South asian contributions to the international rehabilitation literature: an online literature survey of 10 years

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SOUTH ASIAN CONTRIBUTIONS TO THE INTERNATIONAL REHABILITATION LITERATURE: AN ONLINE LITERATURE SURVEY OF 10 YEARS

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ABSTRACT

INTRODUCTION

Physical medicine and rehabilitation (PM & R) deals with management, rehabilitation and community reintegration persons with disabilities. It is an emerging medical specialty in the South-Asian region (Pakistan, India, Bangladesh, Nepal, Sri Lanka, Afghanistan, Bhutan and Maldives). The region comprises 24% of the world population with a huge burden of disability. The contributions of South Asian authors to the international rehabilitation medicine literature are unknown. The aim of this study was to document the contributions of south Asian authors in the international rehabilitation literature in the last decade.

METHODS

Five leading international journals of PM & R were selected for the survey including American Journal of PM&R, Archives of PM&R, PM&R and Journal of Rehabilitation Medicine, Journal of Neurehabilitation and Neural Repair

The online archives of these journals (Jan 2005- Dec 2015) were reviewed. Total number of manuscripts published in a single issue was noted. Author’s affiliations were checked and manuscripts with at least one south Asian author were recorded. The article type, number of authors and author’s country were noted. Similar data was also obtained for Turkey and Iran.

RESULTS

The total number of manuscripts published in these five major PM&R journals in the last decade is 8341. South Asian authors published only 18 manuscripts. Thirteen were from India and five articles were from Pakistan.

There was no contribution from any other South Asian country. In case of Pakistan, the same person was the lead and corresponding authors in all manuscripts. Fifteen articles had all South Asian authors while three articles had a foreign co-author too. The manuscripts were mostly related to Neuro-rehabilitation, Spinal cord injury & Pediatric followed by musculoskeletal, orthopedic and disaster rehabilitation. Most of the manuscripts were original research articles.

CONCLUSIONS

The contribution of South Asian authors to the leading international rehabilitation journals in the last one decade is less than 1% although the burden of disability in this area is huge. There is a need to conduct more research on different aspects of disability and PM&R interventions and collaborate with colleagues abroad to improve the publication rate from this region of the world.

Keywords

Rehabilitation medicine, South Asia, Research; Physiatry; Pakistan

INTRODUCTION

Physical medicine and rehabilitation (PM&R) also referred to as physiatry or rehabilitation medicine is a branch of medicine concerned with “evaluation and treatment of, and coordination of care for, persons with musculoskeletal injuries, pain syndromes, and/or other physical or cognitive impairments or disabilities”.¹ The primary focus is on maximal restoration of physical and psychological function, and on alleviation of pain. The South-Asian region consists of Pakistan, India, Bangladesh, Nepal and Sri Lanka. This is one of the most densely populated areas of the world with an...
were from India and five articles were from Pakistan. The total number of manuscripts published in these five countries, 13 were from India and five were contributed from Pakistan. (Table 1)

Table 1 Details of the contributions of South Asian authors to the International Rehabilitation literature

Table

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Journal</th>
<th>Year of Publication</th>
<th>Type of Publication</th>
<th>Country of Corresponding Author</th>
<th>Number of South Asian Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Compliance with Walking Aid Use in Meeting the challenges of spinal cord injury &amp; Pediatric followed by musculoskeletal, orthopedic rehabilitation</td>
<td>Archives of Physical Medicine and Rehabilitation</td>
<td>2012</td>
<td>Original Manuscript</td>
<td>India</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Responsiveness of Edinburgh Visual Gait Score to Orthopedic Surgical Intervention Unusual Site and Etiology</td>
<td>Archives of Physical Medicine and Rehabilitation</td>
<td>2012</td>
<td>Special Communications</td>
<td>India</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>7. Health-related problems and effect of postoperative management of patients with spondylotic myelopathy</td>
<td>Archives of Physical Medicine and Rehabilitation</td>
<td>2012</td>
<td>Case Report Orthopedic Surgery</td>
<td>India</td>
<td>1</td>
</tr>
<tr>
<td>4.</td>
<td>10. Physical Medicine and Rehabilitation (EJPMR) 5, Journal of Physical medicine and Rehabilitation</td>
<td>Archives of Physical Medicine and Rehabilitation</td>
<td>2012</td>
<td>Original Manuscript</td>
<td>India</td>
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<td>5.</td>
<td>16. South Asia. Thirteen were from India and five were contributed from Pakistan. (Table 1)</td>
<td>Archives of Physical Medicine and Rehabilitation</td>
<td>2012</td>
<td>Original Manuscript</td>
<td>India</td>
<td>1</td>
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</tbody>
</table>

There was no contribution from any other South Asian country. In case of Pakistan, the same physiatrist was the lead author/ corresponding author in all manuscripts. Fifteen articles had all South Asian authors while three articles had a foreign co-author. The manuscripts were mostly related to spinal cord injury, neuro-rehabilitation and pediatric rehabilitation followed by musculoskeletal, orthopedic rehabilitation and disaster rehabilitation. Eight manuscripts were original research articles. Rest were a mix of review articles, special communications and case reports. (Table 2)

RESULTS

The total number of manuscripts published in these five leading PM&R journals from Jan 2005- Dec 2015 was estimated 1.709 billion people living here. It comprises 24% of the world population. The disability burden in this region is huge due to the underdeveloped health care infrastructure, rapid urbanization, increase in number of traffic accidents and lack of public awareness. PM&R is an emerging field in India, Pakistan and Bangladesh, while it does not exist in Sri-lanka, Nepal, and Afghanistan. The contributions of South Asian authors and physiatrists to the international rehabilitation medicine literature are unknown. The current study aimed to review and document the contributions by the South Asian authors in the leading international rehab literature in the last decade.

METHODS

This was an online literatures search. Leading five international journals in the field of PM&R were selected. They were selected based on their Impact factor, affiliation with a national or international PM&R society, scope and geographical location. Currently all leading journals in PM&R are published from the USA or Europe. Journals selected for the survey were American Journal of Physical medicine and Rehabilitation (AJP&M&R)³, Archives of Physical medicine and Rehabilitation (APMR)⁴, European Journal of Physical Medicine and Rehabilitation (EJPMR)⁵, Journal of Neurorehabilitation and Neural Repair(JNRR)⁶ and Journal of Rehabilitation (JRM).⁷

Only one PM&R journal is published from this region; Indian Journal of Physical Medicine and Rehabilitation. We excluded the journal from the analysis as it is not currently indexed in Medline and does not have any impact factor.

The online archives of these journals of Jan 2005- Dec 2015, was accessed and reviewed from their official websites. The data extracted and documented included types of manuscripts ( original research articles, reviews, special communication, brief reports, case reports, visual vignette and book review were included)...total number of manuscripts published in a single issue, manuscripts with at least one south Asian author, (whether first or co-author); author’s affiliations and topic of the article. Editorials and erratum were excluded. Similar data for Turkey and Iran was also noted for comparison.
Asian authors published only 18 manuscripts. Thirteen major PM&R journals in the last decade published 8341. The total number of manuscripts published in these five journals was accessed and reviewed from their official online archives (Jan 2005-Dec 2015). Researchers and physiatrists from different South Asian countries (Bangladesh, India and Pakistan) who can conduct research related to rehabilitation medicine and publish it in international PM&R journals.

We have observed a similar pattern for publications from South Asian authors in the leading Rehabilitation medicine journals in a ten-year period (2005-2010). We have a low publication rate. Rehabilitation medicine is advancing at a rapid pace in the High income countries while it is underdeveloped in South Asian countries. These high-ranking Rehabilitation journals would prefer to publish new and interesting advances in PM&R instead of repetition of old, techniques and facts already known. There have been an increase in the number of randomized control trials being conducted and published in Rehabilitation Medicine in the last two decades. Unfortunately, high quality rigorously planned RCT in rehabilitation medicine are not being conducted in South Asian countries. Descriptive studies have a lower chance of acceptance as compared to a well-designed RCT. Another limiting factor could be the open access fee structure of some leading PM&R journals. The publishing cost of 60-200 Euros/page is prohibitive for an author working in South Asia as most of them lack any institutional support to cover the cost of publications. Other factor could include the problems being faced by researchers based in low-income countries who do not have English as their first language. Additional factors are availability of a limited number of trained physiatrists in only three countries (Bangladesh, India and Pakistan) who can conduct research related to rehabilitation medicine and publish it in international PM&R journals. Most of the manuscripts published from South Asia during this ten-year period were from India. This is consistent with similar findings, which report that India has the best research output from this region. There is a need for better cooperation and collaboration among researchers and physiatrists from different South Asian countries in order to increase the scientific output. This trend also reveals the high research output of Turkey and Iran in the field of PM&R which is substantially better than the combined output of South Asian countries.

DISCUSSION

The research culture in South Asia is still evolving and has received low priority overall. The number of researchers as well as the research funding combined expenditure on research and development as a percent of gross domestic product (GDP) in the South Asian countries is low as compared to the developed countries. Majumder et al conducted a geographical analysis of biomedical publications from the South Asian countries over 25 years (1985-2009) using the PubMed database. They documented that only 1.1% of the articles indexed in PubMed in this period were published from South Asian countries.

We have observed a similar pattern for publications from South Asian authors in the leading Rehabilitation medicine journals in a ten-year period (2005-2010). There can be many possible explanations for this low rate of publications. Rehabilitation medicine is advancing at a rapid pace in the High income countries while it is underdeveloped in South Asian countries. These high-ranking Rehabilitation journals would prefer to publish new and interesting advances in PM&R instead of repetition of old, techniques and facts already known. There have been an increase in the number of randomized control trials being conducted and published in Rehabilitation Medicine in the last two decades. Unfortunately, high quality rigorously planned RCT in rehabilitation medicine are not being conducted in South Asian countries. Descriptive studies have a lower chance of acceptance as compared to a well-designed RCT. Another limiting factor could be the open access fee structure of some leading PM&R journals. The publishing cost of 60-200 Euros/page is prohibitive for an author working in South Asia as most of them lack any institutional support to cover the cost of publications. Other factor could include the problems being faced by researchers based in low-income countries who do not have English as their first language. Additional factors are availability of a limited number of trained physiatrists in only three countries (Bangladesh, India and Pakistan) who can conduct research related to rehabilitation medicine and publish it in international PM&R journals. Most of the manuscripts published from South Asia during this ten-year period were from India. This is consistent with similar findings, which report that India has the best research output from this region. There is a need for better cooperation and collaboration among researchers and physiatrists from different South Asian countries in order to increase the scientific output. This trend also reveals the high research output of Turkey and Iran in the field of PM&R which is substantially better than the combined output of South Asian countries.

RECOMMENDATIONS

We recommend the following to improve the research output in PM&R and disability from South Asia.

- There is a need to establish PM&R research groups in different South Asian countries, which should collaborate and coordinate between the different countries. These groups, should conduct research on different PM&R topics by contributing data and promoting exchange visits.
- Registries on different disabilities like Stroke, spinal cord injuries, pediatric disabilities and rheumatologic should be established in the South Asian countries. It will facilitate estimating the actual burden of these disabilities and documenting data.
- South Asian physiatrists should coordinate and collaborate with the international PM&R societies.
like International society of PM&R, European Society of PM&R, Asia-Oceanian society of PM&R in order to establish mentoring program between the physiatrists based in South Asia and abroad in order to improve the research output.

- A national body of physiatrists should be created, governed by leading local Physiatrists providing healthcare as well as collaborating with international physiatrists.
- Training courses should be offered to those willing to improve their research skills which will genuinely improve the output.

CONCLUSIONS

The contribution of South Asian authors and physiatrists in the international rehabilitation journals over a period of 10 years is less than 1 % although the burden of disability in this area is huge. There is a need to conduct more research on different aspects of disability and PM&R interventions and collaborate with colleagues abroad to improve the publication rate from this region of the world.

REFERENCES


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Author’s contribution:
Serad Ahmad Mangat; Study concept and design, protocol writing, data collection, data analysis, manuscript writing, manuscript review
Farooq Azam Rathore; Study concept and design, data collection, data analysis, manuscript writing, manuscript review
Shahbaz Ali Nasir; Study concept and design, data collection, data analysis, manuscript writing, manuscript review
Mubasshar Shahid; Study concept and design, data collection, data analysis, manuscript writing, manuscript review
Hassaan Altaf; Study concept and design, data collection, data analysis, manuscript writing, manuscript review