

Awareness of Various Aspects of Physiotherapy among Medical Residents

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Abstract: *Physiotherapy profession has emerged as important medical and rehabilitation complement in health care delivery and vital therapeutic tool but there exists a variation in the referral. Method: A survey based study using self-devised pre validated questionnaire. Results: Musculoskeletal physiotherapy (97.22%) was most known among various fields of physiotherapy followed by sports (93.80%), neuro (86.66%) while least in industrial therapy (66.10%) and community based rehabilitation (64.40%). Only 2% knew about both pre and post-operative physiotherapy. Conclusion: There's need for physiotherapists to educate medical residents about fields of physiotherapy, treatment modalities and evaluative procedures through continuing education programs.*

Keywords: Physiotherapy, fields, medical residents, awareness, referral.

1. Introduction

Physiotherapy is a healthcare profession that assesses, diagnoses, treats and works to prevent diseases and disability by physical means. ¹ It involves providing services to individuals and populations to develop, maintain and restore maximum movement and functional ability throughout the lifespan forming an essential part of the health and community/welfare services delivery systems. They practise independently of other health care/service providers and also within interdisciplinary rehabilitation programmes.² The profession is committed to health, lifestyle and quality of life that incorporates a broad range of physical and physiological therapeutic interventions and aids.³

Physiotherapy has emerged not only as an important medical and rehabilitative complement in health care delivery but also as a health profession with a vital therapeutic tool that employs defined scientifically-based protocols, and is an integral part of the treatment of most patients (American Physical Therapy Association, 1997). It is widely used in health institutions, private practices, schools, sports and work place settings (Hogue, 2005) involving interaction between the physical therapist, patients/clients, other health professionals, families, care givers and communities, using knowledge and skills unique to physical therapists ²

According to Jackson (2004), lack of or poor knowledge about a profession may lead to misconceptions about the profession and inter-professional conflicts. Thus, good awareness of the role of physiotherapy in health care delivery may influence its use (Jackson, 2004).

The practice of physiotherapy as a first contact profession is not common in India. Physiotherapists often mainly depend on referrals from physicians from the different fields of practice of medicine. The practice of „prescribing physiotherapy“ by most physicians has been of great concern to physiotherapists“ worldwide (Balogun, 1998; Struber, 2003).⁴

Physiotherapy as a profession has evolved over the years from general forms of physical therapies to specialized physiotherapy services in healthcare settings. Despite the recognition and advances gained worldwide in physiotherapy, yet there are few researches done in India to evaluate the awareness of physiotherapy among clinical doctors of India. Thus it is important to increase the awareness of the role of a physiotherapist among the medical residents which would be future clinical consultants, so that the work of physical therapy can be enhanced and can be used widely with appropriate knowledge and concern.

2. Aim & Objectives

To find the awareness of various aspects of physiotherapy among medical residents and to enquire about their knowledge on various physical therapy modalities and if they have perceived adequate background to refer patients to physical therapy effectively.

3. Review of Literature

Acharya R S, Khadgi B, Shakya N R et al did a study “**Physiotherapy awareness among clinical doctors in Nepal**”. It was concluded that the clinical doctors had a good awareness about physiotherapy but needed acceleration in terms of referrals and specialized services provided by the physiotherapist

Pamela English Stanton, F Kathy Fox, Karen M Frangos et al on **Assessment of resident physician’s knowledge of physical therapy**. The study concluded a deficit in the knowledge among the residents especially about the treatment modalities used by the physical therapists.

Thusharika D. Dissanayaka, Shayama Banneheka on **Awareness in physiotherapy among high school students**. It was concluded that there was a need for educating the general public in Sri Lanka about Physiotherapy both as a therapeutic modality and as a prospective career pathway.

Odebiyi, D.O, Amazu, A.R, Akindele, M.O., Igwe, Olaogun, M.O.B. did a study **Evaluation of the Mode of Referral of Patients for Physiotherapy by Physicians**. The University of Graduation of the respondents was found to influence the respondents' knowledge and perception of physiotherapy and this invariably affected both their use of physiotherapy and their mode of referral for physiotherapy (whether as a 'prescription' or a 'referral' on a consultation basis).

Apurv Shimpi, Hutoxi Writer, Ashok Shyam, Rachana Dabadghav. **Role of Physiotherapy in India – A Cross-sectional Survey to Study the awareness and perception among referring doctors**. We found that there is a significant awareness about Physiotherapy & the various functions of Physiotherapy including a high number of informed references sent for Physiotherapy, preferably given in writing. Also a significant number of doctors let the physiotherapists decide the choice of treatment for the patients taking care to interact with the physiotherapists

4. Material and Methodology

Research approach: Cross-sectional survey

Study sample: Medical residents

Sample size: 180 subjects

Study setting: medical resident's from D Y Patil Hospital, Navi Mumbai and St George Hospital, Mumbai.

Ethical clearance: The ethical clearance for the study was taken from the institutional ethics committee of D. Y. Patil University, Nerul, Navi Mumbai. Written informed consent was taken from all the study subjects.

Procedure: A self - devised pre validated questionnaire was administered to the study subjects via a face to face method. A pilot study was conducted and accordingly requisite modifications were made to the questionnaire. To avoid any misinterpretation, the questionnaire was kept self-informed and self-administered. Also the questions were closed ended to prevent any statistical errors.

5. Observations and Results

It was observed that 54% of the residents thought that Physiotherapy was a degree course, 44% a professional course while 2% a diploma course. Regarding the duration of the course, 54% were of the opinion that physiotherapy was a course of 4.5 years, 30% 4 years and 12% 3 years. On enquiring about various clinical aspects of Physiotherapy, the following results were found

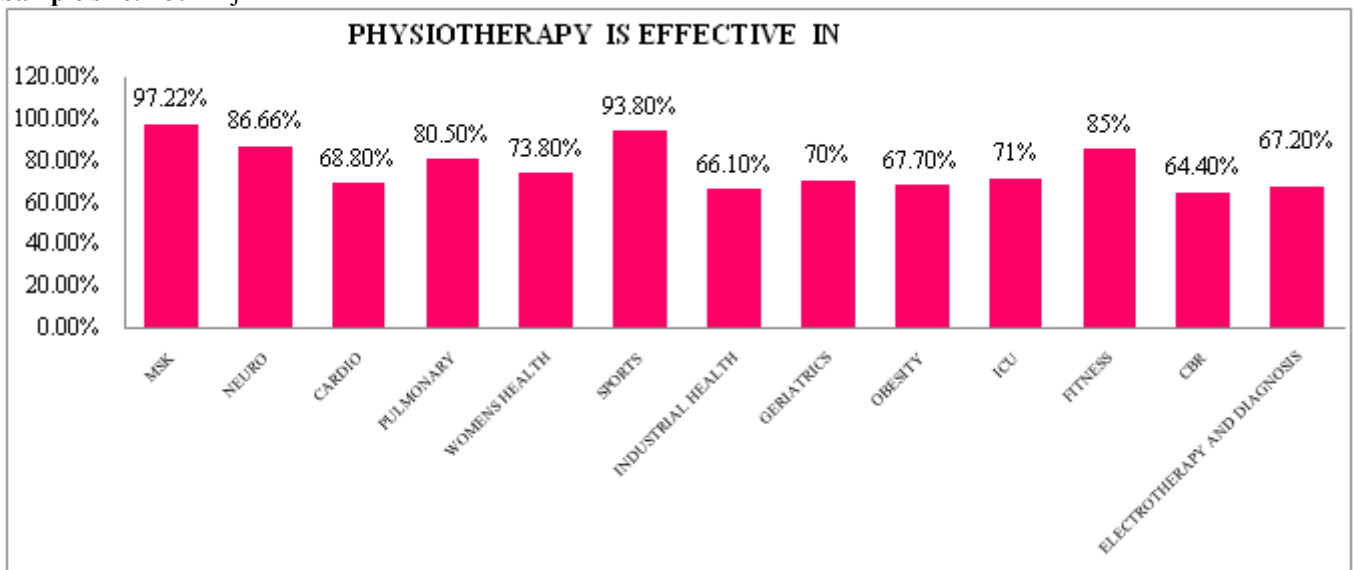


Figure 1: The figure shows that the residents had highest knowledge about musculoskeletal physiotherapy (97.22%) followed by sports (93.80%), neuro (86.66%) and fitness (85%) while least in industrial therapy (66.10%) and community based rehabilitation (64.40%).

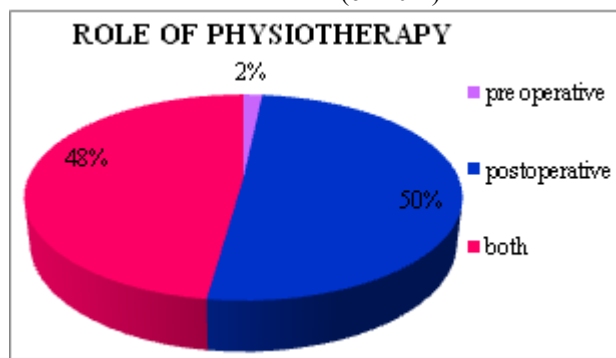


Figure 2: The above graph shows that the medical residents were of opinion that physiotherapy was mostly referred either post operatively 50% or preoperatively 48% while only 2% agreed for both.

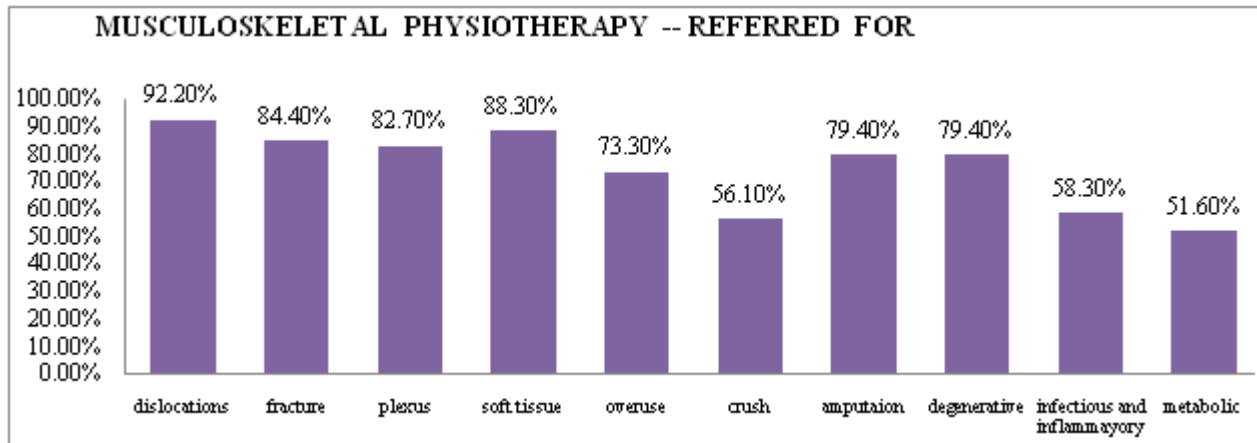


Figure 3: According to residents, Musculoskeletal physiotherapy is highest referred for dislocations (92.20%) and soft tissue (88.30%) and fracture (84.40%) while least for metabolic (51.60%), crush injuries(56.10%) and infectious and inflammatory conditions (58.30%).

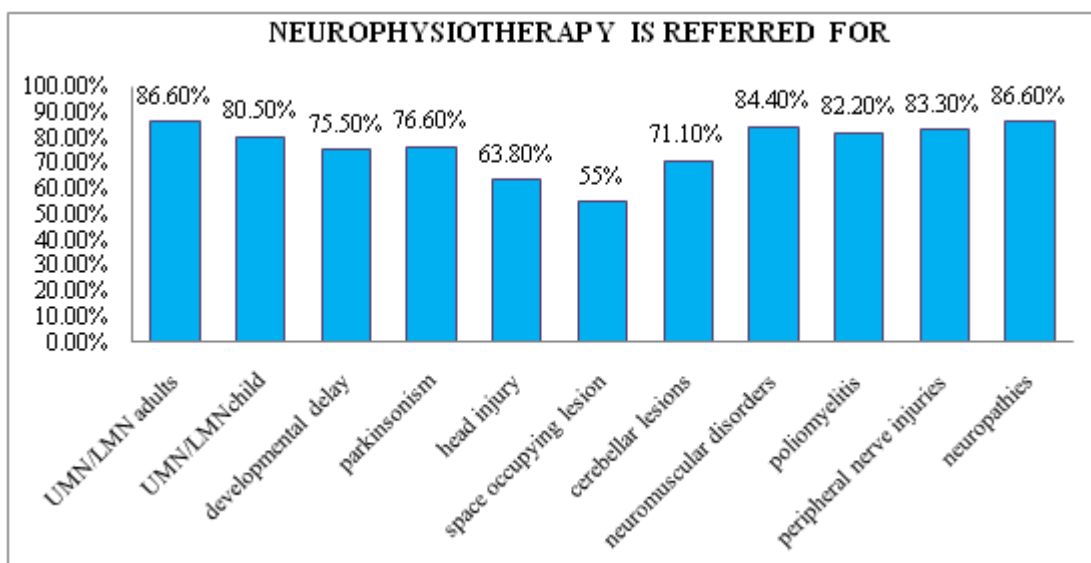


Figure 4: According to the residents, Neuro-physiotherapy is most referred for upper n lower motor neuron disorders in adults (86.60%) and neuropathies (86.60%) and least about space occupying lesions (55%) and head injuries (63.80%).

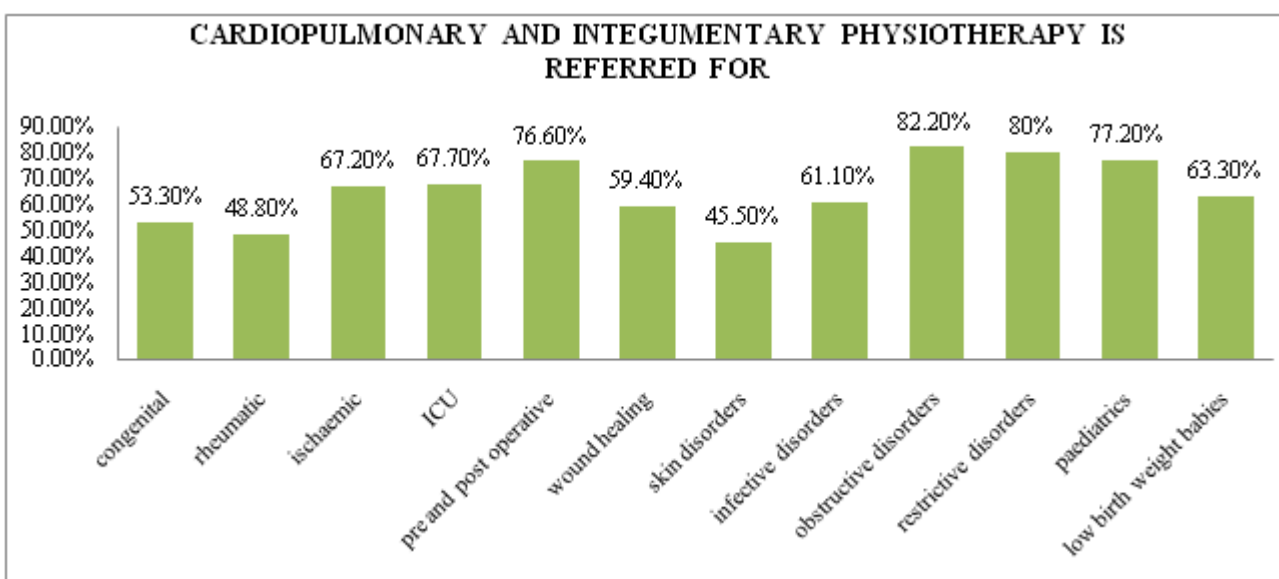


Figure 5: According to residents, Cardiopulmonary physiotherapy is highest referred for obstructive (82.20%) and restrictive pulmonary disorders (80%) and least for wound healing (59.40%) and skin disorders (45.50%).

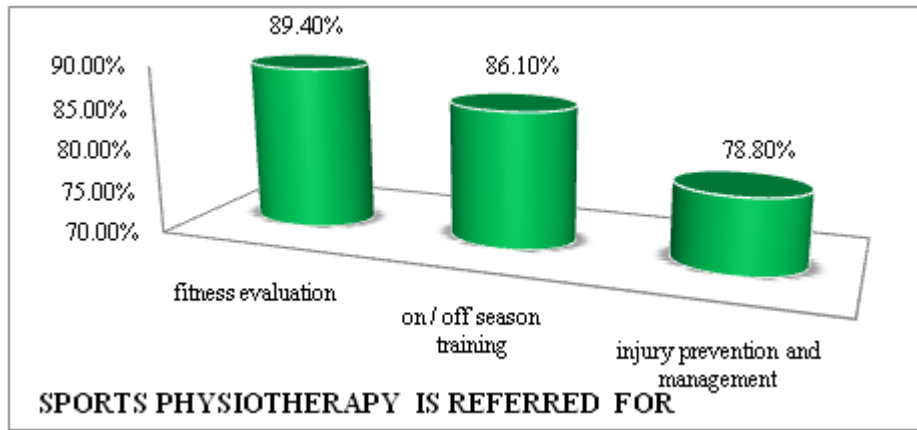


Figure 6: According to residents, Sports physiotherapy is most referred for fitness evaluation (89.40%) and least for injury prevention and management (78.80%).

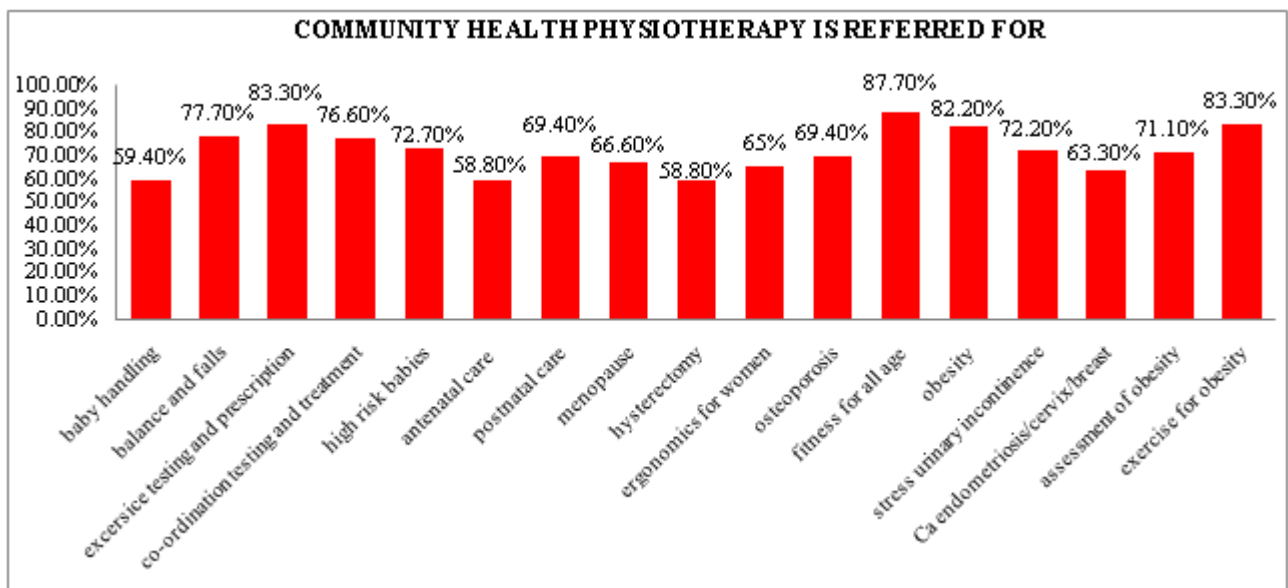


Figure 7: According to residents, Community based physiotherapy is most referred for fitness for all age(87.70%) and exercise testing and prescription, exercise for obesity (83.30%) and least for baby handling(59.40%) and hysterectomy and antenatal care (58.80%).

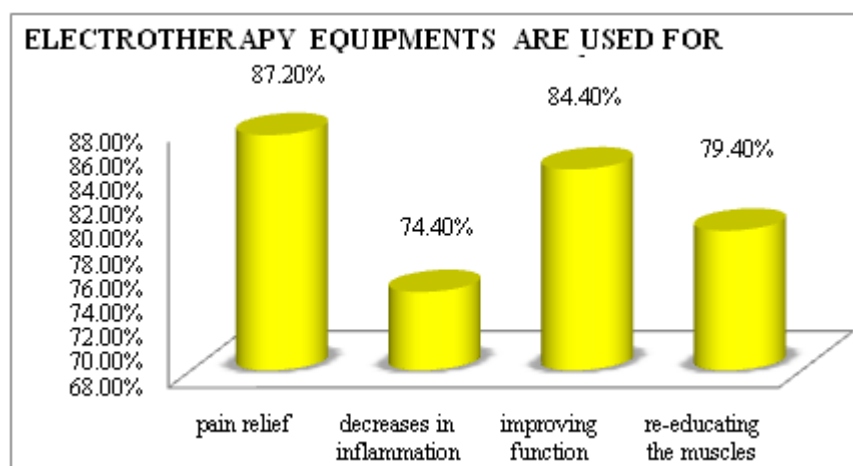


Figure 8: According to residents, Electrotherapy equipment's were most used for Pain relief (87.20%) and least for decreasing inflammation. (74.40%)

Also, it was seen that the medical residents were of the opinion, Industrial health physiotherapy was most referred for exercise prescription as per occupation (76.10%) and least aware regarding job description and analysis (61.10%)

while Electro diagnosis physiotherapy was most referred for sensory and motor evoked potential (75.50%) and electromyography (74.40%) and were least aware for h reflex and f wave (68.30%).

6. Discussion

This study was done to know the awareness among medical residents about various aspects of physiotherapy profession. A total of 180 medical residents participated in the study. Following were the observations:

Duration of Course

Only 54% of the medical residents knew that Physiotherapy is a degree course while 44% knew it as a professional course. 57% residents considered it as a 4.5 years course, 30% considered as 4 years of duration while 12% as 3 years course. This may be due to the lack of awareness about the physiotherapy course which was first a 3 year diploma course and later has evolved as a professional course of 4.5 years, with only around 50% of the total residents knew the correct duration of the course.

Various Fields Awareness as A Whole

The percentage of awareness among various fields of physiotherapy found were maximum for musculoskeletal physiotherapy i.e. 97% , followed by sports physiotherapy 93.8%, 86.6% for neuro-physiotherapy and the least was found for cardiovascular 68.8% ,67.7% for obesity , 66.1% for industrial health .The reason could be the lack of knowledge about the development and diversity of physiotherapy in various fields. Similar observations were made in a survey conducted in Australia, to ascertain the public perception of physical therapy, revealed the same results.⁵

Pre/Post Operative Physiotherapy

The knowledge of medical residents about the role of physiotherapy post/pre surgical procedures was that physiotherapy was 50% beneficial postoperatively, 48% pre operatively and 2% for both. This finding shows a lack of awareness regarding the importance of pre-operative physiotherapy which could be due to an assumption that post-operative chest physiotherapy and mobility is the only the only indication to minimize the effects of de-conditioning post-surgery.

Musculoskeletal Physiotherapy

Regarding the various conditions in which musculoskeletal physiotherapy is referred for, the findings concluded that the awareness of the residents about this field was that physiotherapy is highest referred for dislocations that is 92.2% followed by 88.3% for soft tissues which was then followed by fractures 84.40% and brachial plexus injury 82.70% and the lowest for crush injuries that is 56.1% and 51.6% for metabolic conditions.

These results support the findings of a study that was done in which it was found that the response was highest for musculoskeletal and orthopaedic. A survey conducted in Australia, to ascertain the public perception of physical therapy, revealed the same results.⁵ It has been seen that awareness in musculoskeletal physiotherapy has been very effective in improving the patients with wide range of rehabilitative approaches to restore, maintain and improve movement and activity. This rehabilitation may be provided in a range of different settings including hydrotherapy pools, leisure centre, physiotherapy gym and treatment settings and

in people's own homes.⁶ The probable reason for lesser awareness regarding referral for crush injuries and metabolic conditions may be due to a perception that a physiotherapist mostly deals with cases pertaining to conditions of larger joints of either traumatic origin or degenerative cause. It was also seen that physiotherapy brings a holistic approach in patient's assessment and attaining their functional goals.⁶

Neuro-Physiotherapy

The findings for the various conditions in which neuro-physiotherapy is referred for, were found highest for upper motor neuron and lower motor neuron conditions in adult and neuropathies 86.6%, followed by peripheral nerve diseases that is 83.3% then followed by neuropathies 86.60% and neuromuscular disorders 84.40% and the lowest was found for head injuries 63.8% and space occupying lesions that is 55%. Physiotherapy has a key role to play in supporting patients with chronic neurological conditions such as stroke, Parkinson's disease, multiple sclerosis, brain injury and spinal cord injury. There will also be an important role in the conditions which are small in number e.g. motor neuron disease (mnd), and other conditions which will be palliative through to end of life care.⁶ The possible reason for the resident's lower awareness of referral for head injuries and space occupying lesions could be as these conditions have a first line reference to a physician or a neuro surgeon while patients with upper motor neuron lesion patients need hospital as well as home care with respect to gait training, bed mobility, transfers and a need for an independent way of living, showing residents knowledge to be inadequate.

Cardio-Pulmonary and Integumentary Physiotherapy

For cardiopulmonary and integumentary physiotherapy, it was found that highest referral was found for obstructive pulmonary conditions 82.2% and restrictive pulmonary conditions 80% followed by paediatrics 77.2% and the least for wound healing 59.4% and skin disorders 45.5%. There are studies that state the importance of physiotherapy in wound healing with the help of various therapies like ozone (o3) which appears providential because first of all eliminates the pathogens and then, by releasing oxygen (o2), activates the proliferation of fibroblasts, hence the building of intercellular matrix with consequent proliferation of keratinoblasts and successive healing.⁸ Also conditions like psoriasis, alopecia , vitiligo, atopic dermatitis, acne are indicated for physiotherapy for ultra-violet therapy.⁹ This shows that there is a lack of knowledge among medical residents regarding the application of physiotherapy in dermatological as well as integumentary conditions.

Sports Physiotherapy

According to the study, Sports physiotherapy was found to be referred highest for fitness evaluation 89.6% followed by on/off training 86.1% and lowest for injury prevention and management 78.8%. The findings show that the residents may have a perception of a physiotherapist treating players for injuries or perform with their fitness evaluation but not a holistic approach which also includes injury prevention and management, thus showing lack of knowledge regarding the extensive role of the sports physiotherapist beyond the treatment of injury to a broader role by also providing assistance with maintenance and recovery.¹⁰

Community Based Physiotherapy

The various conditions in which community based physiotherapy is referred for of which highest results are found for fitness of all age 87.7% followed by high risk babies 72.7% followed by stress urinary incontinence 72.2% and the least in baby handling 59.4% followed by hysterectomy and antenatal care 58.8%. The findings show inadequate knowledge of the residents regarding work of a physiotherapist in women during antenatal period and post hysterectomy which include relaxation techniques, breathing exercises, positioning baby handling and also treating incontinence by teaching pelvic floor muscle exercises. According to a study, there was little awareness that PT provided special care for women and children.¹¹

Electrotherapy Equipments

The various benefits of electrotherapy equipment used by physiotherapist according to residents was the most for pain relief 87.2% followed by improving function 84.4% and least in decrease in inflammation 74.4%. This could be due to lack of knowledge regarding the therapeutic effects of various electrotherapy equipment used by a physiotherapist.

Industrial Health Physiotherapy

Industrial health physiotherapy was one of the specialities which was found to be less known among the residents as discussed before. On inquiring regarding the referral, it was found highest for exercise prescription as per occupation 76.1%, followed by cumulative disorders 75% and least for job description and analysis 61.10%. Thus the findings show that residents were aware of physiotherapist treating with exercises prescribed for a particular occupation as well as for cumulative disorders but not about her extensive role in performing a job description and analysis which include early intervention and identification of the disability of patients, in clinical evaluation and treatment, development in appropriate workplace culture and return to work.¹²

Electrodiagnosis Physiotherapy

The various fields in which electro diagnosis physiotherapy is the most referred for sensory and motor evoked potentials 75.5% followed by electromyography 74.4% and least for h reflex and f wave 68.3%. The reason could be that the residents refer the patients to the physiotherapist for electromyography and sensory / motor evoked potential as an investigation and may not be aware of the significance of h reflex and h wave.

7. Conclusion

This study identified a need for physiotherapists to educate medical residents about various fields of physiotherapy like community based rehabilitation and industrial health physiotherapy, their extensive role in each of the speciality, treatment modalities and evaluative procedures through continuing education programs.

8. Clinical Implication

There should be CMES arranged with various departments promoting interactive sessions about update of each other's

profession. Inter-department research projects should be encouraged.

9. Acknowledgement

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References

- [1] Australian physiotherapy association.
- [2] World Confederation for Physical Therapy. Description of physical therapy. Adopted at WCPT General Meeting, May 1999
- [3] Physiotherapy. *NHS* ; (): . <http://www.nhs.uk/conditions/Physiotherapy/Pages/Introduction.aspx> (accessed) .
- [4] World Confederation for Physical Therapy. Policy statement: Ethical responsibilities of physical therapists and WCPT members. London, UK: WCPT; 2011. www.wcpt.org/policy/ps-ethical-responsibilities (Access date 22nd September 2011))
- [5] Sadaf Shafqat¹, Sarah Omer², Marina Ayub³, Asma Faheem⁴, Muhammad Shahid⁵, Syeda Amool Sakeena Rizvi⁶ (n.d.) 'Awareness of Physical Therapy as a Profession among Pre-medical Students of Private and Government Colleges', *Pakistan Journal of Rehabilitation* 2012, 1(0), pp. .
- [6] (May 2013) 'The contribution of physiotherapy to community service provision', *Welsh Physiotherapy Leaders Advisory Group Chartered Society of Physiotherapy Welsh Board*, (), pp. .
- [7] P. Martin, "Wound healing-aiming for perfect skin regeneration," *Science*, vol. 276, no. 5309, pp. 75-81, 1997)
- [8] *Rivista Italiana Di Ossigeno* (2010) 'International Journal Of Ozone Therapy', , 53(), pp.
- [9] Philips sense and simplicity (n.d.) 'Medical treatment with phototherapy', , (), pp. . OR
- [10] www.philips.com/phototherapy
- [11] Marie-Elaine Grant,^{1,2} Kathrin Steffen,³ Philip Glasgow,⁴ Nicola Phillips,⁵ Lynn Booth,⁶ Marie Galligan⁷. The role of sports physiotherapy at the London 2012 Olympic Games. 2014; 48(): .
- [12] (Sheppard L. Public perception of physiotherapy implications for marketing. 1992;40(4):265-71)
- [13] The physiotherapist's role in occupational rehabilitation. *Australian Physiotherapy Association* September 2012; (): .