



## CRITICAL APPRAISAL OF MODEL CURRICULUM OF PHYSIOTHERAPY INDIA AGAINST ENTRY TO PRACTICE PHYSIOTHERAPY CURRICULUM 2009 CANADA

### Physiotherapy

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### ABSTRACT

Physiotherapy profession is recognized Globally for its significant role in improving health and wellbeing and is known for having lucrative careers abroad. Canada is one of the destinations preferred by Indian physiotherapy students. Indian students need to undergo credential evaluation as the education has to be substantially equivalent to Canadian educational level in order to register for masters. It is therefore imperative that analysis of the graduate curriculum of Canada and India needs to be undertaken to address whether the content meets the needs of the curriculum. So, the content inclusions of the two curricula were analysed and compared for their matchability and Nonmatchability. On comparison it is observed that the approach availed in the structuring of Canadian Curriculum is integrated teaching Learning approach as against segmented approach in the Indian curriculum. The competencies segregation in the Canadian Curriculum is therefore observed to be effectively linked with specific competencies as against the Indian Curriculum which falls short on the said count.

### KEYWORDS

Curriculum; Physiotherapy; India; Canada

### INTRODUCTION

Globalisation and Internationalisation of education is driving the call to reduce barriers to education and practice, across and between nations and prepare learners to embrace the developing world to actively pursue professional development.

The current trend among Indian learners going to study abroad specially to major global countries like Canada, USA, United Kingdom, Australia and New Zealand has exponentially increased in the last decade<sup>1</sup>. Canada being the top most country probably owing to the easy availability of post study work visas, better chances of permanent residency after study, immigration-friendly government, positive local environment for international students and easy, quick and facilitatory process of issuance of student visas.

Physiotherapy profession is recognized Globally for its significant role in improving health and wellbeing and is one of the professions having lucrative careers abroad and therefore physiotherapy learners going abroad for Masters is growing exponentially.

World Confederation of Physical Therapy, the international voice of physiotherapy in its long term "out comes 2020 and beyond" is working on international collaboration in the field of Education and professional development by facilitating implementation of internationally accepted sets of core competencies for entry into the practice of physiotherapy<sup>2</sup>.

The efficiency and effectiveness of any educational program largely depends on the curriculum design that is being followed. Curriculum is in the core of education. It is important to have a relevant, well-structured curriculum that answers all the questions about the future and equips the student with all the necessary skills and knowledge (NAAC)<sup>3</sup>.

Crucial to any curriculum is its content as country specific requirements are to be fulfilled and education has to be substantially equivalent for the entrance exam for registration to the country. Therefore, it is imperative that analysis of the curriculum should address whether the content meets the current and long-term needs of the learners with respect to Global requirements.

Ministry of Health and Family Welfare Government of India Allied Health Section 2017 has designed the Model Curriculum Handbook of Physiotherapy for creation of Indian national guidelines for education and career pathways of allied and healthcare professionals, with a structured curriculum based on skills and competencies. This is done with an aim to reduce the variation in education by having a standardized curriculum and career pathways for physiotherapy profession<sup>4</sup>.

Entry-to-Practice Physiotherapy Curriculum: Content Guidelines for

Canadian University Programs is a Council of Canadian Physiotherapy University Programs publication intended to prepare the entry-to-practice physiotherapist (PT) in Canada to be an autonomous, effective, safe and compassionate professional, who practices collaboratively in a variety of health and social service settings and is responsive to the current and future needs of the Canadian health care system. The Guidelines also reflect current physiotherapy practice and evolving sciences that influence practice while accommodating emerging areas of practice<sup>5</sup>.

As Canada is one of the top most preferred countries by Indian Learners and Physiotherapy students being one of them therefore it becomes imperative to analyse the Indian baccalaureate Physiotherapy syllabus with that of Canada to match the core competencies in the curriculum.

### AIM

Aim of the study was to review and compare Model Physiotherapy Undergraduate Curriculum proposed by Ministry of Health and Family welfare Government of India as against Entry-to-Practice Physiotherapy Curriculum Content Guidelines for Canadian University Programs 2009 Canada to match the core competencies in the curriculum in all its details with reference to curriculum inclusion.

### Procedure

The following steps were followed:

The Model Physiotherapy Undergraduate Curriculum proposed by the Ministry of Health and Family welfare Government of India available online was downloaded from the website, studied and analysed in detail.

Entry-to-Practice Physiotherapy Curriculum Content Guidelines for Canadian University Programs 2009 Canada available online was also downloaded from the website, studied and analysed in detail.

A desk review of these curricula was conducted using a data abstract sheet.

Both the curricula were analysed in terms of segmented inclusion in the Indian curriculum and areas of matchability and nonmatchability of the Canadian curriculum were identified.

The subjects in the Curriculum were grouped into Foundation course, Pre and Para clinical medical subjects, clinical medical subjects, Physiotherapy Basic foundation subjects and clinical physiotherapeutic subjects.

The subjects in the Indian and Canadian curriculum were then assessed for their extent of subject content inclusion with respect to the requirement of the competencies.

The Indian curriculum mentions the hours allotted to each subject along with the topics to be covered while the entry-to-practice physiotherapy Canadian curriculum content is characterized by Dimensions and Domains and Elements that depicts the Key indicator conditions, knowledge, skills and behaviour.

As per the Indian curriculum If the allotted duration is less than 60 hours the subjects were categorised into sketchy, elaborative if the hours allotted are between 60 and 100 and exhaustive if allotted hours are more than 100 and the same was compared with the Canadian curriculum as per the contents included and categorised accordingly.

The subject which is present in Indian Model Physiotherapy undergraduate curriculum but not present in Entry-to-Practice Physiotherapy Curriculum Canada although contents are included in other subjects was categorised as Inclusive.

## RESULTS

**Table 1 Foundation Course**

| Subject                                                                              | Model Physiotherapy Undergraduate Curriculum India | Entry to practice Physiotherapy Curriculum Canada |
|--------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
| 1)Introduction to health care delivery system                                        | Sketchy                                            | Exhaustive                                        |
| 2)Basic computers and information science, English, Communication and soft skills    | Sketchy                                            | Exhaustive                                        |
| 3)Medical terminology and record keeping                                             | Sketchy                                            | Exhaustive                                        |
| 4)Quality Assurance and patient safety                                               | Sketchy                                            | Exhaustive                                        |
| 5)Medical Physiotherapy Law and Ethics Professionalism and Values                    | Sketchy                                            | Exhaustive                                        |
| 6)Principles of Management                                                           | Sketchy                                            | Exhaustive                                        |
| 7)Research methodology, Clinical reasoning and Evidence based Physiotherapy Practice | Sketchy                                            | Exhaustive                                        |

**Table 2 Preclinical And Para Clinical Medical Subjects**

| Subject        | Model Physiotherapy Undergraduate Curriculum India | Entry to practice Physiotherapy Curriculum Canada |
|----------------|----------------------------------------------------|---------------------------------------------------|
| 1) Anatomy     | Exhaustive                                         | Exhaustive                                        |
| 2)Physiology   | Exhaustive                                         | Exhaustive                                        |
| 3)Biochemistry | Sketchy                                            | Inclusive                                         |
| 4)Sociology    | Sketchy                                            | Sketchy                                           |
| 5)Psychology   | Sketchy                                            | Sketchy                                           |
| 6)Pathology    | Sketchy                                            | Sketchy                                           |
| 7)Microbiology | Sketchy                                            | Inclusive                                         |
| 8)Pharmacology | Sketchy                                            | Sketchy                                           |

**Table 3 Physiotherapy Basic Foundation Subjects**

| Subject                                                 | Model Physiotherapy Undergraduate Curriculum India | Entry to practice Physiotherapy Curriculum Canada |
|---------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
| 1)Basic principles of Biomechanics and Exercise Therapy | Exhaustive                                         | Exhaustive                                        |
| 2)Electro therapy                                       | Exhaustive                                         | Inclusive but extensive                           |

**Table 4 Medical Clinical Subjects**

| Subject                                           | Model Physiotherapy Undergraduate Curriculum India | Entry to practice Physiotherapy Curriculum Canada |
|---------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
| 1)Clinical Orthopedics and Traumatology           | Extensive                                          | Inclusive                                         |
| 2)General Surgery                                 | Extensive                                          | Inclusive                                         |
| 3)Clinical Cardiovascular and Pulmonary           | Extensive                                          | Inclusive                                         |
| 4)General Medicine and Paediatrics and Psychiatry | Extensive                                          | Inclusive                                         |
| 5)Community Medicine                              | Extensive                                          | Inclusive                                         |
| 6) Clinical Neurology and Neuro surgery           | Extensive                                          | Inclusive                                         |

**Table 5 Physiotherapy Clinical Subjects**

| Subject                                                         | Model Physiotherapy Undergraduate Curriculum India | Entry to practice Physiotherapy Curriculum Canada |
|-----------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------|
| 1)Physiotherapy in Orthopedics and Sports                       | Exhaustive                                         | Exhaustive                                        |
| 2)Physiotherapy in General medicine and General Surgery         | Exhaustive                                         | Inclusive                                         |
| 3)Physiotherapy in Neurology and Psychosomatic disorder         | Exhaustive                                         | Exhaustive                                        |
| 4)Physiotherapy in Cardiovascular, Pulmonary and intensive care | Exhaustive                                         | Exhaustive                                        |
| 5)Community Physiotherapy                                       | Exhaustive                                         | Inclusive and Exhaustive                          |

## OBSERVATIONS AND DISCUSSION

In the basic foundation course, the Indian syllabus aims towards orientation of the student to national health systems and the basics of public health, while the Canadian curriculum is exhaustive in its Health care environment domain addressing the global health system including policy, legislation, funding, allocation and service delivery models which are fundamental to practicing effectively in the Canadian setting, whether in the private or public sector.

In the model Indian curriculum the knowledge about computers and information science is at a very basic level along with sketchy English, Communication and soft skills while the Interprofessional practice domain of Canadian curriculum explores and elaborates a range of professional relationships that a physiotherapist has to delegate and emphasises on a range of professional relationships associated with being a team member, including education, delegation, supervision, conflict management, collaboration, consultation and referral practices.

The Model Indian curriculum emphasizes on basic principles of management while the Canadian curriculum emphasizes extensively on Domains of Practice Management, Services Management and Practice Settings in the context of practice dimension and works elaborately on Client Physiotherapist interaction that addresses the service and health system requirement for the newly graduated physiotherapist to have knowledge of business, organisational and management principles.

Elements of Medical terminology, record keeping, Quality Assurance and patient safety is again sketchy in Model Indian curriculum while Health records management and safety risk management along with Professional & Ethical Reasoning and Health Care Models and Frameworks forms the backbone of the Canadian curriculum.

Physiotherapy Law and Ethics are sketchy in the Model Indian curriculum while the professional and ethical content of the Canadian curriculum is very elaborative. It emphasizes on application of professional and ethical reasoning and decision-making strategies, professional communication, reflective practice strategies and personal management issues (stress, work-life balance).

In the preclinical and paraclinical medical subjects Anatomy and Physiology are elaborately covered in both the Curricula.

Sociology and Psychology in both curricula are Sketchy with emphasis on socio cultural aspects of respective countries.

Biochemistry, Pathology, Microbiology and Pharmacology form separate subjects in Indian Model curriculum while the Canadian Curriculum integrates the subjects with the Key PT indicator conditions.

In Physiotherapy Professional Foundation Subjects Biomechanics and Exercise therapy is extensively covered in both the curricula.

Electrotherapy is extensively covered as a separate subject in the Model Indian Curriculum while the Canadian curriculum teaches the modalities under therapeutic conditions so is inclusive and elaborate.

In the Model indian curriculum understanding of Diseases and various medical conditions and their aetiology, pathology, clinical features, and Medical and surgical Management is elaborate and covered as separate subjects while in Canadian syllabus the Key PT indicator conditions are integrated with physiotherapeutic clinical subjects.

The Clinical Physiotherapeutic subjects covered in Model curriculum I.e. Physiotherapy in Orthopaedics and Sports, Physiotherapy in General medicine and General Surgery, Physiotherapy in Neurology and Psychosomatic disorder, Health Promotion and Fitness, Physiotherapy in Cardiovascular, Pulmonary and intensive care and Community Physiotherapy have exhaustive coverage.

The Canadian Curriculum has only three core Physiotherapy subjects, Cardiorespiratory PT practice, Musculoskeletal PT practice and Neurological PT practice based on International classification of functioning, Disability and Health ICF in which the Knowledge, Skills and Behaviours identified reflect the latest iteration of the World Health Organisation's disablement model.

The Curriculum Inclusions in terms of Integrated approach embedded in the dimension of Physiotherapy professional Interaction of Canadian Curriculum is at a very preliminary level or are missing in the Indian Curriculum. The Inclusion and reflection of the client and individual physiotherapist relation in the domains of professional and ethical practice, Client-PT interaction and Interprofessional practice is elaborate in the Canadian curriculum but is lacking in the Indian curriculum. Although the Client-Physiotherapist Interaction which has the elements or the process of therapeutic interaction as client patient assessment, clinical reasoning and professional judgement, physiotherapy diagnosis and prognosis, Intervention planning, Client-PT communication and documentation, Implementation of the PT intervention, Evaluation of client's response to the intervention, Completion and follow-up regarding the therapeutic interaction is also inclusive in Indian syllabus but is missing in the form of separate domain.

Both the curricula are characterised by a progression from learner of foundational knowledge, clinical sciences and clinical practice to competent practitioner of the physiotherapy profession.

## CONCLUSION

The approach availed in the structuring of Canadian Curriculum is integrated Teaching Learning approach as against segmented approach which is the modality reflected in the Indian curriculum.

The competencies segregation in Canadian Curriculum is therefore observed to be effectively linked with specified competencies as against Indian Curriculum which falls short on the said count.

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