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## **Community Survey of Awareness about the Knowledge of Physiotherapy Services amongst Health Care Profession Students**

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### **Abstract**

Physiotherapy is a health care profession. Physiotherapy plays a significant role in all levels of health. Interaction between various disciplines of medicine within a health care team is becoming recognized more and more as an effective method of improving the delivery of health care services. In order to achieve interdisciplinary teamwork, members of the health care team need to understand and respect each other's professional abilities. It was aimed to find out the extent of knowledge about physiotherapy services among medical sciences students and to analyze the current level of awareness. 249 student's participants were involved in the study using convenient sampling from SGT University. Students were involved from four different department viz. MBBS, BDS, BAMS, Nursing. Every student fills the

structured questionnaire in the prescribed format. The data collected was analyzed by using frequency and percentage in Microsoft 2007. The respondents displayed that 63% of healthcare profession students had 'Good' awareness and 61% had 'Good' knowledge about physiotherapy. The study concluded that there is a good awareness and knowledge among health care profession students about physiotherapy. Lack of knowledge and awareness was also found which can be improved by educating them on different direction of physiotherapy to the students of health care profession. Among all the profession MBBS and BDS students are slightly more aware and have more knowledge regarding physiotherapy profession.

**Keywords:** Questionnaires, Health Care Profession, Physiotherapy, Community Survey

### **Introduction**

Physiotherapy is a Healthcare profession, analogous to the anatomical and physiological bodily functions, movements with enhancing its further prospects. It utilizes palpable maneuvers to develop, maintain and restore physical, psychological & social wellbeing, taking an account of variation in health status (Apurv Shimpi *et al* 2014, Curriculum Framework for Qualifying Programs in Physiotherapy 2002) <sup>[1, 2]</sup>.

The role of a Physiotherapist is application of his skills & knowledge, put together leading to patient's assessment, diagnosis, planning, delivery and implementation of rehabilitative programs that improve or restore human motor functions, relieve pain syndromes and movement, intensifying its potential, and treat or avert physical challenges associated with injuries, diseases and other impairments. (Shemjaz, A. M., Thakral, *et al* 2016) <sup>[3]</sup>.

A Physiotherapist acts as an integral part of the healthcare team and contributes to the wholesome rehabilitation of a patient. Patients rely on a doctor for recommendation to other health care professionals such as physiotherapists. Thus, a doctor who is not well aware of the scope and values that physiotherapy offers, it may delay or may be unable to make appropriate referrals to physiotherapy (Lee and Sheppard, 1998) <sup>[5]</sup>. If the physiotherapy profession hopes to attain interdisciplinary co-operation with the medical professionals, it is important that physicians and other medical professionals have a profound knowledge and a favorable attitude towards physiotherapy (Varghese, Benjamin, *et al* 2012) <sup>[7]</sup>. It is vital for doctors to remember about how physiotherapy plays a crucial role in maintaining the functional strength and independence of the patients. (Shemjaz, A. M 2016, Whyte M, B 1991) <sup>[3, 4]</sup>.

Physiotherapy has emerged not only as a crucial medical and rehabilitative aspect in health care delivery but also as a health profession with an important therapeutic tool that employs well defined scientifically-based protocols and regimes, thus being an essential part of the treatment of most patients.(American physiotherapy Association, 1997). Clear communication and mutual understanding are vital concepts to be practiced among the key members in solicit for a patient or client. Through the combined efforts of every team member, the patient in care would surely reap enormous benefits from the health care service provided and in turn obtains good level of potential of regaining optimum function. (World confederation for physical therapy, 2011). This emphasizes the necessity of interdisciplinary collaboration and interdisciplinary education (IPE), which has been on the surge, for the past decade. Respecting and understanding roles of team members are some of the essential characteristics which build up an effective interdisciplinary team. (Nancarrow, S. A., 2013) [8].

**Material and Methods**

**Study design:** It was a cross sectional survey study design.  
**Study Centre:** The study was conducted at Faculty of medicine & health sciences, Faculty of dental sciences, Faculty of Ayurveda Indian medical system and Faculty of Nursing form SGT University, Budhera, Gurgaon, Haryana, India.  
**Sampling design:** Convenient sampling was done.  
**Sample size:** A total of 249 final year students and Postgraduate students of health care professions.  
 Inclusion criteria includes-. Final years M.B.B.S, BDS, BAMS and Nursing and Postgraduate students.  
 Exclusion criteria includes- Incomplete questionnaires, Physiotherapy students.

**Study Procedure**

The study was based on the questionnaire method in which sets of questions were given to the health care profession students from SGT University. 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, Name, Age, gender, Course and year of the study, Section two: Includes the questions based on awareness of physiotherapy, Section three: Consists of questions based on conditions treated in physiotherapy, the modalities used in physiotherapy, and the source of information about physiotherapy among health care profession students. The above section of questions was given to the health care profession students 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 ethical clearance conducted by institutional ethical review Board.  
**Data analysis:** After the questionnaire form being filled by the subject, researcher collected the form on the spot. All data were entered into Microsoft Excel to make a master chat. Responses to each item in the questionnaire rate according to their importance depending upon the item in the questionnaire. The data collected was analysed by using frequency and percentage by Microsoft Excel 2007.

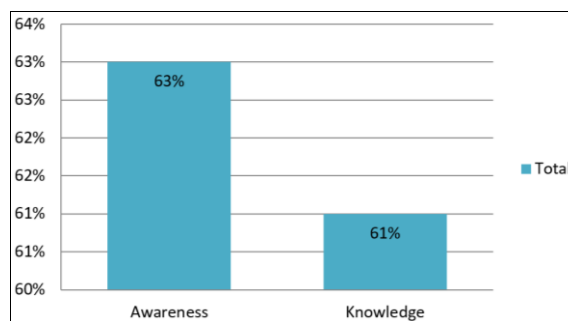
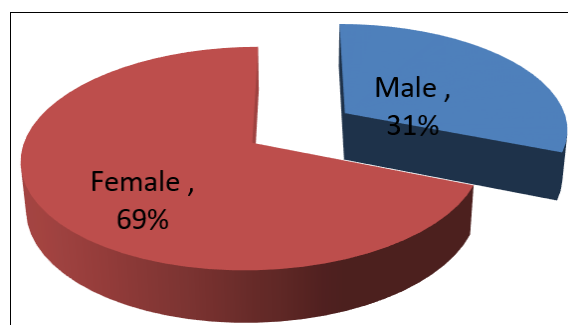
Knowledge and perception arbitrarily categorised as: <25%: very poor, 26–50%: poor, 51–75%: good, and >76%: very good.

**Results**

The total number of 249 students participated in the study. Finding the awareness and knowledge of physiotherapy among the health care profession students.

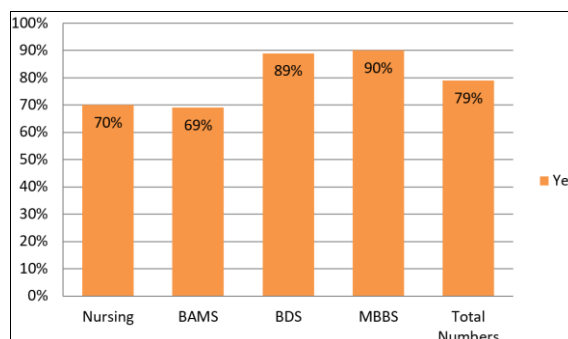
**Table 1:** Demographic information on the Respondents

Demographics	Nursing	BAMS	BDS	MBBS	Total Numbers
Students(UG/PG Final year)	76	59	62	52	249
Age(mean value standard deviation)	22.7	21.68	24.21	23.87	23.08



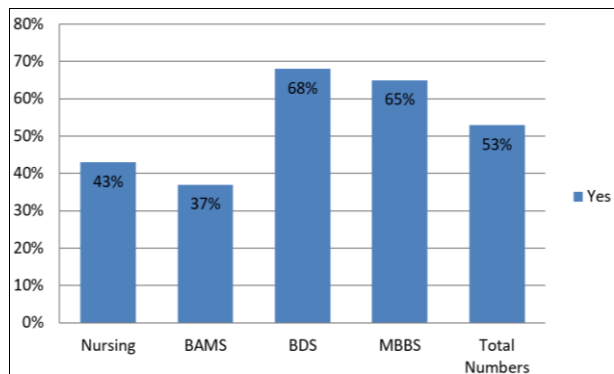
**Graph 1:** Graphical Presentation of Awareness and Knowledge about physiotherapy among Health care profession students

According to arbitrarily categorized by showed the ‘Good’ awareness and knowledge among health care profession students (Graph 1).



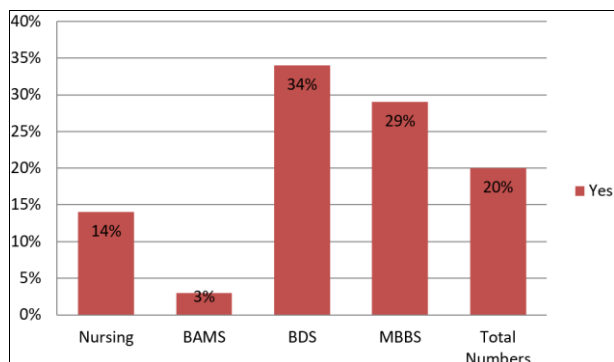
**Graph 2:** Graphical Presentation of awareness about the various physiotherapy treatments

Graphical Presentation showed that about the various physiotherapy treatments in (89%) BDS and (90%) MBBS branch students had very good awareness (Graph 2).



**Graph 3:** Graphical Presentation of awareness about the use of various modalities in physiotherapy

Graphical Presentation showed that (68%) of BDS and (65%) of MBBS branch students there were good awareness towards the use of various modalities in physiotherapy and BAMS branch students were less awareness (37%) (Graph 3).



**Graph 4:** Graphical Presentation of awareness about the difference between occupational therapy and physiotherapy

Graphical Presentation showed BDS branch students of responded that occupational therapy and physiotherapy are same (34%) (Graph 4).

**Table 2:** Percentage of knowledge about the duration of bachelor's degree of physiotherapy

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
1 year	3%	0%	0%	0%	1%
2 year	7%	0%	0%	0%	2%
3 year	20%	3%	18%	15%	14%
4 year	50%	85%	53%	71%	63%
5 year	9%	0%	18%	6%	8%
Don't know	12%	12%	11%	8%	11%

Total health care profession students showed their agreed the duration of bachelor's degree of physiotherapy in 4 years (63%) and BAMS branch students were very good response (85%) (Table 2).

**Table 3:** Percentage of knowledge of the duration of the physiotherapy internship program

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
1 month	1%	0%	0%	0%	0%
3 months	12%	0%	6%	4%	6%
6 months	61%	75%	77%	85%	73%
1 year	24%	22%	16%	6%	18%
Don't know	3%	3%	0%	6%	3%

Total health care profession students showed there was good knowledge regarding the 6-month duration of the physiotherapy internship program (73%) and many students replied that the duration of internship 1 year (18%) (Table 3).

**Table 4:** Percentage of knowledge about the various subjects taught in physiotherapy course

Subjects	Nursing	BAMS	BDS	MBBS	Total Numbers
Anatomy	39%	53%	34%	29%	39%
Physiology	39%	51%	34%	23%	37%
Biomechanics	16%	10%	18%	6%	13%
Biochemistry	17%	19%	19%	10%	16%
Sociology	12%	8%	11%	2%	9%
Psychology	18%	10%	11%	8%	12%
Pathology	18%	39%	26%	15%	23%
Microbiology	18%	10%	18%	4%	12%
Pharmacology	24%	24%	26%	10%	22%
Electrotherapy	20%	22%	24%	23%	22%
Exercise therapy	37%	39%	32%	25%	33%
General surgery	5%	22%	13%	10%	12%
General medicine	14%	22%	26%	10%	18%
Orthopedics	32%	37%	29%	19%	31%
Neurology & Neurosurgery	24%	25%	21%	13%	21%
Community medicine	5%	14%	10%	2%	8%
research & biostatistics	13%	19%	10%	13%	14%
All of the above	39%	24%	56%	62%	45%
None on the above	7%	14%	3%	4%	7%

Total health care profession students showed their less response towards the various subjects taught in physiotherapy (< 51%) (Table 4).

**Table 5:** Percentage of knowledge about the various physiotherapy modalities

Modalities	Nursing	BAMS	BDS	MBBS	Total Numbers
TENS	42%	22%	69%	75%	51%
MS	42%	46%	53%	52%	48%
US	20%	14%	50%	62%	37%
IFT	11%	14%	31%	42%	21%
SWD	12%	3%	31%	35%	19%
Moist heat	21%	25%	47%	62%	37%
Traction	18%	14%	21%	33%	21%
LASER	25%	17%	52%	58%	37%
NCV	21%	14%	19%	17%	18%
Whole body supported Treadmill	32%	20%	21%	25%	25%
CPM	22%	8%	24%	46%	25%
Whirlpool	13%	22%	16%	13%	16%
Cryotherapy	26%	7%	48%	65%	35%
Wax bath	20%	36%	37%	42%	32%
Suspension therapy	12%	14%	19%	25%	17%
EMG biofeedback	5%	3%	19%	13%	10%
IR & UVR	20%	5%	37%	31%	23%
Pulmonary function test	32%	17%	15%	17%	21%

MBBS branch students showed their good awareness regarding the physiotherapy modalities in TENS (75%), MS (52%), US (62%), Moist heat (62%), LASER (58%), Cryotherapy (65%) (Table 5).

**Table 6:** Percentage of knowledge of the role of physiotherapy in community-based rehabilitation

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
Yes	87%	68%	90%	87%	83%
No	7%	10%	2%	2%	5%
Don't know	7%	22%	8%	12%	12%

Three branch students were Nursing, BDS and MBBS showed their very good responses as the role of physiotherapy in community-based rehabilitation (>80%) (Table 6).

**Table 7:** Percentage of knowledge about the relation of physiotherapy with orthopedics

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
Yes	80%	59%	87%	88%	79%
No	12%	12%	5%	6%	9%
Don't know	8%	29%	8%	6%	12%

Total health care profession students showed their agreed that physiotherapy is related to orthopedic (79%) (Table7).

**Table 8:** Percentage of opinion about physiotherapy profession

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
Excellent	25%	12%	31%	23%	24%
Very good	47%	24%	22%	40%	35%
Good	28%	58%	32%	37%	39%
Not good	0%	7%	15%	0%	2%

Total health care profession students showed their less opinion towards physiotherapy profession in 'Excellent' (24%) and 'very good' (35%) (Table 8)

**Table 9:** Percentage of sources of information regarding physiotherapy

Response	Nursing	BAMS	BDS	MBBS	Total Numbers
media	50%	27%	31%	31%	36%
book	36%	17%	15%	17%	22%
friend	45%	39%	60%	75%	53%
awareness programs	38%	14%	27%	23%	27%
patient	21%	17%	21%	33%	22%

All branch students showed their more response towards sources of information regarding physiotherapy by friend (53%) and nursing branch students replied the sources of information by media (50%) (Table 9).

## Discussion

The aim of the present study was to find out the extent of knowledge about physiotherapy services among health care profession students and to analyze the current level of awareness. Total of 249 participant's response in this survey, out of which 76 participants from Nursing, 59 participants from BAMS, 62 participants from BDS and 52 participants from MBBS (Table 1).

Data analysis showed that the 'Good' awareness and knowledge among health care profession students. 63% had awareness and 61% had knowledge about physiotherapy among health care profession students.

70% of total health care professions students were aware about the eligibility for entering into a physiotherapy degree program and 85% were aware about the physiotherapy specialization as physiotherapy is the part of health care profession course so may be student collected information at

the time of admission.

But when they are asked to comply the particular physiotherapy specialization subject. At that time, some lacks are found in awareness. The percentage of awareness on subject of orthopedic was 48%, Neurology 31% and highest percentage was recorded in Sports physiotherapy 49% among all the student of health care. Unfortunately, only 41% student was agreed that 'Massage' is specialization of physiotherapy. May be some more time is required to be more aware on physiotherapy among the student.

It was observed that 79% student of health care profession were aware about physiotherapy treatment. Among all only 53% students were aware about the modalities which are used in physiotherapy profession and 44% aware about the various special techniques applied in physiotherapy. As physiotherapy profession is in a growing stage many professions are unaware about the special techniques and modality which are used in physiotherapy treatment. Everyone should know about the physiotherapy techniques and modalities because now days all the specialization like orthopedic, neurology, sports, gynecology etc are interlink with each other.

80% of students were agreed that physiotherapy and occupational therapy is not a same profession. 63% of health care profession student had given their opinion that physiotherapy course is 4 year tenure and according to 14% student it is 3 year program. In actual physiotherapy program is four- and half-year program. Among that four year is main course and half year is internship program (73%). 18% students are agreed that 1 year is internship program. This information may get when they are prepared for medical entrance.

(Lee and Sheppard, 1998) [5] also observed in his study which was conducted in South Australia that knowledge and perception of physiotherapy among final year medical students in Australia reported a good awareness of physiotherapy treatment and services. The majority of the respondents either agreed or strongly agreed with the attitudinal statements about physiotherapy that is, that physiotherapists were progressive, professional and competent, well qualified, caring to their patients and that they offer effective treatments.

The responses given on the question about the 'subject' that are taught in physiotherapy program gave a new outlook about how exposure to physiotherapy can influence the health care profession student's knowledge. The result shows that the students were less knowledgeable about the subjects that are taught in the physiotherapy program. Therefore, education to make respondents knowledge of the efficacy of subjects in physiotherapy program intervention for these conditions is imperative.

All branches of students had given their positive opinion due to getting better result in reduced of pain by the effect of physiotherapy (88%). They might be getting this information from the patient or the relatives who are treated in physiotherapy. This reason may be the way of getting better opinion. (D. O. Odebiyi *et al*, 2006), observed in his study that 56% of the respondents agreed that physiotherapy is an effective.

The physiotherapy modality that the students as a whole were most aware of was Transcutaneous Electrical Nerve Stimulation [TENS] (51%) followed by Muscle stimulator [MS] (48%), Ultrasound [US] (37%), LASER (37%) and



cryotherapy (35%). But when group wise students observation was done it showed that the Nursing students were aware of [TENS] (42%), Muscle stimulator [MS] (42%), pulmonary function test (32%), cryotherapy (26%). Whereas the group of BAMS students were awareness about the Muscle stimulator [MS] (46%), Wax bath (36%), moist heat (25%), Transcutaneous Electrical Nerve Stimulation [TENS] (22%) and Whirlpool (22%). The group of BDS students were awareness in TENS (69%), Muscle stimulator [MS] (53%), Ultrasound [US] (50%), LASER (52%), cryotherapy (48%), Moist heat (47%), Inter Ferential Therapy [IFT] (31%) and Short Wave Diathermy [SWD] (31%) and the last group MBBS were awareness in TENS(75%), cryotherapy (65%), Ultrasound [US] (62%), Moist heat (62%), Laser (58%), Muscle stimulator [MS] (52%), Continuous Passive Motion [CPM] (46%), Inter Ferential Therapy [IFT] (42%) and Wax bath (42%). More awareness was found from MBBS students compare as other groups like Nursing and BAMS students, the BDS students' groups were slightly more aware. Because they referred the patient to physiotherapy department. So MBBS students to know more about physiotherapy modalities, from other branch students. This result was in stark contrast with the study done by (D.O. Odebiyi, *et al* 2008) [9] in Nigeria, where medical students respondents were familiar, particularly with the commonly used physiotherapeutic treatment modalities.

All students had given their positive opinion the role of physiotherapy in community-based rehabilitation (>80%) and 76% of students were aware on effectiveness of early intervention of physiotherapy. They may be aware from physiotherapy program or camp which was conducted in their society.

When asked to health care profession students that do they know the relationship of physiotherapy with orthopedic, <80% of the students were agreed. If we see, physiotherapy is not only associated with orthopedic but also in different specialization.

When asked to all health care profession students on about physiotherapy, 24% students were given excellent feedback. 53% students had gave their opinion that the main source of information about physiotherapy was got from friend circle. Harikrishnan R *et al*, 2017 also observed in his study which was conducted in Malaysia that main source of information about physiotherapy for students was friend circle.

Though the majority students had a positive opinion regarding the (85%) agreed to refer their patients for physiotherapy department. all health care profession students think that physiotherapy treatment is effective about the usefulness of the survey, majority believed that this survey was helpful in understanding more about physiotherapy for BDS (98%), MBBS (98%), Nursing (79%) and BDS (69%).

The present work finding suggests that there is a demand to educate about physiotherapy among health care profession. In one study done in Yenepoya University, mangalore, India, it was reported that the only 45% of medical interns had awareness and 42 % had knowledge about physical therapy. The study results also indicate the need for improved awareness and knowledge regarding physiotherapy services (Arakkal Maniyat Shemjaz *et al* 2016) [3].

### Future scope of the study

Future research should be done with a large sample size in different colleges and different department students population so that the data can be benefit the profession if they evaluate the outcomes of strategies designed to increase the awareness of physiotherapy among health care students.

### Conclusion

The study clearly states that there is a good awareness and knowledge among health care profession students about physiotherapy. We also found the lack of knowledge and awareness which can be improved by educating them on different direction of physiotherapy to the students of health care profession. Among all the profession MBBS and BDS students are slightly more aware and have more knowledge regarding physiotherapy profession.

So, there is a need of educating the future medical health care professionals about the physiotherapy thereby achieving a better patient care.

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