP. Establishing evidence from practice: Can status of current practice inform future decision-making? Use and misuse of practice-based evidence in Physical therapy. *J PhysTher*. 2012; 4(2): 45-9.
 28. Kumar SP, Kumar VK, Vaishali K. Physiotherapy/Physical Therapy Journals: Struggling to exist or Getting fit to Survive? *PhysiotherOccupTher J*. 2013; 6(2): 97-8.
 29. Kumar SP, Sisodia V, Kumar A. Evidence for Physiotherapy/Physical Therapy: a 40-year Trend Analysis and Explorative Synthesis of Articles. *Saudi Journal for Health Sciences*. 2013; 2(1): 22-30.
-