

## Awareness and Knowledge of Physiotherapy among Secondary Students in Kuala Terengganu

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### Abstract

Physiotherapy is a healthcare profession concerned with human function and mobility, as well as the maximisation of potential. In recent days, though the awareness about the Physiotherapy profession is increasing, maybe still the complete awareness is not achieved. There is a high percentage of students who hold incorrect beliefs, necessitating the inclusion of specific teaching about it during undergraduate training. The purpose of the study was: (1) to examine the level of awareness regarding physiotherapy among secondary students in Kuala Terengganu, (2) to identify level of knowledge regarding physiotherapy among secondary students in Kuala Terengganu and (3) to determine the relationship between the level of awareness and knowledge regarding physiotherapy among secondary students in Kuala Terengganu. This is a quantitative cross-sectional study and conducted by online survey. The survey instrument for the study was a four sectioned, self-administered questionnaire. Section A was on demographic data (4 questions), while section B was on level of awareness regarding physiotherapy (12 questions). Section C required information on level of knowledge about physiotherapy practise (6 questions) while section D was on physiotherapy as a career (5 questions). A total of 388 of student's form four and form five from 23 of SMK in Kuala Terengganu participated in the study. The method for sampling applied was convenience sampling. The respond of this study is 100% (n=338). Majority of respondents is form four (n=205, 60.7%), with age 16 years old (n=205, 60.7%), female gender (n=208, 61.2%) and Malay race (n=187, 55.3%). The level of awareness of physiotherapy is (n=145, 54.3%) and the level of knowledge of physiotherapy is (n=65, 24.3%). The relationship between level of awareness and knowledge is ( $r=0.189$ ,  $CI=1.2449, 1.2744$ ,  $p\text{ value}=0.002$ ). The result shown there is a statistically significant, positive and weak correlation between level of awareness and level of knowledge regarding physiotherapy among secondary students ( $r=0.189$ ,  $p=0.002$ ).

### Keywords

Physiotherapy; Awareness; Knowledge; Secondary Students

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## Introduction

Nowadays, health professionals consist of medical doctors, pharmacists, dentists, nurses, and a total of 23 categories of health science professionals' others such as audiologists, speech-language therapists, occupational therapist, medical laboratory technologist, environmental health officers, forensic officers, as well medical social officers (World Health Organization, 2014). In Malaysia, there are 16 allied health professions from diverse backgrounds listed to be regulated by the Allied Health Professions Act (Act 774) including physiotherapists (Rotem and Roberts, 2020). This act is distinct from others in Malaysia that govern a single profession with comparable qualifications. Each profession has its own qualification, training pathways, expertise, function, scope of services, and competencies under Act 774. In the Ministry of Health (MOH), each profession has a specific job scope, whereas in the private sector, multitasking is expected (Rotem and Roberts, 2020). As a result, a suitable regulatory framework to implement Act 774 in the local context is required. But the lack of scientific professional's health has a negative impact on effectiveness of treatment and is an issue that has long been faced in the health sector (Lapkin et al., 2013). In recent days, though the awareness about the Physiotherapy profession is increasing, maybe still the complete awareness is not achieved (Tronchoni-Crespo et al., 2021). Many students (65.6%) were familiar with the role of physiotherapy in orthopaedic conditions but its scope in other specialities like cardio-pulmonary problems (29.1%), neurological conditions (28.2%), women's health (34%) and paediatric disorders (22.4%) was found to be very poor (Rathi and Chandra, 2020). Similar findings are noticed in the study conducted by Patel (2015) among high school students in Anand district, India. In similar research, Harikrishnan and Kamalambal (2017) found that the majority of respondents (80%) are aware of the use of physiotherapy in musculoskeletal disorders, while only 17% are aware of its usage in paediatrics. A similar discovery was made in a study of high school pupils in Japan by Ogiwara and Nozoe (2005). According to research conducted by Ebenezer et al. (2019), just 4% of physiotherapy students are aware of sub-specialties. A large proportion of students (87.9%) lack awareness of the situations encountered by physiotherapists and the problems treated by physiotherapists (90.9 percent. According to a survey done by Bargaje et al. (2017), just 2.5 percent and 0.5 percent of students were aware that physiotherapy is also beneficial in cardiorespiratory and paediatric diseases, respectively. This study was therefore conceptualized to examine the level of awareness and knowledge of physiotherapy among secondary students in Kuala Terengganu.

## Methods

### Instrumentation

The study was a quantitative cross-sectional study. It conducted by online survey. The survey instrument for the study was a four sectioned, self-administered questionnaire. Section A was on demographic data, while section B was on level of awareness regarding physiotherapy. Section C required information on level of knowledge about physiotherapy practise while section D was on physiotherapy as a career (Ramalingam et al., 2023).

### Participants and procedure

A total of 2760 students from 23 of SMK in Kuala Terengganu who entered the inclusion criteria, after being calculated using the Raosoft sample formula size calculator large sample then obtain from the calculation amounted 338 students. They volunteered to

participate in this study. Permission to carry out the study in the selected schools was also obtained from the same office and ethical approval was granted by the faculty ethics review committee, UiTM (FERC/FSK/MR/2022/0345) and the Kementerian Pelajaran Malaysia (KPM). In this study, the convenience sampling was used to distribute questionnaires to the students. Data were analysed using Statistical Package for the Social Science (SPSS) version 27.

## Results

### Subjective data

338 students were given online survey were completed and returned (100%) response rate). There were 208 females and 130 males among the respondents.

### Demographic characteristics of respondents

Table 1. Demographic characteristics of respondents

Demographics		Frequency (n)	Percentage (%)
Age	16 years old	205	60.7
	17 years old	133	39.3
Gender	Male	130	38.8
	Female	208	61.2
Race	Malay	187	55.3
	Chinese	99	29.9
	Indians	52	14.8
	Others	0	0
Education Level	Form 4	205	60.7
	Form 5	133	39.3

Based on 338 respondents, male respondents comprised 130 (38.8 percent), and the balance of 208 (61.2 percent) were female respondents. This is probably because, in these school, they are probably female students is greater than that of male students. As for the age, a large number of respondents, which equivalent to 205 (60.7 percent), and the age group of 16 years old. Table 1 also displays the frequencies and percentage of the race among students, 187 of respondents' majority (55.3 percent) were from Malay race. The majority of the respondents come from form 4 with 205 (60.7 percent). This is due to the fact that form five students are currently occupied with their Sijil Pelajaran Malaysia (SPM) examinations. In summary, the majority of respondents are females, Malay race, aged is 16 years old and form four who responded in this study.

Table 2. The Level of Awareness Regarding Physiotherapy among Secondary Students

Variable	Frequency (n)	Percent (%)
Are you aware about Physiotherapy?	184	54.4
	154	45.6
Did you know about Physiotherapy during high school?	249	73.6
	89	26.4
Did you know about Physiotherapy through hospitals/ medical centres?	259	76.6
	79	23.4
Did you know about Physiotherapy in mass media?	261	77.2
	77	22.8
Did you know about Physiotherapy with colleagues?	244	72.2
	94	27.8

Did you know about Physiotherapy by word of mouth?	261	77.2
	77	22.8
Like a family physician, do you think there is a need of a family physiotherapist as well?	142	41.7
	196	58.3
Do you think that Physiotherapy centres should be available in all hospitals?	280	82.8
	58	17.2
Do you think that Physiotherapists contribute to the well-being of individuals who seek their services?	315	93.2
	23	6.8
Do you think a patient should visit a Physiotherapy centre only on the reference of a doctor?	294	86.9
	44	13.1
Would you encourage your family members/ friends to become a Physiotherapist?	283	83.7
	55	16.3
Are you aware of any physiotherapy centre in your locality?	229	67.8
	109	32.2

This questionnaire is adapted and modified from previous research. It consists of 12 questions with two choices of the answer which are 'yes' or 'no'. Based on the data, majority of the respondents at school had aware about physiotherapy which comprised 184 (54.4 percent). Besides, the result showed that most of the respondents had known about physiotherapy which comprised 249 (73.6 percent). Next, 259 (76.6 percent) were aware of physiotherapy through hospital medical centre. From the data, 244 (72.2 percent) respondents had knowing physiotherapy from their colleagues. Approximately, 261 (77.2 percent) the respondents had knowing physiotherapy by word of mouth. 196 (58.3 percent) of respondent think they are in need a physiotherapist in family. 280 respondents (82.8 percent), agreed that physiotherapy centres should be available in all hospitals. Out of total respondents, 315 (93.2 percent) agree that physiotherapists contribute to the well-being of individuals who seek their services. From 294 (86.9 percent) agree patient should visit a physiotherapy centre only on the reference of a doctor. 283 respondents (83.7 percent), agreed to encourage their family members to become physiotherapist. From the total respondents, 229 (67.8 percent) are aware of physiotherapy centre in their locality.

Table 3: The Level of Knowledge Regarding Physiotherapy among Secondary Students

Variable	Frequency(n)	Percent (%)
Physiotherapy is a		
Branch of Medicine	5	1.5
Branch of Acupuncture	82	24.3
Branch of Masseurs	251	74.2
Separate Medical field	0	0
Where is the physiotherapy service provided?		
Government Hospitals	32	9.4
Private Hospitals	244	72.3
Clinics	48	14.2
Community areas	14	4.1
Where do you think you have to meet a physiotherapist?		
Sport Injuries	79	23.2
Pain in any body parts	197	58.4
Referred by Orthopaedist	62	18.4
Other general conditions (Flu/fever)	0	0
Physiotherapy involves application of		
ICE/ HEAT	0	0
Current therapy	202	59.6
Use of water	49	14.6
Teach exercises	87	25.8
Physiotherapy unit concept has		

Electrical, equipment and lamp	68	20.2
Exercises, equipment and gymnasium	189	55.8
Treatment use tapes and mobility aids	47	13.9
Special in manual techniques	34	10.1
Physiotherapist can handle conditions like...		
Neurological conditions (Stroke, PD)	3	1.1
Musculoskeletal conditions (OA, RA, etc...)	249	73.8
Paediatric conditions (Cerebral palsy)	61	18.0
Chest conditions (COPD, Asthma etc...)	25	7.1

This questionnaire is adapted and modified from previous research. It consists of 6 questions with multiple choice to answer. Regarding the field of physiotherapy, about 251 (74.2 percent) respondents are agree with physiotherapy is a branch of masseurs. Based on the data, most of the respondents answer physiotherapy was provided at private hospitals which are 244 (72.3 percent). Most of the respondents answer they will meet a physiotherapy when they got pain in any body parts which is 197 (58.4 percent). While, the respondents answered that physiotherapy involved application of current therapy which is 202 (59.6 percent). Based on the data, most of the respondents answer that physiotherapy unit concept has exercise equipment & gymnasium which is 189 (55.8 percent). From the total respondents, 249 (73.8 percent) answer that physiotherapist can handle conditions like musculoskeletal conditions.

Table 4. Result of Correlation Between Awareness and Knowledge

Variable (n=267)	Median (IQR)	95% C.I (LB, UB)	Level of knowledge	
			Correlation (r)	P- value
Level of awareness	1.2500(0.17)	1.2449, 1.2744	0.189	0.002

A spearman correlation coefficient was conducted between all independent variable and dependent variable. Result on significant relationship is shown in table 4. The findings indicated that the relationship between the level of awareness and level of knowledge were statistically significant relationship among respondents. Statistically respondents with level of awareness and knowledge have weak positive correlation (0.189).

### Discussion

As the findings of this study also revealed, the majority of students have knowledge and awareness about the physiotherapy. It showed that students nowadays are easier to get the knowledge through social media. This finding is in line with the study result of (Rasool, 2007). It has been demonstrated in that research that more than half of the study population used computer and Internet for scientific and research activities. In the study of Mohammadi et al., (2005) it was observed that the main reason for the use of Internet resources was to get more knowledge. Many physiotherapists considered that the need for information is necessary in the context of teaching, which also confirms the importance of information in this case. In similar research conducted by Ogiwara & Nozoe (2005) in Japan among high school students in Ishikawa, it was found that 58% of respondents were thought to have some knowledge of physiotherapy. While in a survey of high school students in Sri Lanka, more than 63% of them had no idea what physiotherapy was or how it was used to treat patients (Thusharika & Shayama, 2014). Thus, comparable trends are observed among students in Sri Lanka and Japan. The knowledge appears to be consistent with a related study done in Meerut (India), where 41% of higher secondary students knew something about physiotherapy (Agarwal, Agarwal, & Gupta, 2012). The same study conducted in Sri Lanka yielded a similar result, but it also found that a very high level of electrical modality awareness (95%) was present Dissanayaka & Banneheka, 2014). Besides, similar research conducted by Ogiwara & Nozoe (2005) showed student the science and healthcare aspiring students in Japan knew more about physiotherapy

than literary and non-healthcare aspiring students. Every study has its limits. There were certain aspects of the methodology and research design used in this study that could have affected or influenced the research's conclusions. First off, the data were gathered and collected only at one particular period in time. It is simply a snapshot of the current state of affairs, if the study had been undertaken at a different time; the findings might have been different. As a result of the study's unique sample size of 338 participants from forms four and form five only, the findings might not be generalizable beyond the particular demographic from which the sample was obtained. Students studying in Kuala Terengganu at other Malaysian school cannot be represented by the data.

### **Conclusion**

In conclusion, despite the fact that 98.5% of the students said they understood what physiotherapy was, among students in Kuala Terengganu. According to the study's findings summary, all students from form four and five still have a limited understanding of what physiotherapy entails. Therefore, proper measures must be taken to improve students' knowledge of physiotherapy in the medical and health sciences. The emphasis on inter-professional education during their secondary programme of study can help with this.

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