

# Medical Students' Awareness of the Role of Physiotherapy in Healthcare at the University of Zambia-Ridgeway Campus

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## ABSTRACT

**Objectives:** The main objective of this research was to determine the University of Zambia medical students' awareness of the role of physiotherapy in health care at Ridgeway Campus, School of Medicine.

**Methods:** This study was a descriptive cross-sectional study. One hundred and fifty-two medical students of the University of Zambia participated in this study. Participants were recruited using simple random sampling. Each student completed a self-administered questionnaire that obtained information on demographics, awareness of role of physiotherapists and educational sources of information. Chi-square test was used to analyze differences in awareness by gender and year of study.

**Results:** The results showed that there were more males (n=92; 60.5%) than females (n=60; 39.5%). The majority of participants were within the age range of 25–31 years (n=116; 76.3%). Although rates of awareness regarding some physiotherapy roles were high, many of the medical students were unaware that physiotherapists are capable of establishing diagnoses. About 83.6% (n=127) of the students also viewed the role of physiotherapists in the health team as one of providing assistance for medical work. Clinical ward rounds were identified as the most common source of information on physiotherapy. Year of study resulted in a significantly different level of awareness ( $p<0.05$ ) with a higher proportion of sixth-year students exhibiting awareness of physiotherapists' roles.

**Conclusion:** The study revealed that medical students have low levels of awareness regarding the role of the Physiotherapists as related to the role of the medical doctors. Therefore, there is a need for physiotherapists to educate medical students about various specialties of physiotherapy like women's health, industrial health, cardiopulmonary dysfunction, and geriatrics physiotherapy.

## INTRODUCTION

Physiotherapy is a healthcare profession that is concerned with identifying and maximizing the quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, habilitation and rehabilitation.<sup>1</sup> This includes providing services in circumstances where movement and function are threatened by aging, injury, disease or environmental factors.<sup>2</sup> Functional movement is central to what it means to be healthy.<sup>3</sup> It involves the interaction between physiotherapist, patients/clients, other health professionals, families, caregivers, and communities in a process where movement potential is assessed and goals are agreed upon, using knowledge and skills unique to physiotherapists.<sup>3</sup>

However, any profession possesses a range of specific knowledge and skills that are either unique or more significantly developed than in other professions. For physiotherapy, the roots of the profession can be found in massage.<sup>4</sup> Physiotherapists continue to use massage therapeutically, as well as employing a wide range of

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other manual techniques, such as manipulation and reflex therapy.<sup>4</sup> Therapeutic handling underpins many aspects of rehabilitation, requiring the touching of patients to facilitate movement, and the significance of therapeutic touching of patients still sets physiotherapy aside from other professions.<sup>4</sup>

In multidisciplinary healthcare, collaboration among health professionals vary and some professions collaborate more with certain professions than others. With recent advancement in healthcare and technology, physiotherapists play a central role in the global health environment.<sup>5</sup> Physiotherapists practice independently and work for hand in hand with other healthcare professionals in the provision of quality care. The presence of the physiotherapist in the multidisciplinary team is recognized as crucial and important in serving the interests of patients and health needs of the society. There is need for empirical data on how knowledgeable practitioners and students of other healthcare professions are regarding the role of physiotherapists in the health.<sup>6</sup>

The practice of physiotherapy as a first contact profession is not common in Zambia. Most referrals for physiotherapy come from medical doctors and many recipients of physiotherapy services often obtain information and advice about physiotherapy from their physicians. Several reports have however shown that medical practitioners appear not to possess adequate knowledge and understanding of physiotherapy practice, roles, and services, a situation that is perhaps traceable to the training received as students.<sup>7</sup> Given the low rate of physiotherapy referrals in Zambia<sup>8</sup> and the influence that the training university of medical doctors on their perception of physiotherapy, it is imperative for us to know the levels of knowledge and awareness of the role of physiotherapy in healthcare among medical students at Ridgeway campus.

## METHODS

The study was descriptive cross-sectional study design conducted at Ridgeway campus, Lusaka. Ethical approval was obtained from the University of Zambia, School of Health Sciences Research Ethics Committee (UNZA). One hundred and fifty-

two medical students of the University of Zambia participated in this study. We randomly sampled the 6th and 7th year medical students. Each student completed a self-administered questionnaire that obtained information on demographics, awareness of role of physiotherapists and educational sources of information. Descriptive statistics of frequency and percentages were used to summarize the demographic and "awareness of physiotherapy questionnaire" data. Chi-square test was used to analyse differences in awareness by gender and year of study. The significance level was set at 95% ( $p > 0.05$ ) interval. Analyses were carried out with Software Package for Social Sciences (SPSS, Chicago, IL) version 20.0.

## RESULTS

### *Demographic Characteristics of the Study Participants*

One hundred and fifty-two questionnaires were distributed and completed, giving a 100% response rate. Ninety-two students were males, constituting 60.5% ( $n=92$ ) of the sample, while students in the 6th and 7th years of study were 79 (52%), and 73 (48%), respectively. The age category distribution was such that they were more students overall in the age category 25 to 31 ( $n=116$ ; 76.3%), followed by age category of 18 to 24 ( $n=35$ ; 23.0%), with the least number of students in the age category of 32 to 38 ( $n=1$ ; 0.7%). Results obtained from the two types of students 0.7% ( $n=1$ ) of the respondents was in service while the other 99.3% ( $n=151$ ) quota students did not have prior work experience.

*Table 4.1: Demographic characteristics of participating medical students ( $n=152$ )*

Variable		N	%
Gender	Male	92	60.5
	Female	60	39.5
Age (years)	18-24	35	23.0
	25-31	116	76.3
	32-38	1	0.7
Level of training	6th year	79	52.0
	7th year	73	48.0
Mode of training	Quota student	151	99.3
	In-service	1	0.7

**Awareness on the Role of Physiotherapists**

Table 4.2 gives information about the role of Physiotherapists. Of total 152 medical students, majority of the medical students irresistibly agree or strongly agree that physiotherapists are integral members of health teams (n=140; 92.1%), and are capable of coordinating health care with other practitioners (n=136; 89.2%), educating patients and their family members (n=134; 88.1%), taking part in collaborative health research (n=133; 87.5%) and working in diverse settings including nonclinical ones (n=132; 86.8%), educating other health professionals on aspects of patient's care (n=131; 86.2%), and mainly assist medical work (n=127; 83.6%). The majority also agree or strongly agree that physiotherapists can work in intensive

care unit (n=110; 72.4%) and plan appropriate treatment based on assessment (n=110; 72.3%) and are capable of assessing X-rays and laboratory tests (n=99; 65.1%). The item that recorded the highest rate of "do not know" was on the physiotherapist's capability in referring cases to other health professionals (n=53; 34.9%) and playing a role in operative theatres (n=53; 34.9%). This was followed by items on the physiotherapist's ability to establish diagnoses (n=37; 24.3%) and function in mental health teams (n=31; 20.4%). Of the total 152 medical students, majority of medical students disagree or strongly disagree that physiotherapists play no role in accidents and emergency departments (n=99; 65.1%), are only involved in rehabilitation (n=80; 52.6%) and are incapable of practice independent of others (n=78; 51.3%).

**Table 4.2: Distribution of responses of medical students on the awareness of the role of physiotherapists (n=152)**

1. Physiotherapists are capable of establishing diagnoses	14 (9.2)	62 (40.8)	37 (24.3)	27 (17.8)	12 (7.9)
2. Physiotherapists mainly assist medical work	24 (15.8)	103 (67.8)	9 (5.9)	14 (9.2)	2 (1.3)
3. Physiotherapists can plan appropriate treatment programs based on assessment	23 (15.1)	87 (57.2)	22 (14.5)	15 (9.9)	5 (3.3)
4. Physiotherapists can educate other professionals on aspects of patient care	58 (38.2)	73 (48)	12 (7.9)	6 (3.9)	3 (2)
5. Physiotherapists can co-ordinate care with other practitioners	71 (46.7)	65 (42.8)	11 (7.2)	4 (2.6)	1 (0.7)
6. Physiotherapists manage patients only on a referral basis	20 (13.2)	43 (28.3)	40 (26.3)	44 (28.9)	5 (3.3)
7. Physiotherapists are incapable of practice independent of others	17 (11.2)	33 (21.7)	24 (15.8)	61 (40.1)	17 (11.2)
8. Physiotherapists are incapable of practice independent of a doctor	14 (9.2)	31 (20.4)	30 (19.7)	63 (41.4)	14 (9.2)
9. Physiotherapists can only plan treatments in conjunction with physicians	24 (15.8)	47 (30.9)	17 (11.2)	57 (37.5)	7 (4.6)
10. Physiotherapists are only involved in rehabilitation	12 (7.9)	39 (25.7)	21 (13.8)	64 (42.1)	16 (10.5)
11. Physiotherapists are integral members of teams providing mental health care	28 (18.4)	48 (31.6)	31 (20.4)	35 (23)	10 (6.6)
12. Physiotherapists have a role to play in operating theatres	17 (11.2)	18 (11.8)	53 (34.9)	48 (31.6)	16 (10.5)
13. Physiotherapists play no role in accidents and emergency departments	14 (9.2)	19 (12.5)	20 (13.2)	55 (36.2)	44 (28.9)
14. Physiotherapists work in intensive care units.	48 (31.6)	62 (40.8)	12 (7.9)	20 (13.2)	10 (6.6)
15. Physiotherapists have a role to play in patient and family education	54 (35.5)	80 (52.6)	13 (8.6)	4 (2.6)	1 (0.7)
16. Physiotherapists can take part in collaborative health research	57 (37.5)	76 (50)	15 (9.9)	3 (2)	1 (0.7)
17. Physiotherapists refer cases to other health professionals	20 (13.2)	56 (36.8)	53 (34.9)	19 (12.5)	4 (2.6)
18. Physiotherapists plan discharges and provide for patient follow-up appointments	20 (13.2)	63 (41.4)	27 (17.8)	32 (21.1)	10 (6.6)
19. Physiotherapists are integral members of the health team	64 (42.1)	76 (50)	6 (3.9)	4 (2.6)	2 (1.3)
20. Physiotherapists are capable of assessing x-rays and laboratory tests	30 (19.7)	69 (45.4)	28 (18.4)	18 (11.8)	7 (4.6)
21. Physiotherapists can work in diverse settings e.g. non-clinical settings	45 (29.6)	87 (57.2)	15 (9.9)	4 (2.6)	1 (0.7)

**Differences in awareness by gender and year of study.**

Table 4.4 presents the statistically significant differences in awareness among the medical students according to their year of study. The result of inferential statistics indicated no significant difference in awareness by gender for all 21 items of the role of physiotherapy in the questionnaire. Responses to 2 of the 21 awareness items were however statistically different by year of study. Significantly higher rates of agreement with statements on the physiotherapist's capability in diagnosis (item 1) and manage patients only on a referral basis treatment planning based on assessment (item6) were observed in 6th year medical students compared to the 7th year students. However, the gender of the medical students did not significantly influence their level awareness towards the role Physiotherapists in healthcare.

**Table 4.4: Results of the chi-square test for statistically significant differences in responses to statements on the role of physiotherapists by medical students' year of study.**

Year of Study	SA/A	DNK	SD/D	X <sup>2</sup>	P-value
Statement: Physiotherapists are capable of establishing diagnoses					
				15.092	0.005
6th	49	13	17		
7 <sup>th</sup>	27	24	22		
Statement: Physiotherapists manage patients only on a referral basis					
				9.973	0.041
6 <sup>th</sup>	34	17	28		
7 <sup>th</sup>	29	23	21		

NB: SA/A=Strongly Agree/Agree, DNK= Do Not Know, SD/D= Strongly Disagree/Disagree, X<sup>2</sup>= Chi Square value

**Sources of information about Physiotherapy**

Various educational sources of information about physiotherapy were identified by the participants and "clinical ward rounds" emerged as the most reported source (n=112; 73.7%) with the least being research (n=17; 11.2%).

**Table 4.5: Sources of information about Physiotherapy (n=152).**

Variable	Selected		Not Selected	
	N	(%)	N	(%)
1. Basic medical skills	81	(53.3)	71	(46.7)
2. Basic therapeutic skills	29	(19.1)	123	(80.9)
3. Basic clinical skills	47	(30.9)	105	(69.1)
4. Clinical ward rounds	112	(73.7)	40	(26.3)
5. Classroom lectures	33	(21.7)	119	(78.3)
6. Research	17	(11.2)	135	(88.8)
7. Other (mass media, internet etc.)	62	(40.8)	90	(59.2)

**DISCUSSION**

This study highlight that majority of the respondents were from the 6th year class, where the highest number of students are located. In this study, the results indicate that there is little awareness about the role of Physiotherapists in healthcare among the respondents.

In this study, the majority of respondents were male. It was also established that there was no impact of gender on knowledge towards the role physiotherapists play in healthcare. Arguably, this trend could have emanated from the equal amount of knowledge and exposure of students in clinical practice regardless of their gender. A study in Nigeria yielded similar results in which the authors reported no significant difference in awareness of physiotherapy between male and female medical students [9].

Knowledge about the significance of the role of Physiotherapy in the health care systems is essential to a medical doctor to whether to refer patients or not. According to WHO, a health professional's knowledge and utilization of the expertise and capabilities of other professionals is essential for effective teamwork and among other things, enhances appropriate referral patterns and better coordination of care, and minimizes service duplication [10].

However, responses to items on the role of physiotherapists in relation to the role of medical doctors recorded moderate levels of awareness. It should be mentioned that embracing the notion of working collaboratively requires students to reflect

on their own profession and professional background, and ultimately to see their own [4]. In this study, we observed that there are misconceptions about the role of medical practitioners as it relates to the practice of physiotherapy. For instance, the popular view in this study that physiotherapists must only manage patients on a referral basis is an example of an inadequate understanding of one's own roles and the role of others. This is supported by a study done by Vincent-Onabajo and colleagues where the authors noted that medical practitioners were of the view that the referring physician must be involved in planning physiotherapy treatment [9].

It was also determined that majority of the medical students do not know that a Physiotherapist is capable of establishing a diagnosis, have a role in providing mental health care and play a critical role in operative theatres as well as able to refer cases to other health professionals. Vincent-Onabajo and colleagues also found that most of the medical students agreed or strongly agreed that physiotherapists in the healthcare team mainly assist medical work and can only plan appropriate treatments in conjunction with physicians [9]. These findings reinforce the persistence of hierarchical stereotypes in healthcare delivery and the need to promote equal partnership among health professionals.

In this study, there was no significant difference in the awareness of the role of physiotherapists between male and female medical students similarly to the findings of Vincent-Onabajo and colleagues but contrary to the findings of Odebiyi and colleagues in which male medical students in a University in western Nigeria were more knowledgeable [6]. Our study, however, recorded a significantly higher level of awareness among students in their 6th-year of study. This is unexpected as students in their 7th-year of study who are in higher levels of study should have accumulated more years in clinical training and exposure which would have given them an added knowledge advantage over 6th medical students and other students.

Preparing students during their education for future collaboration is of paramount importance and it is a reasonable and effective way to contribute to efficient, cost-effective and high-quality health care. Similar to the findings of Vincent-Onabajo and colleagues it was noted that clinical ward rounds were identified as the most common source of information on the role of physiotherapists in healthcare delivery system [9].

It is believed that an effective teamwork is an essential tool for constructing a more effective and patient-centered health care delivery system. According to Hall [11], spending time together, to learn and work together as exemplified in an inter-profession education (IPE) is an effective means of developing skills needed for collaborative practice. Therefore, lack of knowledge on the culture of the workplace and its impact on health care team dynamics and functioning can make a team member a bad team player.

## CONCLUSION

Understanding and appreciating professional roles of others should be considered to be as a core requirement for health profession students' education that will result in collaborative practice skill and patient-centred team work. The study revealed that medical students have low levels of awareness regarding the role of the Physiotherapists as related to the role of the medical doctors. Results of this study also revealed that clinical ward rounds were identified as the most common source of information about physiotherapists. Though medical students showed low levels of awareness, in this study slightly high levels of awareness about the effect of physiotherapy in various specialties and the need of physiotherapy in surgical procedures (pre/post-operative) was seen among the medical students. Therefore, there is a need for physiotherapists to educate medical students on various specialties of physiotherapy like women's health, industrial health, cardiopulmonary dysfunction, and geriatrics physiotherapy.

## RECOMMENDATIONS

Based on the findings of this study, we suggest that the University of Zambia should put up a system that will encourage Inter-department research projects. The University of Zambia should also reinforce an interaction programme like partnerships to promote interactive sessions about the update of each other's profession.

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