



Knowledge, attitude, practice and associated factors of Physiotherapy among Medical Doctors in Tigray, Northern Ethiopia – A cross sectional study

Rahul Krishnan Kutty PhD, PT¹, Hailay Gebremichael BSc PT, MPH(RH)², & Shiby Varghese PhD,PT³

¹Lecturer in Physiotherapy, Department of Physiotherapy, College of Health sciences, Mekelle University, Mekelle, Ethiopia.

²Senior Physiotherapist, Department of Physiotherapy, College of Health sciences, Mekelle University, Mekelle, Ethiopia.

³Lecturer in Physiotherapy, Department of Physiotherapy, College of Health sciences, Mekelle University, Mekelle, Ethiopia.

Abstract

Introduction

Physiotherapy is a service to people and populations to develop maintain and restore maximum movement and functional ability throughout the life span. Today, health practitioners including Medical doctors work alongside physiotherapists to offer the best treatment and recovery choices for their patients.

Objectives

To find out knowledge, attitude and practice (KAP) of physiotherapy and factors associated with it among Medical Doctors in Tigray, Northern Ethiopia.

Methodology

Institution based cross sectional study was carried out. A sample of Medical doctors working in public institutions/hospitals in and around Mekelle, Northern Ethiopia was included in the study. A Self administered semi-structured questionnaire was used to collect data, collected data was cleaned and analyzed using SPSS version 16 for windows. The knowledge, attitude and practice were estimated using proportion. To predict the influence of factors associated with the knowledge, attitude, and practice, multivariate logistic regression was employed. The findings was generalized to the source population using the 95% confidence interval and determined the statistical significance at $P < 0.05$. The final logistic model was checked for its adequacy and fitness.

Results

The total numbers of respondents were 221 medical doctors out of them; nearly 50% of Medical doctor's knowledge and attitude were inadequate and negative respectively. On the other hand 67% of medical doctors have good practice of physiotherapy. Specialists were 38.4 times more knowledgeable than General Practitioner. Medical doctors with in age 27-36 were 94% less likely to have Positive attitude than doctors within age group 22-26 and doctors within age group 39-45 were 99% less likely to have good attitude than doctors within age group 22-26. Medical doctors of age group 27-36 were 5 times more likely to have good practice of physiotherapy when compared to age group of 22-26.

Conclusion and recommendation

The response rate was 94.4%. Nearly 50% of Medical doctor's knowledge and attitude were inadequate and negative respectively. On the other hand 67% of Medical Doctors have good practice of physiotherapy. So it is highly recommended to include physiotherapy subjects in the curriculum of Medicine and IEC and BCC should be boosted by Health bureau to take step to bring up knowledge and good attitude among medical doctors.

Key words: Awareness, Attitudes, Knowledge, Practice, Medical Doctors, Physiotherapy.

1. Introduction

With the rapid advancements in technology along with modernization of life style, Health Care Sector has been rapidly growing. Globalization is having a significant impact on health care and the demands put on the health profession are increasing. With the development of new medical techniques and the continuous influx of research, the quality of health services has indeed improved drastically. One of the growing Health care sectors includes Physical therapy / Physiotherapy. Over the years, there has been a tremendous change over the attitude of the medical community regarding physiotherapy. Decades before, the sole people considered appropriate to take care of any injured person, no real matter what the injury, was a medical doctor. Today, health practitioners work alongside physiotherapists to offer the best treatment and recovery choices for their patients. While a doctor can diagnose an illness, relieve symptoms with medication, perform surgeries and suggest the very best treatment for an, disease or injury, a Physiotherapist can help a person who is recovering from such techniques to produce a better and much faster recovery. Physiotherapy is a service to people and populations to develop maintain and restore maximum movement and functional ability throughout the life span.¹

Physiotherapy is concerned with identifying and maximizing movement potential, within the spheres of promotion, prevention, treatment and rehabilitation. Physiotherapy is used in wide variety of disease conditions like musculoskeletal problems (joint pain, stiff shoulder, low back pain etc), neurological disorders(stroke , Parkinson, cerebral palsy etc),

sport injuries (ACL injuries, shoulder impingement syndrome etc), geriatric injuries, burn injuries and rehabilitation of patients in Intensive care unit.²

Physiotherapists are the health care professionals who maintain, restore, and improve movement, activity, and health enabling individuals of all ages to have optimal functioning and quality of life.³

1.1 Scenario in Ethiopia

Based on the World Report on Disability jointly issued by the World Bank and World Health Organization, there are an estimated 15 million children, adults and elderly persons with disabilities in Ethiopia, representing 17.6 per cent of the population^{4,5,6}.

The number of persons with disabilities in Ethiopia is likely to be underestimated due to inadequate definitions or what constitutes disability and which disabilities should be included in the count. The actual number of people with disabilities in Ethiopia is therefore likely to be much higher. Where government is fighting against the background of an ever increasing HIV/AIDS epidemic, a growing financial burden of an ageing population and raising costs of providing health care for chronic diseases, physiotherapy profession faces major challenges.

The University of Gondar in northern Ethiopia began the national's first Bachelor of Science Physiotherapy degree program in 2002. First Batch was graduated since 2006; currently a 223 number of Ethiopian physiotherapists graduated from University of Gondar in a period 2006 to 2012/2013 and are serving more than 80 million populations⁷. Physiotherapists assist people who are at risk of developing or have a chronic disease to safely optimize their level of physical activity. They also help people with chronic diseases to safely and effectively manage their own care⁸. Physiotherapy plays a big role in disabilities Management and fighting chronic non communicable diseases which recently have been a big threat to the population. This indicates there is a lack of access to get physiotherapy service and has high burden among physiotherapy professionals in Ethiopia.

For any country the Health sector is very important in the progress of the country and their people. Medicine bridges the gap between science and society. Indeed, the application of scientific knowledge to human health is a crucial aspect of clinical practice. Medical Doctors are one important agent through which that scientific understanding is expressed. Medical Doctors share the responsibility in treating, improving the health status and rehabilitating patients. Medical Doctors are the key players in a rehabilitation team. Among the rehabilitation team physiotherapy is a part, whereby the most the reference towards the physiotherapy department depends upon Medical Doctors. This clearly indicates that the awareness of physiotherapy among medical doctor is very important when it comes to reference of patient's.

Accordingly, there is an urgent need to check the knowledge, attitude and practice towards physiotherapy in order to provide high quality physiotherapy services for Ethiopian people. Most of the health care providers as well as the general public are still unaware of physiotherapy. However, there are limited studies which have explored knowledge, attitudes and practice of medical doctors concerning to Physiotherapy service, particularly in the Tigray, Northern part of Ethiopia moreover, the numbers of patients referred by Medical doctors to Physiotherapy Clinic is very minimal. Keeping this in view, this study was conducted to assess the knowledge, attitude and practice of physiotherapy and associated factors among Medical doctors in Tigray, Northern Ethiopia.

2. Materials and Methods

A cross-sectional survey study was conducted in Tigray Regional State public hospitals. The hospitals which are included in the study are total of 14 hospitals which includes 13 public and 1 Army hospital. From this Hospitals a sample of 235 doctors which includes Medical intern's students of 84 were selected randomly. The study was conducted in a time frame from March 2013- May 2013. To assess knowledge, attitudes and practice, a self-administered questionnaire was developed with reference to WHO standard questionnaire for KAP. Questionnaire was pretested and modified with a convenience sample of Twelve Medical doctors out of actual study participants. Then, the questionnaires, its content, wording, instructions and ease of completion were revised accordingly.

Questionnaire comprised four sections exploring socio-demographic characteristics, knowledge regarding Physiotherapy, attitude towards Physiotherapy service and practice of Physiotherapy among medical doctors respectively. The knowledge section had 12 questions about department of physiotherapy, duties and responsibilities of physiotherapist, role of physiotherapy in various clinical setups (Like Post-operative, neonatal, neurological and cardio-respiratory rehabilitation). Responses were recorded in terms of "YES", "NO" or "NOT SURE". The attitude scale consisted of 10 questions on medical doctor's attitude, such as willingness to refer patient to physiotherapy department, professional ethics among physiotherapist, interaction among Doctors and physiotherapist, training needs concerning effective physiotherapy service and opening of new schools of physiotherapy in the country. Responses were recorded on a three point Likert scale, DISAGREE (=1) to AGREE (=3). Participants were explained in detail regarding the purpose of the study; informed consent was obtained and questionnaires were distributed. Necessary steps were taken to maintain anonymity.

Ethical clearance for the study was obtained from the Research and Community service office of Mekelle University. The collected data was entered, cleaned and analyzed using SPSS version 16 for windows. Exploratory data analysis was carried out to scrutinize the level of missing values, multi-collinearity using VIF and influential outliers using the DfBeta. The knowledge, attitude and practice were estimated using proportion. To predict the influence of factors associated with the KAP, multivariate logistic regression was employed. The findings were generalized to the source population using the 95% confidence interval and determined the statistical significance at $P < 0.05$. The final logistic model was checked by omnibus test and Hosmer and Lemeshow test for its adequacy and fitness respectively.

3. Results

3.1 Socio Demographic characteristics

Two hundred thirty five questionnaires were distributed out of which 221 responded and were analyzed with response rate of 94.04%. The age of the participants ranged from 22 to 45 years with median age of 28yrs. Majority of respondents 140 (63.3%) were between the ages of 22 and 26 years (Table-I). Out of 221 participants one hundred and forty (63.3%) of the respondents were Male and 81(36.7%) were Female (Table-I). The majority of the study participants 101(45.7%) are specialist doctors, whereas 84(38.0%) are Medical internees students and rest 36(16.3%) are general practitioners (Table-I). The respondent according to their specializations were sorted as, out of 221 participants majority One hundred and thirty one (59.3%) belongs to medicine, following by thirty six (16.3%) from pediatrics department, twenty five (11.3%) from surgical department, followed by gynecology, dermatology and other departments.

Table- I Socio demographic characteristics of Medical Doctors on KAP towards physiotherapy Tigray, Northern Ethiopia, May 2013.

Variables	Frequency	Percentage
Age(n=221)		
22-26	140	63.3%
27-32	45	20.4%
33-38	23	10.4%
39-45	13	5.9%
Sex(n=221)		
Male	140	63.3%
Female	81	36.7%
Designation(n=221)		
GP	36	16.3%
Specialist	101	45.7%
Internees Students	84	38.0%
Specialization(n=221)		
Medicine	131	59.3%
Surgery	25	11.3%
Pediatrics	36	16.3%
Gynecology	12	5.4%
Dermatology	9	4.1%
Others	8	3.6%

Among 221 respondents majority of them Ninety (44.3%) have completed their education from Addis Ababa University, eighty eight (39.8%) from Mekelle university followed by sixteen (7.2%) from Gondar University and eleven (5%) from Gimma University and six (2.71%) from other universities (Table-II). Majority of the population included in the study seems to be One hundred and ten (49.8%) are Clinicians and One hundred and two (46.2%) are Academicians and clinicians (both) and left nine (4.1%) are Academicians only (Table-II). The distributions of participants according to years of experience is out of n=221,One hundred and eighty four (83.3%) are from 0-5 years of experience, Twenty Nine (13.1%) between 5-10 years of experience, four (1.8%) between11-15 years of experience and four (1.8%) greater than 15 years of experiences(Table-II).

Table- II: Socio demographic characteristics of Medical Doctors on KAP towards physiotherapy Tigray, Northern Ethiopia, May 2013.

University Studied(n=221)	Frequency	Percentage
Addis Ababa	98	44.3%
Gondar	16	7.2%
Mekelle	88	39.8%
Gimma	11	5.0%
Hawassa	2	0.90%
Others	6	2.71%
Job Description(n=221)		
Academicians	9	4.1%
Clinicians	110	49.8%
Both	102	46.2%
Years of Experiences(n=221)		
0-5	184	83.3%
6-10	29	13.1%
11-15	4	1.8%
>15	4	1.8%

3.2 Knowledge of physiotherapy among medical doctors in Tigray, Northern Ethiopia

Out of total 221 respondents, majority have adequate knowledge about the service of physiotherapy, role of physiotherapy and responsibility and duties of physiotherapist. Knowledge about physiotherapy was determined according to the scoring awarded to the population as adequate & inadequate knowledge. A total number of respondents 221 medical doctors out of them, Ninety five (43%) have inadequate knowledge and one hundred and twenty six (57%) have adequate knowledge regarding physiotherapy (Table-III).

Table-III: Distribution of Respondents according to Knowledge of Physiotherapy in Tigray, Northern Ethiopia, May 2013.

Knowledge	Frequency	Percentage
Adequate	126	57%
Inadequate	95	43%
Total	221	100%

Logistic Regression was used to determine the set of predictor variables which predicted knowledge of Physiotherapy. A significant association between knowledge of physiotherapy and occupation/designation and specialization of medical doctors was found. Participants who had been classified according to their specialization, specialist were 38.4 time more likely knowledgeable than General Practitioner [AOR=38.394(7.7673-192.12)], in addition to this medical internees were found to be 9.3 times more knowledgeable than General practitioners. More over pediatricians were found to be 84.5% less likely to have knowledge about Physiotherapy when compared to other specialists [AOR=0.155(0.041-0.591)] (Table-IV).

Table-IV: Predictor variables of knowledge of Physiotherapy among Medical Doctors, Tigray, Northern Ethiopia, May 2013.

Characteristics	Knowledge		Odds ratio (95% CI)	
	Inadequate	adequate	COR	AOR
Occupation				
General Practitioner	28	8	1	1
Specialist	34	67	6.897(2.839-16.754)*	38.394(7.7673-192.12)**
Internees	33	51	5.409(2.200-13.298)*	9.294(3.128-27.614)**
Specialization				
Medicine	37	94	1	1
Surgery	4	21	0.662(0.168-2.616)	0.114(0.019-0.692)
Pediatrics	24	12	0.595(0.239-1.476)	0.155(0.041-0.591)**
Gynecology	8	4	0.189(0.049-0.729)*	0.132(0.023-0.758)
Dermatology	5	4	0.303(0.71-1.292)	0.274(0.044-1.692)
others	7	1	0.394(0.190-0.814)*	1.160(0.215-6.269)

**Remained statistically significant in adjusted odds ratio.

3.3 Attitude of medical doctors towards physiotherapy in Tigray, Northern Ethiopia

The attitudes of Medical doctors towards physiotherapy were measured using three items rated on a three-point Likert scale as(1) Disagree, (2) No opinion (3) Agree. Using this Three-point scale for 10 questions, we arbitrarily set the maximum score for each respondent at 30 and the minimum at 3. Attitude score of 105(47.5%) respondents had negative attitude and 116(52.5%) of respondents had positive attitude towards role of physiotherapist, awareness, and ethics of physiotherapy service (Table-V).

Table-V: Distribution of Respondents according to Attitude towards Physiotherapy among Medical Doctors, Tigray, Northern Ethiopia, May 2013.

Knowledge	Frequency	Percentage
Negative Attitude	105	47.5%
Positive Attitude	116	52.5%
Total	221	100%

Variables that entered in to logistic regression, Independent variables that showed significant association with attitude of medical doctors towards physiotherapy were occupation/designation and specialization of medical doctors. Which shows Medical doctors with in age 27-36 were 94% less likely to have Positive attitude than doctors within age group 22-26 [AOR=0.062(0.016-0.235)] and Medical doctors within age group 39-45 were 99% less likely to have good attitude than Medical doctors within age group 22-26 [AOR=0.014(0.024-0.819)]. Medical doctors who studied there first

degree in Mekelle university were 25 times more likely to have good attitude towards physiotherapy [AOR=0.034(0.006-0.0202)] (Table-VI).

Table-VI: Predictor variables of Attitude of Medical Doctors towards Physiotherapy, Tigray, Northern Ethiopia , May 2013.

Characteristics	Attitude		Odds ratio (95% CI)	
	Negative	Positive	COR	AOR
Age				
22-26	37	103	1	1
27-36	35	10	0.103(0.046-0.228)*	0.062(0.016-0.235)**
33-38	23	2	0.150(0.056-0.313)	1.001(0.077-0.273)
39-45	10	3	0.108(0.028-0.413)*	0.014(0.001-0.254)**
Occupation/Designation				
GP	9	27	1	1
Specialist	63	38	0.201(0.085-0.473)*	3.477(0.541-22.329)
Internees	33	51	0.222(0.044-1.124)	0.132(0.023-0.758)
University studied				
Addis Ababa	48	28	1	1
Gondar	9	7	1.392(0.480-4.035)	0.022(0.441-0.513)
Mekelle	27	61	4.043(2.214-7.384)*	24.841(4.012-153.80)**
Gimma	1	10	17.895(2.205-145.2)*	0.062(0.007-0.396)
Hawassa	14	1	0.100(0.023-1.104)	0.132(0.021-0.766)
Others	6	4	0.111(0.064-1.117)	0.123(0.013-0.708)

**Remained statistically significant in adjusted odds ratio.

3.4 Practice of physiotherapy among medical doctors in Tigray, Northern Ethiopia.

Regarding the practice of physiotherapy among Medical doctors showed very promising in referral of patients to the physiotherapy department. Out of (n=221) respondents, Almost every respondent says that they have referred patients for physiotherapy treatment. Out of 221 Doctors, 192(86.9%) have practiced early mobilization which claims to be beneficial for faster rehabilitation of patient (Figure-1). From the distributions of cases which are referred, total of n=221 medical doctors, out of that 163(49.8%) of doctors refers neurology related cases followed by 130(39.8%) of orthopedics cases for physiotherapy treatment (Figure-2).

Figure-1: Distribution of Respondents according to Practice of Physiotherapy among Medical Doctors, Tigray, Northern Ethiopia, May 2013.

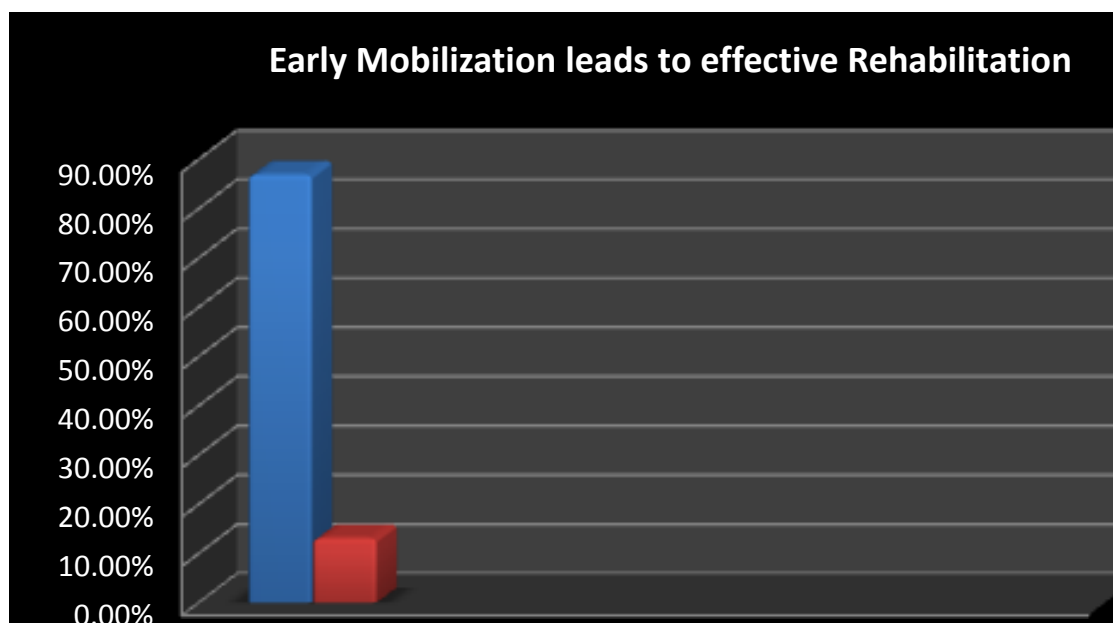
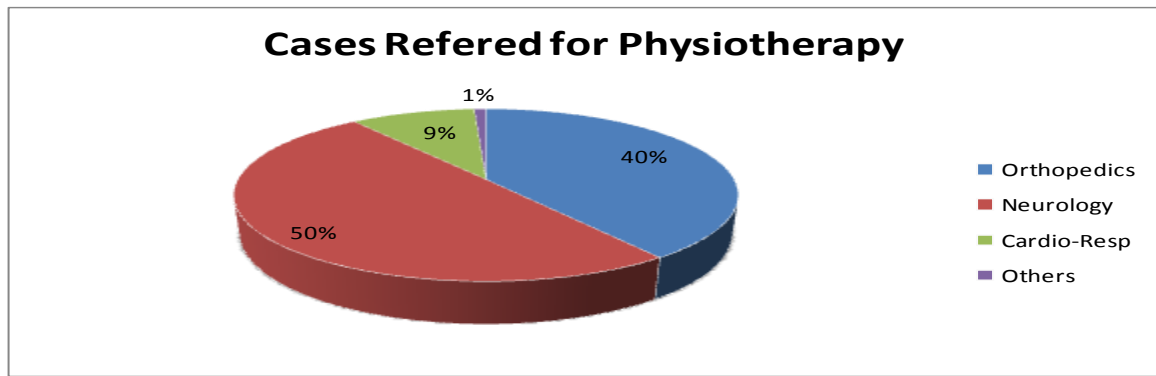


Figure-2: Distribution of Respondents according to referred cases to Physiotherapy by Medical Doctors, Tigray, Northern Ethiopia, May 2013.



Later when asked about the most vital cases should be referred for physical rehabilitation, 181(51.9%) practice neurological cases followed by orthopedics cases. Responds regarding the unqualified / unprofessional person practicing physiotherapy 190(85.9%) of respondent replied as legal action should be taken against that person (Table: VII).

Table-VII: Multiple response questions for practice of physiotherapy among doctors in Tigray, Northern Ethiopia, May 2013.

S.No	Questions	Response	Frequency	Percentage
1.	What types of cases you think physical rehabilitation is most vital?	Orthopedics	87	24.9%
		Neurological	181	51.9%
		Cardio-respiratory	81	23.2%
		Others	-	-
2.	In your opinion, What should be done if unqualified / unprofessional person practice physiotherapy?	Encouraged	9	4.07%
		Legal action	190	85.9%
		Unnoticed	3	1.3%
		I don't want to discuss	19	8.5%

Logistic Regression was used to determine the set of predictor variables which predicted practice of physiotherapy service. Independent variables that showed significant association with practice of physiotherapy in the multivariate logistic regression were: Age, sex, occupation, university studied, specialization and knowledge were found significant in the final model. This shows medical doctors of age group 27-36 were 4.9 times more likely to have good practice of physiotherapy when compared to age group of 22-26[AOR=4.894(1.176-20.36)]. Similarly when analyzed male doctors were 3.4 times more likely to practice physiotherapy than female doctors [AOR=3.437(1.331-8.872)]. Medical interneers students were 90% less likely to practice physiotherapy than GPs [AOR=0.11(7.318-1.563)]. According to specialization pediatricians were 1.46 times more likely to practice physiotherapy than Medical internists [AOR=1.466(0.305-7.060)] (Table-VIII).

Table-VIII: Predictor variables of Practice of Physiotherapy among Medical Doctors, Tigray, Northern Ethiopia May 2013.

Characteristics	Practice		Odds ratio (95% CI)		
	Good	Poor	COR	AOR	
Age					
22-26	90	50	1	1	
27-36	37	8	2.569(1.111-5.944)*	4.894(1.176-20.360)**	
33-38	13	10	0.722(0.295-1.766)	0.681(0.146-3.189)	
39-45	8	5	0.108(0.028-0.413)	6.273(0.056-1.342)	
Sex	Female	84	56	1	1
	Male	64	17	2.510(1.333-4.725)*	3.437(1.331-8.872)**
Occupation/Designation					
GP	15	21	1	1	
Specialist	66	35	2.640(1.211-5.754)*	0.443(1.989-0.343)	
Interneers	67	17	5.518(2.359-12.908)*	0.11(7.318-1.563)**	
Specialization					
Medicine	36	15	1	1	
Surgery	7	4	0.729(0.186-2.864)	0.305(0.040-2.295)	
Pediatricians	28	8	1.458(0.542-3.925)	1.466(0.305-7.060)	
Gynecology	4	8	0.208(0.054-0.798)*	0.050(0.007-0.386)	
Dermatology	3	6	0.208(0.46-0.944)*	0.256(0.021-3.098)	
others	70	32	0.911(0.438-1.898)	0.949(0.201-4.487)	
Poor Knowledge	45(47.4%)	50(52.6%)	1	1	
Good Knowledge	103(81.7%)	23(18.3%)	4.976(2.716-9.116)*	5.438(2.200-13.440)**	

**Remained statistically significant in adjusted odds ratio.

Table-IX: Distribution of Respondents according to Knowledge of Doctors and practice of Physiotherapy among them.

Knowledge of Physiotherapy	Poor practice	Good practice
Inadequate knowledge	50(52.6%)	45(47.4%)
Adequate knowledge	23(18.3%)	103(81.7%)

When analyzed with knowledge and practice of physiotherapy among medical doctors, which shows those doctors with good knowledge of physiotherapy, were 5.4 times more likely to practice physiotherapy than doctors with poor knowledge of Physiotherapy [AOR=5.438(2.200-13.44)] (Table-IX).

4. Discussion

Ninety five (43%) of the medical doctors have inadequate knowledge of Physiotherapy whereas 126(57%) have adequate knowledge about physiotherapy. This may be due to physiotherapy is a new emerging discipline to Ethiopia and since last 10 years there have been a single physiotherapy school in whole country, which clearly indicates the lack of awareness and knowledge of physiotherapy subjects among medical doctors .

When compared to GPs, specialists were 38.4 times more likely to have adequate knowledge of physiotherapy. These might be due to specialist have more exposure and experience with cases related to physiotherapy than GPs, in another scenario pediatrician were 85% less likely to have adequate knowledge when compared to Internists. This might be due to Internists have more exposure and experience in dealing with adult physiotherapy related cases than pediatricians. Medical doctors may be unaware of physiotherapy due to the absence of the functioning physiotherapy department in their work place. Remarkably, a dearth of literature exists regarding awareness of physiotherapy among medical doctors. Medical internees students of Mekelle university were 9.3 times more likely to have adequate knowledge than GPs Whereas, In one study done in Australia it was reported that the knowledge and perception of physiotherapy services among the medical students is low as the medical students had received little formal education about physiotherapy throughout their undergraduate course⁹. This difference might be due to recent physiotherapy awareness creation programme conducted in Mekelle University for medical interneer's students which made them to have adequate knowledge about physiotherapy when compared to Medical Students in Australia.

Comparing the attitude, 47.5% of medical doctors have negative attitude towards physiotherapy, these huge percentage might be due to inadequate knowledge of doctor towards physiotherapy. More over it can be also due to exclusion of physiotherapy subjects from the curriculum of medical doctors which in turn shows lack of team work among Health professional and departmental biases. Doctors generally have a narrow view of physiotherapy scope and technique and such narrow medical perspectives of physiotherapy have been identified as a barrier to the development of the profession in many other countries ,for example a study conducted in Vietnam¹⁰.

Age group 27-32 were 94% less likely to have positive attitude than age group 22-26 and age group 39-45 were 98.6% less likely to have positive attitude than age group of 22-26. These might be due to age group 27-32 includes GPs and they didn't have adequate knowledge of Physiotherapy and age group 39-45 were reluctant to accept physiotherapy as a part of medicine .

Analyzing about practice, 33% of the respondents have poor practice of physiotherapy; this might be due to inadequate knowledge and huge negative attitude of Medical doctors towards physiotherapy. Doctors within the age group 27-32 were 5 times more likely to have good physiotherapy practice when compared to 22-26, this might be due to age group 22-26 they are Medical Internees students and GPs, and they might be influenced by senior doctors for prescribing physiotherapy. Medical internees students were 89% less likely to practice physiotherapy than GPs and this might be due to they are not fully authorized to prescribe physiotherapy until consulted by senior medical doctor. Those respondents with good knowledge of physiotherapy were 5.4 times more likely to practice physiotherapy than those with poor knowledge of physiotherapy; this clearly indicates that knowledge is a prerequisite to have good practice. The WCPT Newsletter summarized issues for physiotherapists in Kenya, Uganda, Malawi and Tanzania describing similar problems to those in Ethiopia¹¹.

5. Conclusion

Even though the awareness about physiotherapy among medical doctors looks appreciable and satisfying to the authors, there stills remains a deficit regarding awareness in terms of referrals and specialized physiotherapy services. While concluding about 43% of medical doctors have inadequate knowledge about physiotherapy and GPs were less knowledgeable about physiotherapy when compared to specialists and internees' students. About 47.5% of Medical Doctors have negative attitude towards physiotherapy and medical doctors within the age group of 27-32 & 39-45 have negative attitude towards physiotherapy. Even though nearly 50% of Medical doctor's knowledge and attitude were inadequate and negative respectively, 67% of them have good practice of physiotherapy.

6. Recommendation

- It is highly recommended to include physiotherapy subjects in the curriculum of Medicine.
- It is essential that the Tigray Regional Health Bureau should implement IEC in training and awareness creation programme of physiotherapy among Medical Doctors sustainably.
- BCC should be boosted by Health bureau to take step to bring up good attitude among medical doctors.
- It is strongly recommended for the researchers to have further studies in KAP and its predictors on physiotherapy which includes qualitative and quantitative part.

7. Acknowledgment

We would like to extend deep sense of gratitude and acknowledge to all Medical doctors who participated in this study. The Authors also acknowledge Mekelle University, Mekelle University Health Science college research and community service, Mekelle University Dean College of Health sciences, Medical Director and fellow colleagues of Department of Physiotherapy at Ayder referral Hospital.

8. Reference

- 1) World Confederation of Physical Therapy: The nature of physical therapy 2002 October 12.
Available from: http://www.wcpt.org/policies/description/what_is_physical_therapy.html // has stated the definition of physical therapist. (Accessed on March 2013).
- 2) Today's physical therapist 2011: A comprehensive review of a 21st century health care profession, has given the definition of physiotherapy. Available at: <http://www.apta.org/TodaysPT/> (Accessed on March 2013).
- 3) Childs J, Whitman J, Sizer P, Pugia M, Flynn T, Delitto A. A description of physical therapists' knowledge in managing musculoskeletal conditions. *BMC Musculoskeletal disorders* 2005 6:32 .
- 4) World Bank and World Health Organization: World Report on Disability, Washington, D. C., 2011. Available at: http://www.who.int/disabilities/world_report/2011/accessible_en.pdf (Accessed at April 2013).
- 5) CARDOS (2007) Research report on the General Conditions of People with Disabilities in Ethiopia, Addis Ababa. Available: <http://www.aifo.it/.../research/reports/NewParadigmHealthCareDisabilities> (Accessed on March 2013).
- 6) Ministry of Labour and Social Affairs (MOLSA) 2010.
Available: http://www.ilo.org/wcmsp5/groups/public/---ed.../wcms_112299.pdf (accessed on April 2013).
- 7) University of Gondar, Physiotherapy Department.
Available: <http://www.uog.edu.et/academic-units/college-of-medicine/department-of-physiotherapy/> (Accessed March 2013).
- 8) Australian Physiotherapy Association (2005) Position Statement: Evidence regarding therapeutic exercise in physiotherapy. Available on <http://www.physiotherapy.asn.au> ; retrieved 29 May 2009. (Accessed on March 2013).
- 9) Lee K, Sheppard L. An investigation into medical students' knowledge and perception of physiotherapy services. *Australian Journal of Physiotherapy* 1998;1;44(4):239-245.
- 10) Kay E, Huong N T, Chau N TM. Upgrading physical therapy education in Vietnam. Cross-cultural Rehabilitation, R L Leavitt. W.B.Saunders, London 1999 Available:
<http://www.cline.lib.nau.edu/search~rehabilitationcrosscultural>. (Accessed on March 2013)
- 11) World Confederation for Physical Therapy (WCPT Newsletter). *Physiotherapy* 1994; 80(4)231–232
Available [http://www.physiotherapyjournal.com/article/S0031-9406\(10\)61305](http://www.physiotherapyjournal.com/article/S0031-9406(10)61305) (Accessed on March 2013).

Abbreviations

AIDS- Acquired Immuno Deficiency Syndrome
 AOR- Adjustable Odds ratio
 ACL- Anterior Cruciate Ligament
 BCC- Behavioral Changes through Communications
 COR- Crude Odds Ratio
 GPs- General Practitioners
 HIV- Human Immuno Virus
 IEC- Information Education and communication
 KAP- Knowledge, Attitude, Practice
 SPSS- Statistical Package for Social Science
 VIF- Variance Inflation Factor
 WCPT- World Confederation for Physical Therapy