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AWARENESS AND KNOWLEDGE OF PHYSICAL THERAPY AMONG MEDICAL INTERNS – A PILOT STUDY

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ABSTRACT

Background: The changes happening in the physical therapy education and the profession should be reached and demand to be seen by the other medical professionals to benefit the health care process. At the same time, if attempts are to be prepared to elevate the degree of awareness of physical therapy, it is necessary to evaluate the current attitude and knowledge of the medical interns. So the aim of this study was to find out the current level of awareness and knowledge about physical therapy among the M.B.B.S. medical interns.

Methods: An institution based cross sectional study, carried out purely based on the questionnaire method which consist of sets of questions. Prior to the data collection the researcher explained about the study to the subject and an informed consent was obtained from them. The researcher gave the questionnaire form to the subject and was required to fill the frame. The data collected was analysed by using frequency and percentage in IBM SPSS statistics V 19.

Results: Only 45% of medical interns had awareness and 42% had knowledge about physical therapy.

Conclusion: The results of the study provide information regarding the lack of awareness and knowledge among medical interns about physical therapy. Hence there is a need of educating the future medical professionals about the physical therapy, thereby reaching a better patient care.

Keywords: Physical therapy, Interns, Awareness, Medical, Knowledge, MBBS

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INTRODUCTION

Over decades the injuries and illnesses have developed, physical therapy has also evolved and grown from general forms to specialized form of physical therapy services in health care settings. Despite the recognition and advanced gain worldwide in physical therapy, yet there is a lack of awareness of physical therapy among medical doctors. In health care profession there are a wide variety of branches. Interdisciplinary interaction between these various branches is very important in the present situation to deliver better health care [1]. This is achieved by respecting, recognizing and understanding the skills and abilities of other team members who can provide patient care.

In physical therapy services, “physiotherapists assess, plan and implement rehabilitative programs that improve or restore human motor functions, maximize movement ability, relieve pain syndromes, and treat or prevent physical challenges associated with injuries, diseases and other impairments. They apply a broad range of physical therapies and techniques such as movement, ultrasound, heating, laser and other techniques. They may develop and implement programs for screening and prevention of common physical ailments and disorders” [2].

Physical therapists as a part of the health care team play an essential role in reducing hospital stay, in providing a quicker recovery, and in rehabilitation for a better quality life[3].So, it is very important for medical doctors to be aware about how physical therapy plays an important role in maintaining the functional ability of an individual. Various studies show that there is lack of knowledge about physical therapy among medical professionals. A review of literature indicated that medical professional may not have an adequate knowledge of all physical therapy services and how physical therapy can help their patients’ disorders[4,5]. Another study done among medical doctors also concluded by stating that they do not have an adequate knowledge and understanding of physical therapy profession [6].One of the solution to tackle this problem is to educate the future medical professionals. This could be achieved by introducing physical therapy related topics in their curricula [7].The awareness of physical therapy in medical professionals is beneficial in terms of timely and appropriate referral of patient which in turn results in a better patient care [8].

The recent approaches and evidence based practice has rendered a new growth to physical therapy as a profession. Though this profession is gaining ground there still exists a need to create awareness among the other medical professionals. Unless the other medical professionals are well informed about the peculiar character of the physical therapist they will be disadvantaged when trying to receive appropriate health care and presumably the services of the physiotherapists to their patients. At the same time, if attempts are to be prepared to elevate the degree of awareness of physical therapy, it is necessary to evaluate the current attitude and knowledge of the medical interns. Hence this study was carried out using a questionnaire method to find out the current level of awareness and knowledge about physical therapy among the M.B.B.S. medical interns.

METHODS

The study was purely based on the questionnaire method in which sets of questions were given to the M.B.B.S. medical interns of private medical college in Mangalore.We included all medical interns (n=50) of the year 2015, starting from freshly joined batch to batches who are about to finish their internship. Prior to participation, the researcher explained about the study to the subject and an informed consent was obtained from them. The questionnaire form consists of 3 sets of 30 questions as per the following. Section one: Consists of Qualification, Age, gender, Month (s) of practice, Section two: Includes the questions based on awareness of physical therapy, Section three: Consists of questions based on conditions treated in physical therapy, the modalities used in physical therapy, and the source of information about physical therapy among medical interns.

The above section of questions was given to the medical interns by the researcher and was asked to fill the questionnaire form. The researcher was present with the interns in order to clarify the doubts, if any.

Ethics: The work was commenced only once the University Ethics Committee gave ethical clearance.

Statistics: After the questionnaire form being filled by the subject, researcher collected the form on the spot. The data collected was analysed by using frequency and percentage by IBM SPSS statistics V 19.

RESULTS

The study has been conducted in a sample of 50 subjects in view of finding the awareness and knowledge of physical therapy among the medical interns.

Tables and Graphs:

Table 1: Percentage of interns’ participated according the months of practice as an intern.

Months of practice as an Intern		
Fresh Batch	4-7 months Batch	8-11 months Batch
14%	64%	22%

Table 2: Percentage of Awareness and Knowledge about physical therapy among medical interns.

Item	Responds in %
Awareness	45
Knowledge	42

Table 3: Percentage of awareness about the difference between occupational therapy and physical therapy among the medical interns with the practice of 8-11 months, 4-7 months and freshly joined.

Question	Options	Months of Practice			
		Freshly joined	4-7	8-11	Total
Physical therapy and Occupational Therapy the same	Yes	0%	9%	0%	6%
	No	57%	50%	55%	52%
	Don’t know	43%	41%	45%	42%

Graph 1: Percentage of Physical therapy special techniques interns are aware of

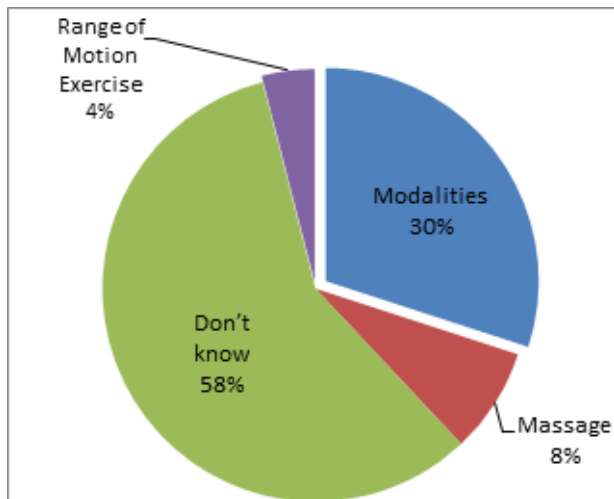


Table 4: Percentage of knowledge in the total duration of physical therapy program including internship among the medical interns with the practice of 8-11 months, 4-7 months and freshly joined.

How many years of course is bachelor of physical therapy?	Months of Practice			
	Freshly joined	4-7	8-11	Total
1 year	0%	0%	0%	0%
2 years	0%	0%	0%	0%
3 years	14%	3%	9%	6%
4 years	57%	69%	73%	68%
5 years	29%	22%	18%	22%
Don't know	0%	3%	0%	2%
What is the duration of physical therapy internship?	Freshly joined	4-7	8-11	Total
1 month	29%	0%	0%	4%
3 months	0%	3%	0%	0%
6 months	71%	50%	45%	52%
1 year	0%	50%	55%	44%

Table 5: Percentage of knowledge about the subjects taught in physical therapy course among the medical interns with the practice of 8-11 months, 4-7 months and freshly joined.

The subjects that are taught in physical therapy course	Months of Practice			
	Freshly joined	4-7	8-11	Total
Anatomy	100%	69%	73%	74%
Physiology	100%	66%	73%	72%
Orthopedics	86%	59%	45%	60%
Exercise therapy	86%	50%	55%	56%
Pharmacology	86%	50%	27%	50%
Pathology	43%	44%	55%	46%
Microbiology	43%	50%	36%	46%
Electrotherapy	86%	44%	27%	46%
Biomechanics	43%	41%	55%	44%

Biochemistry	57%	31%	55%	40%
Psychology	43%	22%	45%	30%
Neurology & neuro-surgery	71%	28%	9%	30%
General medicine	57%	22%	27%	28%
General surgery	57%	22%	18%	26%
Community medicine	43%	22%	27%	26%
All of the above	0%	28%	27%	24%
Sociology	14%	22%	18%	20%
Research & biostatistics	57%	13%	0%	16%
None of them	0%	0%	0%	0%

Table 6: Percentage of knowledge regarding the expensiveness, role in community, early intervention, exercise prescription, interdepartmental relation by the physical therapy among the medical interns with the practice of 8-11 months, 4-7 months and freshly joined.

Question	Option	Months of Practice			
		Freshly joined	4-7	8-11	Total
Physical therapy services are expensive	Yes	14%	9%	9%	10%
	No	71%	56%	27%	52%
	Don't know	14%	34%	64%	38%
Physical therapy plays an important role in community based rehabilitation	Yes	86%	81%	91%	84%
	No	0%	3%	9%	4%
	Don't know	14%	16%	0%	12%
Early intervention through physical therapy leads to an effective rehabilitation	Yes	86%	78%	82%	80%
	No	14%	3%	0%	4%
	Don't know	0%	19%	18%	16%
Exercise prescription is done in physical therapy for type II diabetes mellitus	Yes	14%	16%	27%	18%
	No	29%	44%	27%	38%
	Don't know	57%	41%	45%	44%
Physical therapy is related only with orthopedics	Yes	0%	13%	18%	12%
	No	100%	75%	82%	80%
	Don't know	0%	13%	0%	8%

Table 7: Percentage of knowledge about the physical therapy modalities among the medical interns with the practice of 8-11 months, 4-7 months and freshly joined.

Which modalities in physical therapy are you most aware of?	Months of Practice			
	Freshly joined	4-7	8-11	Total
Ultrasound	86%	75%	73%	76%
Transcutaneous Electrical Nerve Stimulation	57%	53%	82%	60%
Moist heat	29%	66%	45%	56%
Wax bath	29%	44%	64%	46%

Intermittent traction	71%	38%	18%	38%
Short Wave Diathermy	14%	31%	64%	36%
Muscle stimulator	29%	38%	36%	36%
Cryotherapy	29%	19%	45%	26%
Nerve conduction velocity	57%	22%	18%	26%
Pulmonary function test	57%	25%	9%	26%
Laser	14%	13%	27%	16%
Inter Ferential Therapy	0%	13%	27%	14%
Infrared&Ultraviolet Radiation	29%	6%	27%	14%
Whole body supported treadmill	0%	13%	9%	10%
Electromyography bio-feedback	43%	6%	0%	10%
Continuous Passive Motion	0%	6%	18%	8%
Suspension therapy	0%	9%	9%	8%
Whirlpool	0%	6%	0%	4%

Graph 2: Percentage of opinion on physical therapy as a profession among the medical interns.



DISCUSSION

The aim of the present study was to find out the awareness and knowledge of physical therapy among medical interns of a private medical college. The present work indicates that there is a demand to educate about physical therapy among medical interns. The result shows only 45% had awareness and 42% had knowledge about physical therapy among the medical interns (Table 2). In one study done in Nigeria it was reported that the medical students had a good knowledge and fair perception of physical therapy. This may be due to the formal education received about physiotherapy during their classroom lectures. The same education strategy can be adopted in Indian medical colleges to improve their awareness and knowledge. The author also suggested that inter-professional courses and communication should be given greater attention during medical training [9].

Total of 50 participants participated in this survey, out of which the result shows that 14% participants were freshly joined, 64% of interns were having four-seven months practice as interns and 22% of interns were having Eight-Eleven months of experience (Table 2). According to the data

analysis, 82% of medical interns were aware of eligibility for entering into physical therapy degree program and on the other hand 18% of medical interns were unaware. Regarding the physical therapy specialization all the categories had enough awareness. But when asked to specify the different types of specialization 76% of them chose the orthopaedics followed by neurology (54%), sports physical therapy (54%), cardio respiratory (50%) respectively. Unfortunately 34% of participants think that 'massage' is also a specialization for physical therapy. Without any major difference among all the categories, 52% participants stated that there is no difference and 42% told they are not sure about whether physical therapy and occupational therapy are the same (Table 3). The majority of interns (58%) don't know about the special techniques used in physical therapy. This analysis shows the need for educating our upcoming medical professionals at the earliest.

The majority of interns (68%) had the information that physical therapy is a four years program and the interesting information was that 22% of interns believe that physical therapy is a course which requires a five years duration. Fifty two percentage of interns knows that the physical therapy internship duration is six months. Whereas 44% believe that the duration is for one year (Table 4).

The responds given on the question about the 'subjects' that are taught in physical therapy program gave a new outlook about how exposure to physical therapy can influence the intern's knowledge. The result shows that 60% of freshly joined interns had better knowledge than compared to the interns who had been practicing for four-seven months (38%) and eight-eleven (38%) months (Table 5). The likely reason could be that 71% of fresh batch had a problem/s which involved physical therapy service. This in turn shows how early exposure to physical therapy can influence the knowledge of the medical interns about physical therapy.

The interns had a positive opinion regarding the effectiveness of physical therapy in reducing the pain (92%), role of physical therapy in community based rehabilitation (82%), effectiveness of early intervention of physical therapy (80%), and 56% of them believe that physical therapy follows a definite assessment protocol (Table 6). Majority of interns knows that physical therapy is not only related to orthopaedics but also to other specialties as well.

The physical therapy modality that the interns as a whole were most aware of was ultrasound (76%) followed by Transcutaneous Electrical Nerve Stimulation [TENS] (57%) and moist heat (56%). But when group wise observation was done it showed that the fresh interns were more aware of Ultrasound (86%), Continuous Passive Motion (71%), TENS (57%), Whirlpool (57%), Cryotherapy (57%), and Nerve Conduction Velocity (43%). Whereas the group of interns who had four-seven months of practice had awareness about the Ultrasound (75%), Moist heat (66%), TENS (53%), and Inter Ferential Therapy [IFT] (44%). The group of interns who had eight-eleven months of practice had awareness in TENS (82%), Ultrasound (73%), IFT (64%), Short Wave Diathermy [SWD] (64%), Moist heat (45%), and Intermittent Traction (45%) (Table 7). The possible

reason for the difference among the groups could be based on the exposure they got by means of these modalities being the most frequently referred by their PGs and faculty or else it could be due their exposure received when they got treated in physical therapy department.

When asked about the opinion regarding physical therapy, eight percentage had an 'excellent' opinion and 46% had 'very good' and 'good' opinion respectively. And about the usefulness of the survey, majority (72%) believed that this survey was helpful in understanding more about physical therapy especially for the freshly joined interns(86%). Friends(48%) were the main source of information about physical therapy among the medical interns, followed by patients(24%), books(18%), and media(18%).

Though majority (95%) of interns agreed to refer their patients for physical therapy, at the end of the study we can clearly understand that the medical interns did not have adequate awareness and knowledge regarding physical therapy which may hamper the effective and timely referral of patients. The reason for the lack of awareness and knowledge may be many but it is sure that there exists a need for educating the future medical professionals about the various aspects of physical therapy so that there can be a betterment of health care system as a whole. There was no limitations in the study but the study was delimited small sample size and also the data were from one particular college so these results cannot be generalized to other colleges. In future the study should be done with a large sample size in different colleges so that the data can be generalized or else a study could be done in the same college with an intervention to improve the awareness and knowledge of physical therapy among medical interns, if successful then the information can be generalized to other needed colleges.

CONCLUSION

The study clearly states that there is a lack of awareness and knowledge among medical interns about physical therapy. So there is a need of educating the future medical professionals about the physical therapy thereby achieving a better patient care.

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Questionnaire form

Section 1

- 1) Age/Gender:
- 2) Qualification:
- 3) Months of practice as an intern:

Section 2

[Multiple choice where ever necessary]

- 4) Are you aware about the eligibility for entering into physical therapy degree program?
a) Yes b) No
- 5) Physical therapy Specialization
 - A. Are you aware that physical therapy has specialization?
a) Yes b) No
 - B. If yes then list out the physical therapy specialization you are aware of ?
 - a) Orthopaedics g) Massage
 - b) Neurology h) Women health
 - c) Cardio respiratory i) Dermatology
 - d) Pediatrics j) Manual therapy
 - e) Veterinary physical therapy k) All of the above
 - f) Sports l) None of them
- 6) Are you aware of treatment provided in physical therapy?
a) Yes b) No
- 7) Are you aware about modalities used in physical therapy?
a) Yes b) No
- 8) Is Physical therapy and Occupational Therapy the same?
a) Yes b) No c) Don't know
- 9) List the physical therapy special techniques that you are aware of ?

Section 3

- 10) Total duration of Physical therapy degree program:
 - A. How many years of course is bachelor of physical therapy?
a) 1 b) 2 c) 3 d) 4 e) 5 f) Don't Know
 - B. What is the duration of physical therapy internship?
a) 1 month b) 3 months c) 6 months d) 1 year
- 11) Among these which are the subjects that are taught in physical therapy course?
 - a) Anatomy b) Physiology c) Biomechanics d) Biochemistry
 - e) Sociology f) Psychology
 - g) Pathology h) Microbiology i) Pharmacology
 - j) Electrotherapy k) Exercise therapy
 - l) General surgery m) General medicine n) Orthopaedics
 - o) Neurology & Neuro surgery
 - p) Community medicine q) Research and biostatistics
 - r) All of the above s) None of them
- 12) Physiotherapy for you:
 - A. Have you ever had problem/s which required physical therapy?
a) Yes b) No
 - B. If yes, what was the treatment taken?

- 13) Do you agree physical therapy is effective in reducing pain?
a) Yes b) No c) Don't know
- 14) Do you know about the pathological conditions treated in physical therapy?
a) Yes b) No
- 15) Does physical therapy follow a definite assessment protocol?
a) Yes b) No c) Don't know

16) What are the common conditions treated by physical therapy? (list any five)

17) Which modalities in physical therapy are you most aware of?

- | | |
|--|-----------------------------------|
| a) Transcutaneous electrical nerve stimulation(TENS) | i) Muscle Stimulator |
| b) Ultrasound | j) Whole Body supported Treadmill |
| c) Interferential therapy(IFT) | k) Continuous passive motion(CPM) |
| d) Short Wave Diathermy (SWD) | l) Whirlpool |
| e) Moist heat | m) Wax Bath |
| f) Intermittent traction | n) Cryotherapy |
| g) Infrared & Ultraviolet rays(IR&UVR) | o) Suspension therapy |
| h) LASER | p) EMG biofeedback |
| | q) Nerve conduction velocity |
| | r) Pulmonary function test |

18) Do you feel physical therapy services are expensive?

- a) Yes b) No c) Don't know

19) Do you agree physical therapy plays an important role in community based rehabilitation?

- a) Yes b) No c) Don't know

20) Do you agree early intervention through physical therapy leads to an effective rehabilitation?

- a) Yes b) No c) Don't know

21) Do you know, exercise prescription is done in physical therapy for type II diabetes mellitus?

- a) Yes b) No c) Don't know

22) Are physical therapy services paid enough compared to the effort put in?

- a) Yes b) No c) Don't know

23) Do you feel physical therapy is related only with orthopedics?

- a) Yes b) No c) Don't know

24) How can awareness of physical therapy be improved?

25) What is your opinion on physical therapy as a profession?

- a) Excellent b) Very good c) Good d) Not good

26) Your source of Information regarding Physical therapy? E.g. Media, Books, Friend, Awareness programs, patient etc.

27) Which aspect of physical therapy would you like to know more about?

28) How can the referrals to physical therapy be improved?

29) Will you refer your patients for physical therapy?

30) How will you rate this survey?

- a) Helpful b) Not helpful c) Time waste d) Can't say