

Course Outcomes-4th B.P.Th

MUSCULOSKELETAL PHYSIOTHERAPY

At the end of the course, the candidate will be able to:

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Cognitive:

- a) Identify, evaluate, analyze & discuss primary and secondary musculo-skeletal dysfunction, based on biomechanical, kinesiological & patho-physiological principles.
- b) Correlate the same with radiological, electrophysiological, biochemical/ haematological investigations as applicable & arrive at the appropriate Physiotherapy diagnosis with skillful evaluation of structure and function with clinical reasoning.
- c) Understand the pharmaco-therapeutics, its interaction with physiotherapeutic measures and modify physiotherapeutic intervention appropriately.
- d) Apply knowledge of psychosocial factors (personal and environmental factors in the context of disability associated with the musculo-skeletal system or multiple body systems) for behavioral and lifestyle modification and use appropriate training and coping strategies.

Psychomotor:

- a) Apply theoretical basis of physiological effects, indications, contraindications; and best available evidence on the effectiveness, efficacy and safe application guidelines for a full range of physiotherapeutic strategies and interventions, including appropriate modes of soft tissue & joint mobilization, electrotherapy, therapeutic exercise, and appropriate ergonomic advise that can be employed to manage problems of the individual's structures, functions, activities and participation, capacity and performance levels associated with the musculoskeletal system, for relief of pain & prevention, restoration and rehabilitation measures for maximum possible functional independence at home, workplace and in community.
- b) Prescribe and train for appropriate orthoses, prostheses and walking aids based on musculoskeletal dysfunction.

Acquire ethical skills by demonstrating safe, respectful and effective performance of physical handling techniques taking into account the patient's clinical condition, the need for privacy, the physiotherapist, the resources available and the environment.

NEUROPHYSIOTHERAPY

OBJECTIVES:

At the end of the course, student will

Cognitive:

- a) Be able to identify and analyze movement dysfunction due to neuromuscular skeletal disorders in terms of biomechanical and biophysical basis, correlate the same with the health condition, routine electrophysiological, radiological and biochemical investigations, and arrive at appropriate physical therapy diagnosis using WHO-ICF with clinical reasoning.
- b) Be able to plan realistic goals based on the knowledge of prognosis of the disease of the nervous system and prescribe appropriate, safe evidence based physiotherapy interventions with clinical reasoning.
- c) Understand infection control principles, best practices and techniques applicable to a range of setting where clients with neurological conditions would receive physiotherapy services.
- d) Know determinacy of health (environmental, nutritional, selfmanagement/ behavioral factors) and chronic disease management principles related to neurological health.

Psychomotor:

- a) Be able to develop psychomotor skills to implement timely and appropriate physiotherapy assessment tools/techniques to ensure a holistic approach to patient evaluation in order to prioritize patient's problems.
- b) Be able to select timely physiotherapeutic interventions to reduce morbidity and physiotherapy management strategies, suitable for the patients' problems and indicator conditions based on the best available evidence.
- c) Implement appropriate neuro-physiotherapeutic approaches, electrotherapeutic modalities, joint and soft tissue mobilizations and ergonomic advice for neuromuscular skeletal systems, contextual factors to enhance performance of activities and participation in society.

Affective:

a) Be able to develop behavioral skills and humanitarian approach while communicating with patients, relatives, society and co-professionals, to promote individual and community health.

CARDIO-VASCULAR & RESPIRATORY PHYSIOTHERAPY

(INCLUDING CRITICAL CARE)

OBJECTIVES:

At the end of the course, the student will be able to:

Cognitive:

a) Identify and analyze cardio-vascular & pulmonary dysfunction in terms of biomechanical, and Bio-physical basis and correlate the same with the Health condition, routine electrophysiological, radiological, and biochemical investigations and arrive at appropriate Physical therapy diagnosis using WHO-ICF tool (Disability, Functioning and contextual factors) with clinical reasoning.

b) Plan, prescribe appropriate, safe physiotherapy interventions with clinical reasoning for and prevention of impairments, activity limitations, participation restrictions and environmental barriers related to cardio-vascular & pulmonary dysfunction in acute care settings, at home , work place, in society & in leisure activities.

Psychomotor:

- a) Utilise skills such as executing exercise tests, PFT, Ankle brachial index, arterial & venous insufficiency tests
- b) Utilise psychomotor skills to implement appropriate bronchial hygiene therapy, therapeutic exercise, electrotherapeutic modalities, CPCR, Intensive (critical) care, joint and soft tissue mobilisations, offering ergonomic & energy conservation advice for patients with cardio-vascular & pulmonary dysfunction.
- c) Utilise the knowledge about contextual factors to enhance capacity and performance of activities and participation in society
- d) Utilise the skill to deliver cardiac, pulmonary & vascular rehabilitation

Affective:

- a) Develop behavioral skills and humanitarian approach while communicating with patients, relatives, society at large and co-professionals
- b) Develop bed side behavior, respect & maintain patients' confidentiality

COMMUNITY PHYSIOTHERAPY

At the end of the course the student shall:

Cognitive:

Be able to describe:

- a) The general concepts about health, disease and physical fitness.
- b) Physiology of aging process and its influence on physical fitness.
- c) National policies for the rehabilitation of disabled role of PT.
- d) The strategies to access prevalence and incidence of various conditions responsible for increasing morbidity in the specific community role of PT in reducing morbidity, expected clinical and functional recovery, reasons for non-compliance in specific community environment & solution for the same.
- e) The evaluation of disability and planning for prevention and rehabilitation.
- f) Rehabilitation in urban and rural set up.
- g) Able to be a part of decision making team regarding the policies for the welfare of special communities & on issues of disability

Psychomotor:

- a) Be able to identify with clinical reasoning the prevailing contextual {e.g. environmental and psycho-social cultural} factors, causing high risk responsible for various dysfunctions and morbidity related to sedentary life style and specific community like women, children, aged as well as industrial workers and describe planning strategies of interventional policies to combat such problems at community level.
- b) Be able to gain the ability to collaborate with other health professionals for effective service delivery & community satisfaction
- c) Utilize the research methodology knowledge for formulation of a research question (synopsis)

Affective:

Be an empathetic health professional, especially for those in the community, who is away from the health institutions and having difficulty in healthcare access

PRINCIPLES OF BIOENGINEERING

(COLLEGE EXAMINATION)

OBJECTIVES:

At the end of the course, the candidate shall

Cognitive:

- a) Acquire knowledge about biomechanical principles of application of variety of aids & appliances used for ambulation, protection & prevention.
- b) Acquire in brief knowledge about various material used for splints/ Orthoses & prostheses and their selection criteria **Psychomotor:** Acquire the skill of fabrication of simple splints made out of Low cost material

RESEARCH METHODOLOGY AND BIOSTATISTICS

(COLLEGE EXAMINATION)

At the end of the study of this subject the student should be able to:

- 1. Enumerate the steps in Physiotherapy research process.
- 2. Describe the importance & use of biostatistics for research work.
- 3. Acquire skills of reviewing literature, formulating a hypothesis, collecting data, writing research proposal etc.