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NATURE OF PRACTICE AMONG THE PHYSIOTHERAPY PROFESSIONALS

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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled.

NATURE OF PRACTICE AMONG THE PHYSIOTHERAPY PROFESSIONALS

Submitted by **Md Ahnaf Al Mukit** for partial fulfilment of the requirements for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

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Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also decline that same any publication, presentation or dissemination of information of the study. I would be bound to take written consent from the Physiotherapy department, Bangladesh Health Professions Institute (BHPI).

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Acronyms

BHPI	Bangladesh Health Professions Institute
BMRC	Bangladesh Medical Research Council
BPA	Bangladesh Physiotherapy Association
CRP	Centre for the Rehabilitation of the Paralysed
EBP	Evidenced Based Practice
IRB	Institutional Review Board
NGO	Non-governmental Organization
NITOR	National Institute of Traumatology & Orthopaedic Rehabilitation
NSAIDs	Non-steroidal Anti-inflammatory Drugs
Org	Organization
PTs	Physiotherapists
WCPT	World Confederation for Physical Therapy
WHO	World Health Organization

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Abstract

Background: The physiotherapy practice has similarities and dissimilarities across countries. Determination of nature of practice of physiotherapy professionals in a country context is necessary to establish evidence based practice. The aim of the study is to find out the nature of Physiotherapy practice among the professionals. ***Methods:*** A cross sectional study were chosen and sampling technique were purposive. Period of data collection was April 2019 to July 2019. There were 115 participants in this study. A structured questionnaire was used to collect the participant's information. ***Results:*** In this study shows 64 (55.7%) were male and 51 (44.3%) were female; majority of the participants were in their 2nd decade of life which consisted 64 (55.7%) followed by between 26-30 years. Major proportion of professionals involve in the current work position 77 (67%) were clinical physiotherapist. Highest level of educational background was 56 (48.7%) Bachelor's degree. Most of the professionals practice duration were 58 (50.4%) between 2-5 years. Among the professionals 33 (28.7%) were musculoskeletal practitioner and 72 (62.6%) works in hospital. Daily most preferred options for treating patient was Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience 10 (8.7%). Significant association p=0.049 is being found between education and barriers. ***Conclusions:*** Physiotherapy, a novel profession in Bangladesh tries to explore their autonomous practice and tries to remove the barriers in every aspect of their practice. It is obvious to achieve the desire goal, need to activate the Rehabilitation Act-2018 as well as good governance and good communication with stakeholders.

Keyword: Physiotherapist, Nature of Practice, Bangladesh.

CHAPTER-I INTRODUCTION

1.1. Background

Physiotherapy is known as a novel profession where a physiotherapist used to improve a patient's physical functions through physical examination, diagnosis, prognosis, physical intervention, rehabilitation and patient education. According to World Confederation for Physical Therapy (WCPT), Physical therapy services are provided by physical therapists to individuals and populations to develop, maintain and restore maximum movement and functional ability throughout the lifespan. The service is provided in circumstances where movement and function are hindered by ageing, injury, pain, diseases, disorders, conditions or environmental factors and with the understanding that functional movement is central to what it means to be healthy (WCPT, 2019).

Physiotherapists are experts in developing and maintain individuals' capacity of movement through all phases of their lives. They help to maintain life style, treat and prevent many health related problems such as injury, pain, diseases, degenerative conditions and inactivity. Also, Physiotherapist are expert in treating people with neurological condition such as stroke, GBS, transverse myelitis, spinal cord injury; children with disability as cerebral palsy, spina bifida and mental health issues (Mamin & Hayes, 2018). Even though in disaster management, saving lives and reducing the extend of the injuries, Physiotherapist plays a vital role in each stage of responses. physiotherapy have been considered to play a vital role in the medium to long-term care plan of the people affected with disability or injury following a disaster or war (Moore et al., 2013).

Bangladesh have a 48 years' history of introducing Physiotherapy education and services. The country became independent in 1971. The National Institute of Traumatology and Orthopedic Rehabilitation (NITOR) was built up to treat and restore those injured during the war of freedom with Pakistan. This interest for restoration authorities prompted the improvement of the primary physiotherapy course in the nation in 1973. This course just observed two classes graduate before it was ended (Mamin & Hayes, 2018). In 1992, in association with Dhaka University, the Bangladesh Health Professions Institute (BHPI) and NITOR built up a bachelor degree in physiotherapy. This course was a 4-year program with more than 1,000 clinical

position hours, trailed by a 1-year obligatory internship, a model which is still being used today with some revisions. Until now, there are eight institutes which give a bachelor Physiotherapy capability: BHPI, NITOR, Dhaka Institute of Health and Technology, Rajshahi Institute of Health and Technology, State College Health Sciences (SCHS), SAIC Institute of Medical Technology, Gono Bishwabidyalay and Jashore University of Science and Technology. What's more, both the BHPI enrolls a Master's program in Physiotherapy affiliated to the University of Dhaka (BPA, 2019).

In this 48 years' timeline, more than 2000 physiotherapist graduated and practice independently mostly in private chambers. In 2018 "Bangladesh Rehabilitation Council Act 2018" passed from the cabinet to regulate the Physiotherapist and 13 other health and rehabilitation professionals in Bangladesh. Physiotherapists work in various workplace setting, including hospitals, sports, education, research, community settings, nursing's, health center and emergency medical facilities. Still, the physiotherapy facilities are congested in the urban areas and cities in Bangladesh. Roughly 54.7 thousand physiotherapists are registered in the United Kingdom in 2017 (a populace of around 65 million), just an expected 1.7 thousand physiotherapists exist in Bangladesh today (a populace of around 160 million). This gauge depends on the quantity of alumni detailed since the 1990s. Numerous alumni set up private practices and few look for some kind of employment in private emergency clinics, nongovernmental associations (NGOs), or look for work abroad (Mamin & Hayes, 2018).

With a diverse eligibility criterion, there are discrepancies in practice of physiotherapists. There are a few boundaries that affects the physiotherapists capacity to facilitate Evidence based practice (EBP) in the workplace as, absence of time, absence of mastery, trouble acquiring full-text articles, inability to get insights, absence of help from managers, a constrained comprehension of logical research, and misguided judgments of the EBP idea (Ramírez-Vélez et al., 2014). In Bangladesh most of the physiotherapists are not familiar with evidenced based practice. Only few of them maintain and follow evidence based practice during treatment time. Besides capacity and knowledge issues, there are some barriers that affecting to evidenced based practice. Research evident the facts are their lack of limited access to search literature, insufficient time to treat the patient and improve updated knowledge, lack of research skill, Inability to apply research findings in clinical practice.

In ASIA, traditional systems of practice can also influence the manner by which healthcare practices are identified and delivered. For instance, some health

professionals such as physiotherapists in the Philippines and other countries in the ASIA pacific region by tradition are not first-contact practitioners. This means that they cannot deliver services or treatment to patients without a detailed medical prescription. They receive referrals from medical doctors and these referrals often include a treatment plan which becomes the primary bases for identifying interventions to manage the patient case. In some instances, the requested treatment interventions may not be based on the best research evidence and are not best practice intervention (Dizon et al., 2012).

In developing countries, there are additional barriers in applying evidence into guide clinical practice. The diversity and culture of these countries have had significant impact on the type of health care provided, and the way in which it is delivered to patients. Researchers and clinicians in developing countries need more support to learn the concepts and acquire the skills related to evidence based practice, so that research and clinical practices improve. Thus there is an urgent need to build capacity for EBP knowledge and skills amongst health professionals in developing countries (Dizon et al., 2011).

There is a necessity to develop a few guidelines of services and education in the field of Physiotherapy and to ensure these steps, a baseline determination of evidence based practice is necessary.

1.2. Rationale

Physiotherapists in Bangladesh have a traditional method of independent practice beyond legitimation as there was no regulatory body up to 2018. Since establishment there were notable difference in practices among physiotherapist in Bangladesh. The professionals struggled for the educational standard and eligibility from the beginning and the demand is continuing till now. The bachelor degree in physiotherapy comprises 5 years of academic and clinical attachment hence there are discrepancies in quality and scope of education. The another reason behind the diverse nature of practice is the lack of scope for higher education or continuous professional education. In the government facilities, physiotherapists are ineligible to practice independently and bachelor degree holders have no post. Therefore, physiotherapy services in government facilities are somehow a technical operation regulated and prescribed by other health professionals. Moreover, there are lack of multidisciplinary care or interdisciplinary care, thus the system is dominant by physician and the traditional electrotherapy based physiotherapy approach is facilitated and continued as an essence of care. There is a scarcity of individualized assessment protocol for physiotherapist practicing in Bangladesh. Besides, a few model organizations promote multidisciplinary approach and patient centered care in rehabilitation. Thus, the autonomous practice for physiotherapists are limited and there are notable discrepancies among physiotherapists serving in different organizations and having different objectives. The World health organization promotes autonomous practice for physiotherapists, so does the World confederation for physical therapy. The curriculum of bachelor degree of Physiotherapy in Bangladesh is well organized and sufficient to ensure quality of autonomous care for physiotherapist, but the curriculum has been reviewed more than a decade ago. In this circumstances, this is natural that the physiotherapist practicing in Bangladesh have diversity in care, practice, education, skill and decision making ability. The professional leadership also depends on comprehensive education, clinical reasoning and decision making skills. Therefore, there are no evidences available that determines the pattern and variations of practice profile among physiotherapy professionals in Bangladesh. And this gap, encouraged the researcher to employ a snapshot of time to explore nature of physiotherapy practice in Bangladesh after four decades of inauguration of services in this country.

1.3. Research question

What is the nature of physiotherapy practice among the professionals?

1.4. General objective

To find out the nature of physiotherapy practice in Bangladesh.

1.5. Specific Objectives

1. To find out demographic characteristics and profile of education

2. To investigate present practice profile

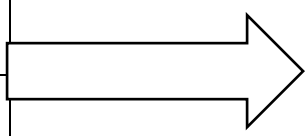
3. To determine the current evidence based physiotherapy practice

4. To elicit the barriers related to evidence based practice

5. To correlate the association among variables of practice profile.

1.6. List of variables

Response
Demographics (age, sex, current work position, education)
Practice profile (years of practice, types of practice, specialty)
Treatment preferences (manual therapy, electrotherapy)
Basis for clinical work (EBP, traditional practice)
Basis for educational/Research work (quality of education, Basic and post-graduate degree, research publication)
Barrier related issues (support, time, education, scope, autonomous decision)



Respond
Nature of Practice

1.7. Operational definition

Disease: A disease is a specific anomalous condition that adversely influences the structure or capacity of part or the majority of a creature, and that isn't because of any outer damage. Illnesses are regularly interpreted as ailments that are related with explicit side effects and signs.

Injury: Damage, otherwise called physical injury, is harm to the body brought about by outer power. This might be brought about by mishaps, falls, hits, weapons, and different causes. Significant injury will be damage that can possibly cause delayed inability or death.

Deformity: A changeless auxiliary deviation from the typical shape, size, or arrangement, bringing about deformation; might be inherent or gained.

Exercise: Exercise is physical movement that is arranged, organized, and redundant to condition any piece of the body. Exercise is utilized to improve wellbeing, keep up wellness and is significant as a method for physical restoration.

Physiotherapist: A person qualified to treat disease, injury, or deformity by physical methods such as massage, heat treatment, and exercise.

Technologist: A medical technologist is an allied health professional who exercises technical and scientific functions in medical laboratories.

Technician: A person skilled in the performance of the technical or procedural aspects of a health care profession; the minimum preparation for this role is generally an associate degree.

Manual Therapy: Manual therapy, or manipulative therapy, is a physical treatment primarily used by physical therapists, physiotherapists to treat musculoskeletal pain and disability; it most includes kneading and manipulation of muscles, joint mobilization and joint manipulation.

Electrotherapy: Electrotherapy is the use of electrical stimulation for therapeutic purposes. Specifically, electrotherapy uses energy waves that are part of the electromagnetic spectrum to produce desired physiological and chemical effects in the body.

CHAPTER-II LITERATURE REVIEW

In Bangladesh, though exact figures for the population vary, the consensus is that the population currently sits at around 160 million people, making it one of the most densely populated countries in the world at 1,252 people per km^2 (Data.worldbank.org, 2019).

Maternal mortality decreased by 75% since 1980 (Hogan et al., 2010). Infant mortality more than halved since the 1990s (Chowdhury et al., 2013). Life expectancy now averages 72 years, and it is estimated that almost 19% of the population will be over 60 years of age by mid-century (Ahsan et al., 2019).

In our country a small-scale study, almost 62% of workers in a garments factory suffered some form of musculoskeletal problems (Haq et al., 2017). According to the Global Burden of Disease 2015 study, the health problems, which resulted in the two highest causes for disability in Bangladesh, were back and neck pain and "other musculoskeletal problems" (Mamin & Hayes, 2018). Physiotherapy is effective in reducing both acute and chronic pain, limiting the risk of further disability and contributes to improved physical function, including return to work and recreational activity (Norrefalk et al., 2017).

The benefits physiotherapy can have to the health and quality of life of a patient population, rehabilitation can also have a positive impact on the economy. A period of structured rehabilitation for injuries and musculoskeletal problems can reduce the degree of impairment, restoring function, improving recovery time, and return to work, thus reducing the financial burden (Turner-Stokes et al., 2016).

At present, the health system does not have the capacity to answer the needs of these patients, leaving them without a proper treatment, at risk of further complications and hamper their reintegration into society. Physiotherapy plays an integral role to promoting and improving health in a population (Mamin & Hayes, 2018).

Evidence based practice (EBP) is a 5 step process whereby clinicians integrate best research evidence with clinical expertise and client preferences, producing the most appropriate and effective service (Bello,2012). As a result, there has been growing pressure on physiotherapy to embrace EBP. Engaging with both research and clinical findings can enhance the proficiency of physiotherapists' clinical practice. And help prevent the misuse, overuse and underuse of health care services (Kumar et al., 2010).

In Ireland there were an estimated 1300 and 1700 physiotherapists practicing in 2001 and 2004 respectively (Wren & Tussing, 2006). However, as these figures were not disaggregated by public/ private sector and acute/non-acute work setting, they fail to capture how physiotherapy services are provided. Some recent studies have examined physiotherapy in Ireland with respect to musculoskeletal and physical activity pathways respectively (French & Galvin, 2016).

Physiotherapy practice in Africa faces a number of challenges, one of which is the limited number of therapists in most public hospitals. In 2000 the ratio of physiotherapists to the local population was estimated at 1:550 000 in most of the public hospitals in Africa (Gona et al., 2013). In India the demand is rapidly increasing. It is estimated that one physiotherapist is required per 10,000 people (Gupta & Joshi, 2013). In Philippines, between 152 participants were mostly female, aged below 30 years, and practicing for less than 5 years. Almost all had only undergraduate-level education, although many attended continuing education seminars at least once a year and planned to pursue postgraduate education. Eighty- eight per cent worked more than 30 hours in a regular week, 83% had a daily workload of at least 5–10 patients, and 79% provided home based physical therapy in addition to their regular workload (Gorgon et al., 2012). The gender ratio of the physiotherapy faculty workforce in Ghana is equally split 50% men and 50% women. In Nigeria, the faculty workforce is dominated by men; 72% of the physiotherapist lecturers are men. This finding is discordant with the situation in the USA where physiotherapy, both in the clinical (68.1%) and academic (84%) settings are women dominated (Balogun et al., 2016).

In Nigeria, the majority (59%) of the physiotherapy lecturers is doctoral-prepared (Ph.D.); 32% had earned their Master's (MS) and only 9% had baccalaureate (BS) degrees. In the USA, 45.9% of the faculty had a Ph.D. degree, 13.9% had professional doctorates, 14.8% had MS degree, 23.3% are Board certified and 2% with "other" degrees. In Ghana, only 8% of the lecturers have earned their doctorate; the majority (84%) had MS degree and 8% had BS degree. Thirty-four percent (34%) of the physiotherapist educators in Nigeria are Senior Lecturers; 19% are Lecturer I, 10% Associate Professors/Readers and 10% Professors. In the USA, 5.4% of the faculty workforce is Instructors, 1.9% Lecturers, 48.1% Assistant Professors, 28.8% Associate Professors, 14.1% Professors and 1.5% "other." None of the lecturers in Ghana attained the status of Associate Professor/Reader or Professor; the majority (50%) is Assistant Lecturer, 33% Lecturer I and 8% Senior Lecturer. Senior lecturer and Assistant

Professor are the most popular academic rank held by physiotherapist educators in Nigeria and the USA, respectively (Balogun et al., 2016).

In Pakistan, between 100 participants there were 36% (n=36) had 1 to 2 years of job experience, 48% (n=48) had 3 to 4 years of job experience while 16% (n=16) people had more than 5 years of job experience. There were also present different barriers to professional development 33% (n=33) PTs responded that "Lack of Professionals" is the problem faced by the PTs in Pakistan, according to 53% (n=53), the lack of opportunities was the main reasons and 14% (n=14) stated that lack of scholarship is the main difficulty in PT's profession (Babur et al., 2014).

In Bahrain, licensed physiotherapists less than 2 PTs per 10,000 people. Such ratio puts Bahrain far behind the Scandinavian countries (12 to 27 PTs per 10,000 people), Germany (16 PTs per 10,000 people), Australia (11 PTs per 10,000) and the US (6 PTs per 10,000 people). Even though, the status of physiotherapy services supply is still better than other Middle Eastern countries such as KSA (0.88 PTs per 10,000) and Egypt (0.37 PTs per 10,000). Currently, there are only 22 specialized PTs in Bahrain, which is equivalent to 8% of the licensed PTs. Most of them are specialized in orthopedics, neurology or pediatrics (Husain et al., 2018).

In Rwanda, between 102 participants there 70% were male (n=64) and 30% were female (n=28). The participants' age ranged from 26- 60 years, with a mean age of 32.49 years. Participants had work experience of ranging from between 1 year to 34 years, with a mean working experience of 1.62 years. Most of the participants' highest education level was a diploma (70%), followed by a BSc degree (21%) and a Master's degree (9%) (Frantz & Ngambare, 2013).

Physiotherapists must be more than competent practitioners, clinician scientists, problem solvers or reflective practitioners, demonstrating accountability and responsibility (Higgs et al., 2009). Like other health professionals, physiotherapists need to be able to work well in health care teams and to demonstrate both their discrete professional skills and an ability to interact with a range of different clients and colleagues and to make decisions in various settings, within the context of a changing political or institutional environment (Higgs & Hunt, 2009).

Physiotherapy practice demonstrates many similarities around the world, despite local variations. There is more uniformity within some regions, such as Europe, than in others such as Africa or the Asia-West Pacific (AWP) region. Some of the variations relate to the structure and funding of health care systems; others relate to the development and

profile of the profession. The percentage of the gross national product spent on health ranges widely within the AWP region, from 1.6% in some countries to 8% in Australia. In some European countries this percentage is higher, for example in Sweden it is 16%. Physiotherapy is an integral part of the health care system in most developed countries, with services paid for either by the official health care system, by a health insurance system, or by users. The absolute number of physiotherapists in any one country also influences the extent of growth and development of the profession. An organization of approximately 30 physiotherapists, such as that in Fiji, would find it more difficult to provide the infrastructure and support for diverse professional needs than would an organization of over 15,000 members, such as in Japan. Physiotherapy is still predominantly a female profession in most countries, although the proportions of males and females are slowly equalizing. In some countries such as Japan and Indonesia the profession has a larger proportion of men (65% and 56% respectively). In Australia, although men and women have been entering the programs in approximately equal numbers for several years, the overall proportion of males practicing physiotherapy is slow to change. There is a trend for the attrition rate from the profession amongst men to be slightly higher than amongst women, perhaps linked to career structures and limited salary scales (Higgs et al., 2011).

As in other professions, postgraduate education for physiotherapists is widespread in developed countries and less available in developing countries. This parallels the higher professional entry qualifications of physiotherapists in developed countries. Postgraduate education programs include research degrees such as PhD and research master's programs. Many developed countries also have coursework postgraduate programs, commonly involving clinical specialties such as manipulative, sports, cardiopulmonary and pediatric physiotherapy. Continuing education for physiotherapists occurs throughout the world, in the form of both in-service educations within the workplace and marketed courses conducted by professional associations. The professional association courses range from local workshops and seminars to national conferences and the four-yearly congress of the World Confederation for Physical Therapy, which brings together physiotherapy educators, researchers and clinicians from around the world for review and updating of professional knowledge and practice. In some countries attendance at continuing education programs are mandatory for ongoing membership of professional associations, as a measure to increase professional standards and facilitate educational development. Other means of continuing education

include self-directed learning by individuals or groups of physiotherapists through such activities as reading professional journals, case presentations and participation in Web-based learning (e.g. accessing physiotherapy and medical databases in search of advances in clinical knowledge) (Higgs et al., 2011). Time/workload pressures were the most common barrier to EBP implementation (Heiwe et al., 2011).

The length of time that physiotherapy has been established and the size and influence of the profession appears also to have influenced the recognition and legal status of the profession. In all the countries of the European Union, physiotherapy is a regulated profession. On the other hand, only 50% of the countries in the AWP region have some sort of legal status or state legislature recognizing the profession There are many systems for maintaining and improving professional standards of physiotherapists. The extent of government regulation varies from region to region. In Europe almost every country has some form of government regulation. However, in the AWP region less than 50% of countries have regulation of the profession (Higgs et al., 2011).

CHAPTER-III METHODOLOGY

3.1. Study Design

This study was a quantitative study design where cross sectional study design has been employed. In a cross-sectional examination, the researcher obtains the result of the exposures or incidences in a specific time frame. This also can be termed as a snapshot of time. The members in a cross-sectional examination are simply chosen dependent on the inclusion and exclusion criteria in a certain time frame.

3.2. Study Place

Data was collected from different institute and organizations serving physiotherapy from different parts of Bangladesh. The alumni of academic institute as BHPI, NITOR, SAIC, GB, IHT, & SCHS serving in different setting in Bangladesh has been contacted through phone call, email, social media and physical visit. The physical visit part of the study has been performed in Dhaka and phone call, email, social media part has been contacted throughout the country.

3.3. Study period

The study was conducted from April 2019 to October 2019. Data collection continued from April 2019 to July 2019.

3.4. Study population

Only practicing Physiotherapist who completed BSc /Bachelor degree in Physiotherapy from Government approved university has been employed as the population. The respondent's higher degrees or qualifications were obtained in the demographic part of study.

3.5. Sampling

An open circular has been provided by physical meet and other electronic media to the physiotherapist practicing in Bangladesh. An email communication has been circulated to the members of Bangladesh physiotherapy association and alumni of all physiotherapy institutes in Bangladesh. From the respondents who replied the mail or agreed in physical meet within the data collection time frame has been evaluated for eligibility criteria and employed as sample. Purposive sampling procedure has been employed in the study and 115 respondents was included as sample in the study.

3.6. Inclusion criteria

1) Physiotherapist having minimum Bachelor degree in Physiotherapy

2) Respondents who were willing to participate.

3) Physiotherapist who were currently practicing or involved in teaching.

4) Preferably member of physiotherapy professional organization.

5) Physiotherapist practicing in Bangladesh.

3.7. Exclusion criteria

1) Physiotherapist with doubtful graduation certificate.

2) Unresponsive to communication or misleading communication.

3) Incomplete answer or responsive sheet

4) Response beyond the specific time frame.

3.8. Sample size

Sample size (n)= $\frac{Z2p(1-P)}{d2}$

Here,

Z= Is standard normal variate (at 5% type 1 error (P<0.05) it is 1.96 and at 1% type 1 error (P<0.01) it is 2.58). As in majority of studies P values are considered significant below 0.05 hence 1.96 is used in formula.

P= Expected proportion in population based on previous studies or pilot studies.
d= Absolute error or precision- Has to be decided by Researcher.

According to this equation the sample should be more than 384 people but due to lack of time limitation and access difficulty the study was conducted around with 115 participants.

3.9. Data collection technique

A structured questioner which is validated to measure the nature of practice has been used in the original format to conduct a face to face interview or formatted digital version to be filled by respondent has been used in the study. In physical meet, the data has been obtained physically and in digital communication format the respondent filled up the questioner and send back through mail or other digital communication. In case of phone conversation, the respondents replied to the questions and filled by the independent data collector.

3.10. Data collection Instrument

A validated survey question named The Physical Therapy Profile Questionnaire (PTPQ).

3.11. Data analysis

Data was analyzed by SPSS20 version and Microsoft excel-2007. The socio-demographic part of the data has been analyzed by descriptive statistics and represented by tables, bar, chart, histogram, pie etc. The association among variables has been performed by Chi-square test considering the parametric of the data as ordinal data.

Chi- square formula:

$$X^2 = \sum \frac{(O - E)^2}{E}$$

Where,

X^2 = Chi square obtained

O = Observed score

E = Expected score

3.12. Ethical consideration

The researcher maintained ethical consideration in all aspect of the study. Before starting the study, a formal project proposal was submitted to the department of physiotherapy and after verifying the proposal to Institutional Review Board (IRB) of BHPI & permission was obtained from the board. This study followed the World Health Organization (WHO) and Bangladesh Medical Research Council (BMRC) guideline and strictly maintained the confidentiality. Informed consent was used to take permission from all participants. Participants' rights and privileges were ensured. All the participants were aware about the aim and objectives of the study. After that they were interviewed following singing the consent from. The investigator has been ensured the confidentiality of participant's information and shares the information only with the research supervisor. The aims and objectives of the study should be informed to the subjects verbally. Before participating in the study the investigator had proved them a written consent from and explained them about it and then ask to sign as well as the researcher had also signed in the consent form. It was mentioned that the subjects had the rights to withdraw themselves from the research at any times. It was assumed to the participant that his or her name or address would not be used. Participation number and code name were used in the notes and transcripts throughout the study. The information might be published in any normal presentation or seminar or written paper but they would not be identified and these would not cause any herm to them. It was also ensured that every participant has the right to discuss about her problem with senior authority as related to this project.

CHAPTER-IV RESULTS

115 participants have been analyzed as a part of Research purpose. The result consisting demographics, practice profile, treatment preferences, basis for clinical work, basis for educational/research work and barriers has been presented accordingly.

4.1.1. Age

Among the participants, minimum age was 20 years and maximum was 45 years. From 20-25 years 8.7% participants (n= 10), 26-30 years 55.7% participants (n=64), 31-35 years 23.5% participants (n=27), 36-40 years 9.6% participants (n=11) and 41-45 years 2.6% participants (n=3).

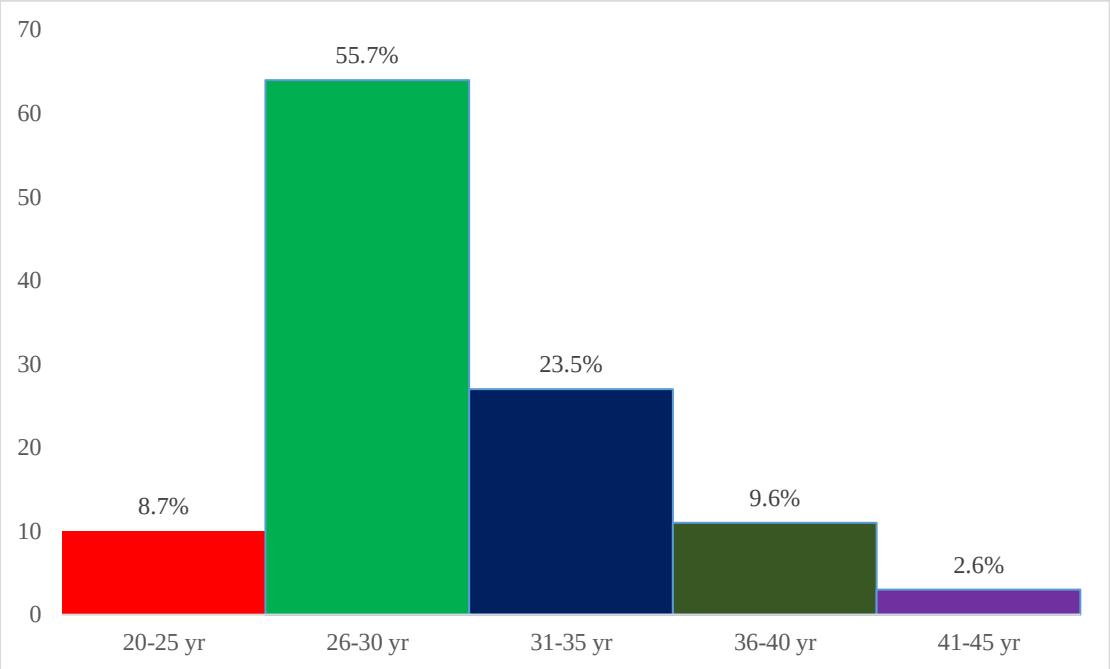


Figure 1: Age of the participants

4.1.2. Gender of the participants

Among the participants, 55.7% were male (n=64) and 44.3% were female (n=51).

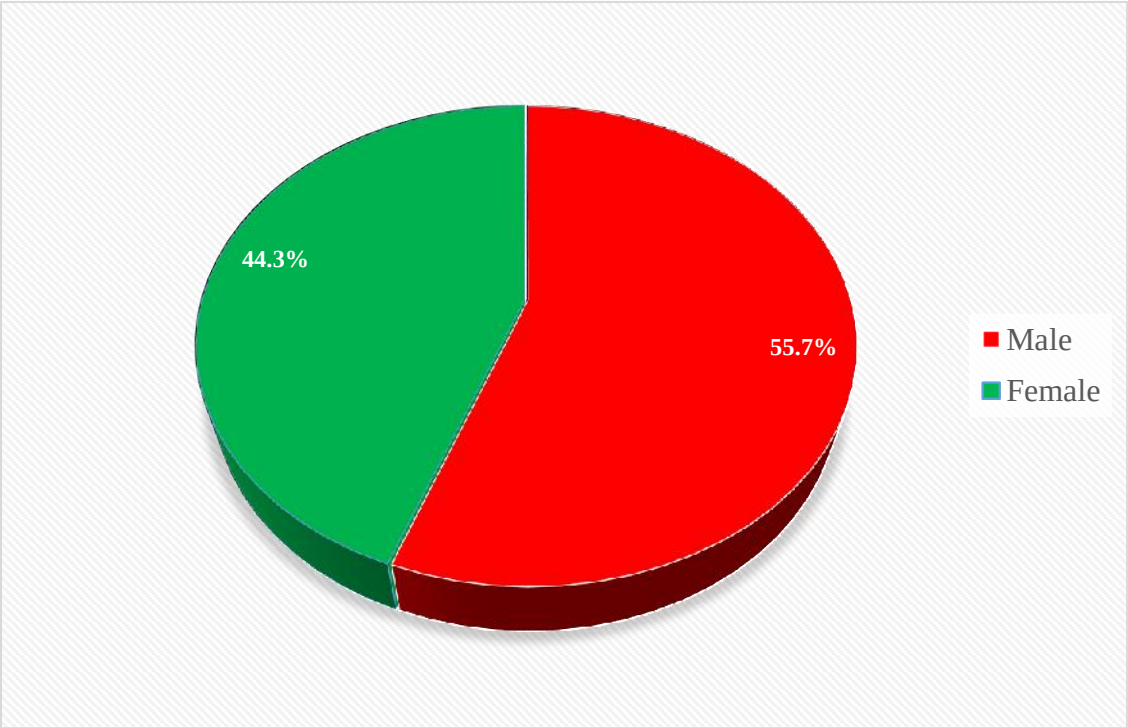


Figure 2: Gender distribution of the participants

4.1.3. Current work position

Among the professionals, 67% were clinical physiotherapist (n=77) and 0.9% were advocacy & networking officer (n=1).

Table 1: Current Work Position

Working position	Number (n)	Percent (%)
Clinical Physiotherapist	77	67.0
Lecturer	9	7.8
Senior Clinical Physiotherapist	8	7.0
Sports Physiotherapist	5	4.3
Assistant Professor	3	2.6
Associate Professor	2	1.7
Project Manager	2	1.7
Rehabilitation Development Officer	2	1.7
Junior Consultant & In charge of SSU	2	1.7
Senior Physiotherapist & Project Officer ICRC	1	0.9
Blind Assessor Officer	1	0.9
Executive Officer	1	0.9
Advocacy & Networking Officer	1	0.9
Consultant	1	0.9

4.1.4. Distribution of Workplace of the Professionals

Among the professionals, 47% were CRP-Savar (n=54), 24% were CRP-Mirpur (n=27), 17% were Dhaka area (n=20) and 12% were Outside Dhaka (n=14).

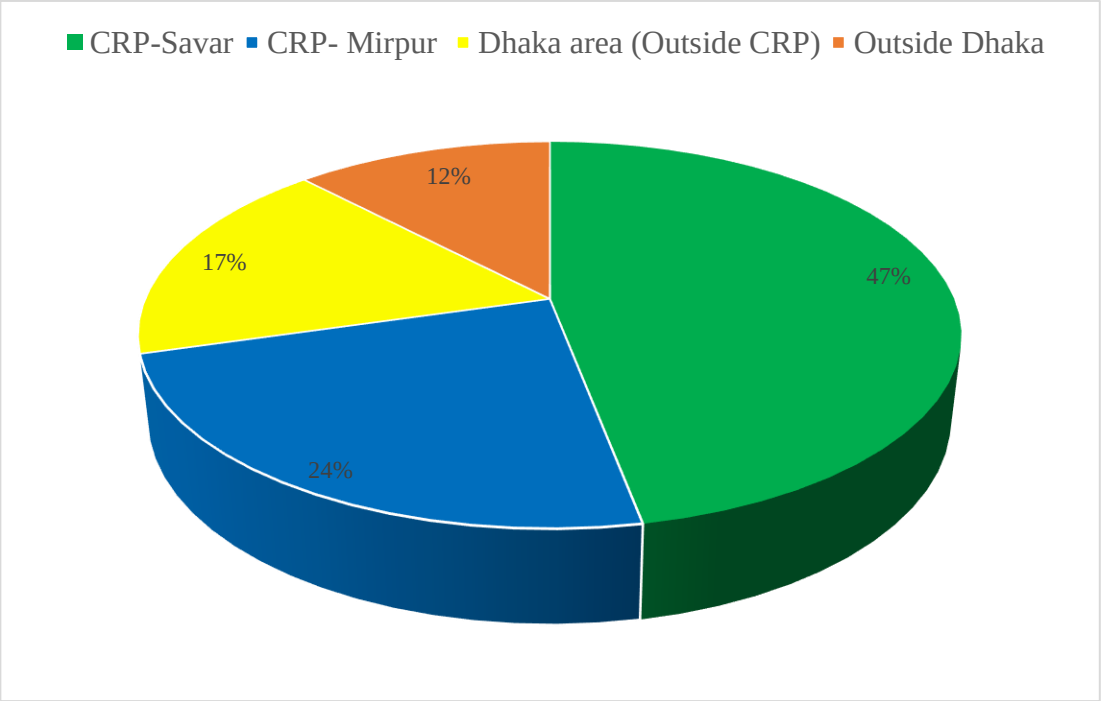


Figure 3: Distribution of Workplace of the Professionals

4.1.5. Educational Qualification

Among the professionals, 48.7% were Bachelor's Degree (n=56), 43.5% were Bachelor's and Master's Degree (n=50), 6.1% were Bachelor's, Master's Degree and Certification/Diploma Course (n=7), 1.7% were Bachelor's Degree and Certification/Diploma Course (n=2).

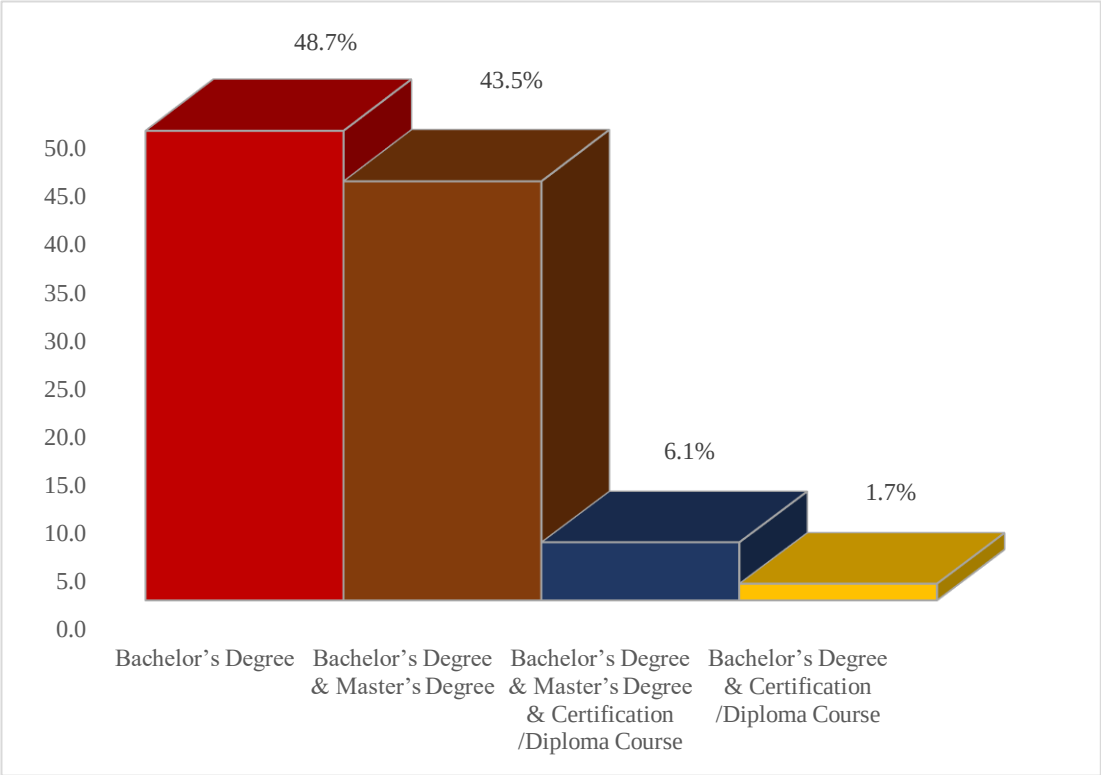


Figure 4: Educational Background/Training

4.2.1. Duration of practice

Among the professionals, 23.5% were <2 years (n=27), 15.7% were 5-10 years (n=18), 50.4% were 2-5 years (n=58), 10.4% were >10 years (n=12).

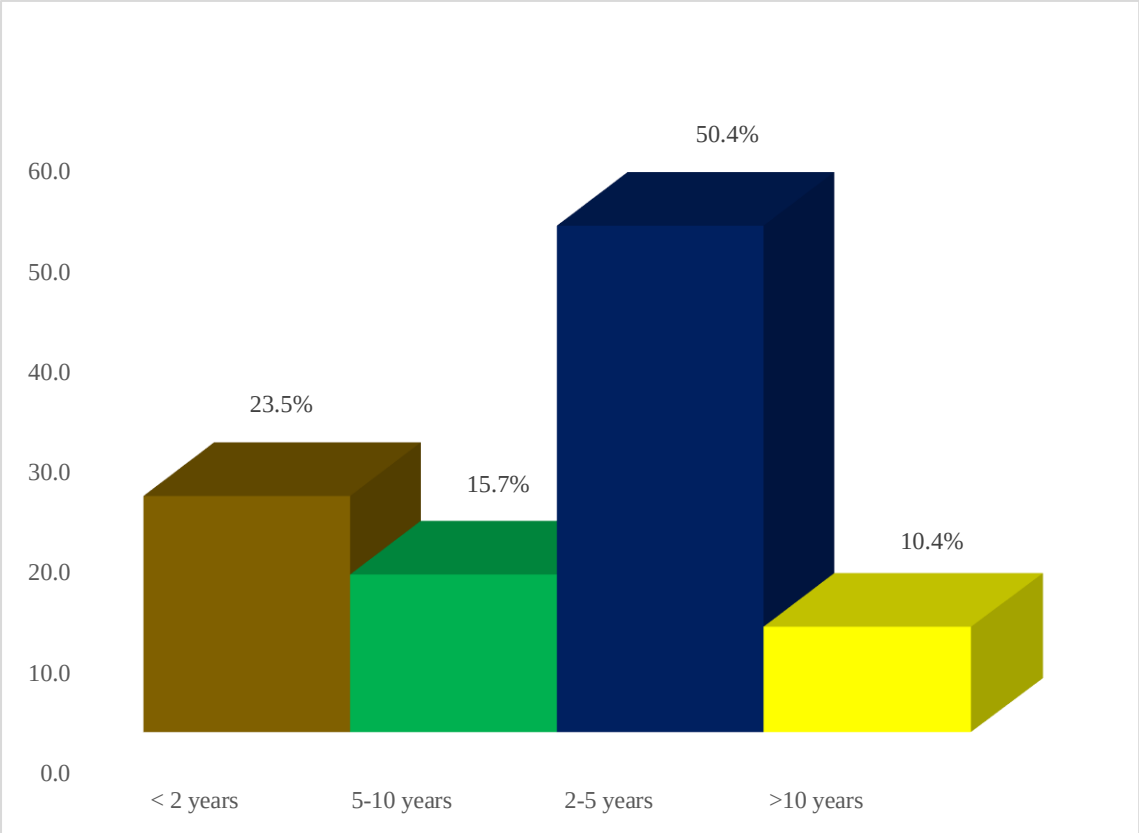


Figure 5: Duration of practice

4.2.2. Current area of practice

Among the professionals, most 28.7% were musculoskeletal (n=33) and 0.9% were General practice (n=1).

Table 2: Current area of Practice

Area of Practice	Number (n)	Percent (%)
Musculoskeletal	33	28.7
Education	11	9.6
Neurologic	10	8.7
Neurologic & Musculoskeletal	10	8.7
Pediatric therapy	7	6.1
Sports & Musculoskeletal	7	6.1
Research	4	3.5
Neurologic & Musculoskeletal & Pediatric therapy	4	3.5
General practice & Geriatric & Neurologic & Sports & Musculoskeletal & Pediatric therapy & Cardiopulmonary rehabilitation & Research	3	2.6
General practice & Geriatric & Neurologic & Musculoskeletal	3	2.6
Education & Research	2	1.7
Geriatric & Neurologic & Musculoskeletal & Cardiopulmonary rehabilitation	2	1.7
Sports	2	1.7
Neurologic & Education & Musculoskeletal & Pediatric therapy & Cardiopulmonary rehabilitation & Wellness/health promotion & Research	2	1.7
General practice & Prosthetics and Orthotics	2	1.7
General practice	1	0.9
Administrator	1	0.9
Research & administrator	1	0.9
Education & sports	1	0.9
Musculoskeletal & Pediatric therapy	1	0.9

Education & Musculoskeletal	1	0.9
Community development & Research	1	0.9
Sports & Musculoskeletal & Wellness/health promotion	1	0.9
Geriatric & Neurologic & Musculoskeletal & Pediatric therapy & Wellness/health promotion& Community development & Research	1	0.9
Neurologic & Education & Musculoskeletal & Community development & Wellness/health promotion & Research	1	0.9
Neurologic & Sports & Musculoskeletal	1	0.9
Neurologic & Sports & Musculoskeletal & Pediatric therapy	1	0.9
Geriatric & Neurologic & Musculoskeletal & Wellness/health promotion & Community development	1	0.9

4.2.3. Current work place setting/environment

Among the professionals, most 62.6% were hospital (n=72) and 0.9% were community clinic (n=1).

Table 3: Current work place setting/environment

Current work place setting	Number (n)	Percent (%)
Hospital	72	62.6
Private clinic	15	13.0
School/university	13	11.3
Multidisciplinary setting	6	5.2
Hospital & Multidisciplinary setting	2	1.7
Community clinic	1	0.9
Professional Association	1	0.9
Wellness/sports facilities & Multidisciplinary setting	1	0.9
Private clinic & Wellness/sports facilities	1	0.9
School/university & Wellness/sports facilities	1	0.9
Rehabilitation Centre	1	0.9
Multidisciplinary setting & Rehabilitation Centre	1	0.9

4.2.4. Number of professional colleagues work in work place setting

Among the professional, 20% were work with 1-5 person (n=23), 19.1% were work with 6-10 person (n=22), 4.3% were work with 11-15 person (n=5), 6.5% were work with >15 person (n=65).

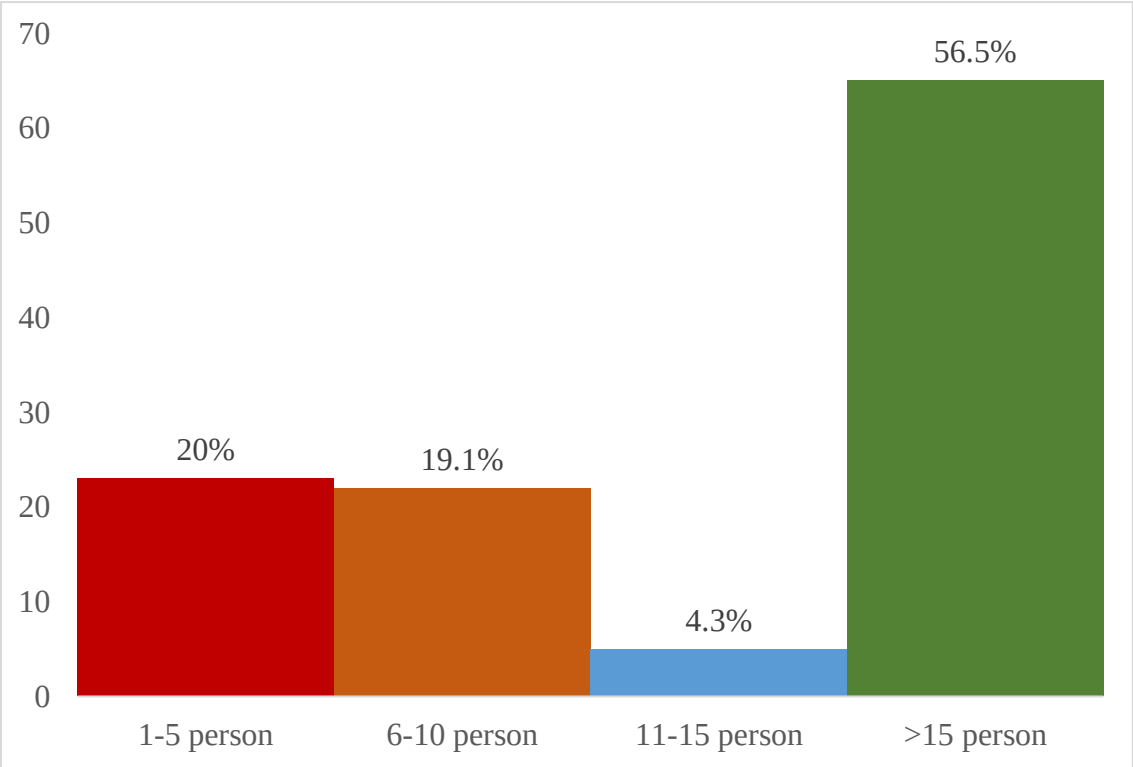


Figure 6: Number of professional colleagues work in work place setting

4.2.5. Professional colleagues work in work place setting

Among the professional, most 54.8% were PT practitioners (n=63) and 0.9% were PT practitioners & OT practitioners & SLT practitioners & Prosthetics and Orthotics (n=1).

Table 4: Professional colleagues work in work place setting

Colleagues work in working area	Number (n)	Percent (%)
PT practitioners	63	54.8
PT practitioners & OT practitioners & SLT practitioners	16	13.9
PT practitioners & Physician & OT practitioners & SLT practitioners	11	9.6
PT practitioners & Physician	7	6.1
PT practitioners & OT practitioners	5	4.3
PT practitioners & Prosthetics and Orthotics	3	2.6
PT practitioners & Physician & Nurse	3	2.6
SLT practitioners	1	0.9
PT practitioners & OT practitioners & SLT practitioners & Prosthetics and Orthotics	1	0.9
PT practitioners & Physician & OT practitioners & SLT practitioners & Prosthetics and Orthotics & Nurse	1	0.9
PT practitioners & Nurse	1	0.9
PT practitioners & Physician & Trainers	1	0.9
PT practitioners & Physician & Coach	1	0.9

4.2.6. Patients update discussion with colleagues

Among the professionals, most 55.7% were as the need arises (n=64) and 0.9% were as the need arises and daily (n=1).

Table 5: Patients update discussion with colleagues

Patients update discussion	Number (n)	Percent (%)
As the need arises	64	55.7
Daily	17	14.8
Weekly	9	7.8
Never	9	7.8
Monthly	3	2.6
Weekly & As the need arises	3	2.6
Weekly & As the need arises & Daily	2	1.7
Weekly & Daily	2	1.7
As the need arises & Daily	1	0.9

4.2.7. Professional roles perform

Among the professionals, mostly 64.3% were Practitioners (n=74) and 0.9% were Administrator/ Educator / Practitioners (n=1).

Table 6: Professional roles perform

Professional roles perform	Number (n)	Percent (%)
Practitioners	74	64.3
Educator	8	7.0
Practitioners & Administrator	7	6.1
Practitioners & Educator	5	4.3
Researcher	4	3.5
Practitioners & Administrator/ Educator / Practitioners	4	3.5
Administrator	3	2.6
Educator / Researcher	3	2.6
Practitioners & Administrator & Administrator/ Educator / Practitioners & Educator & Educator / Researcher & Researcher	2	1.7
Administrator/ Educator / Practitioners	1	0.9
Administrator & Researcher	1	0.9
Practitioners & Administrator & Researcher	1	0.9
Practitioners & Administrator/ Educator / Practitioners & Researcher	1	0.9
Practitioners & Administrator & Administrator/ Educator / Practitioners & Educator	1	0.9

4.2.8. Weekly basis performance time spend

Among the professionals, mostly 62.6% were Clinician 100% (n=72) and 0.9% were Administrator 60% & Educator 30% & Clinician 10% (n=1).

Table 7: Weekly basis performance time spend

Weekly basis performance	Number (n)	Percent (%)
Clinician 100%	72	62.6
Educator 100%	10	8.7
Clinician 70% & Administrator 30%	7	6.1
Administrator 100%	5	4.3
Researcher 100%	5	4.3
Clinician 80% & Administrator 10% &Educator 10%	4	3.5
Clinician 75% & Educator 25%	3	2.6
Clinician 70% & Educator 10% & Administrator 10% & Researcher 10%	2	1.7
Administrator 60% & Educator 30% & Clinician10%	1	0.9
Clinician 65% & Administrator 35%	1	0.9
Administrator 30% & Clinician 50% &Educator 20%	1	0.9
Administrator 80% & Clinician 20%	1	0.9
Clinician 50% & Administrator 30% & Researcher 20%	1	0.9
Clinician 60% & Administrator 40%	1	0.9
Clinician 50% & Administrator 50%	1	0.9

4.3.1. Treatment preferences of manual therapy techniques

Among the professionals, mostly 19.1% were Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Mulligan's techniques & Massage (n=22), and 0.9%were Soft tissue mobilization techniques (n=1).

Table 8: Treatment preferences of manual therapy techniques

Manual therapy techniques	Number (n)	Percent (%)
Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Mulligan's techniques & Massage	22	19.1
Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Massage	12	10.4
Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques	10	8.7
Soft tissue mobilization techniques & Positional techniques & Massage	10	8.7
Soft tissue mobilization techniques & Positional techniques & Mulligan's techniques	8	7.0
Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Mulligan's techniques	7	6.1
Soft tissue mobilization techniques & Positional techniques	5	4.3
Soft tissue mobilization techniques & Positional techniques & Mulligan's techniques & Massage	4	3.5
Soft tissue mobilization techniques & Positional techniques & Mulligan's techniques & Massage & McKenzie approach	4	3.5
Soft tissue mobilization techniques & Muscle energy techniques & Mulligan's techniques & Massage	2	1.7

Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Mulligan's techniques & Dry needling and Tapping	2	1.7
McKenzie Technique	2	1.7
Soft tissue mobilization techniques	1	0.9
Massage	1	0.9
Cyrix & Maitland & McKenzie approach	1	0.9
Soft tissue mobilization techniques & Massage	1	0.9
Positional techniques & Mulligan's techniques & Maitland mobilization	1	0.9
Soft tissue mobilization techniques & Positional techniques & Mulligan's techniques & DTFM	1	0.9
Soft tissue mobilization techniques & Muscle energy techniques & Mulligan's techniques & Massage & Neural Mobilization and Cyrix	1	0.9

4.3.2. Treatment preferences of neurodevelopment techniques

Among the professionals, 23.5% were Bobath exercises & PNF (n=27) and 0.9% were Sensory integration techniques (n=1).

Table 9: Treatment preferences of neurodevelopment techniques

Neurodevelopment technique	Number (n)	Percent (%)
Bobath exercises & PNF	27	23.5
Bobath exercises & PNF & Sensory integration techniques	21	18.3
Bobath exercises & Brunnstrom techniques & PNF & Sensory integration techniques	19	16.5
Proprioceptive neuromuscular facilitation techniques	16	13.9
Bobath exercises & Brunnstrom techniques & PNF	3	2.6
PNF & Sensory integration techniques	2	1.7
Bobath exercises & PNF & Sensory integration techniques & Rood Approach	2	1.7
Sensory integration techniques	1	0.9
Bobath exercises	1	0.9
Bobath exercises & PNF & Rood Approach	1	0.9
Bobath exercises & Brunnstrom techniques	1	0.9
Bobath exercises & PNF & Sensory integration techniques & FES	1	0.9

4.3.3. Treatment preferences of Cardiopulmonary therapy

Among the professionals, 47% were Breathing exercise & ADL retraining & Lifestyle modification (n=54) and 0.9% were Lifestyle modification (n=1).

Table 10: Treatment preferences of Cardiopulmonary therapy

Cardiopulmonary therapy	Number (n)	Percent (%)
Breathing exercise & ADL retraining & Lifestyle modification	54	47.0
Breathing exercise & Postural drainage & ADL retraining & Lifestyle modification	9	7.8
Breathing exercise & ADL retraining	8	7.0
Breathing exercise	6	5.2
Breathing exercise & Lifestyle modification	6	5.2
ADL retraining & Lifestyle modification	5	4.3
Breathing exercise & Postural drainage & Lifestyle modification	2	1.7
Lifestyle modification	1	0.9
Breathing exercise & Postural drainage	1	0.9

4.3.4. Treatment preferences of Therapeutic exercise

Among the professional, 69.6% were Stability exercise & Stretching exercise & Strengthening exercise & Endurance exercise (n=80) and 0.9% were Stretching exercise & Strengthening exercise & Endurance exercise (n=1).

Table 11: Treatment preferences of Therapeutic exercise

Treatment techniques	Number (n)	Percent (%)
Stability exercise & Stretching exercise & Strengthening exercise & Endurance exercise	80	69.6
Stability exercise & Stretching exercise & Strengthening exercise	8	7.0
Stability exercise & Stretching exercise	2	1.7
Stretching exercise & Strengthening exercise	2	1.7
Stability exercise	1	0.9
Stretching exercise & Strengthening exercise & Endurance exercise	1	0.9
Stability exercise & Stretching exercise & Strengthening exercise & Endurance exercise & Proprioceptive Exercise	1	0.9
Stability exercise & Stretching exercise & Strengthening exercise & Endurance exercise & Conditioning and motor control	1	0.9

4.3.5. Treatment preferences of Electrotherapeutic techniques

Among the professionals, 26.1% were Ultrasound & TENS & Infrared radiation & Hot packs/cold packs (n=30) and 0.9% were Ultrasound (n=1).

Table 12: Treatment preferences of Electrotherapeutic techniques

Electrotherapy techniques	Number (n)	Percent (%)
Ultrasound & TENS & Infrared radiation & Hot packs/cold packs	30	26.1
TENS & Infrared radiation & Hot packs/cold packs	11	9.6
Hot packs/cold packs	10	8.7
Ultrasound & Electrical stimulation & TENS & Infrared radiation & Hot packs/cold packs	7	6.1
Ultrasound & Infrared radiation & Hot packs/cold packs	7	6.1
Ultrasound & TENS & Hot packs/cold packs	6	5.2
TENS & Hot packs/cold packs	4	3.5
Electrical stimulation & TENS & Infrared radiation	4	3.5
Ultrasound & Hot packs/cold packs	3	2.6
Ultrasound & Diathermy & TENS & Infrared radiation & Hot packs/cold packs	3	2.6
TENS	2	1.7
Ultrasound & Electrical stimulation & TENS & Hot packs/cold packs	2	1.7
Ultrasound & TENS & Infrared radiation	2	1.7
Ultrasound	1	0.9
Ultrasound & TENS & Hot packs/cold packs & Traction	1	0.9
Ultrasound & TENS & Laser & Hot packs/cold packs	1	0.9
Ultrasound & TENS & Infrared radiation & Laser	1	0.9

4.3.6. Others treatment preferences

Among the professionals, 3.5% were Gait training (n=4), 0.9% were Manual traction (n=1), 0.9% were Tapping & Dry needling & Medication (n=1), 0.9% were CPM & Cycling (n=1), 0.9% were Injection & Infiltration (n=1).

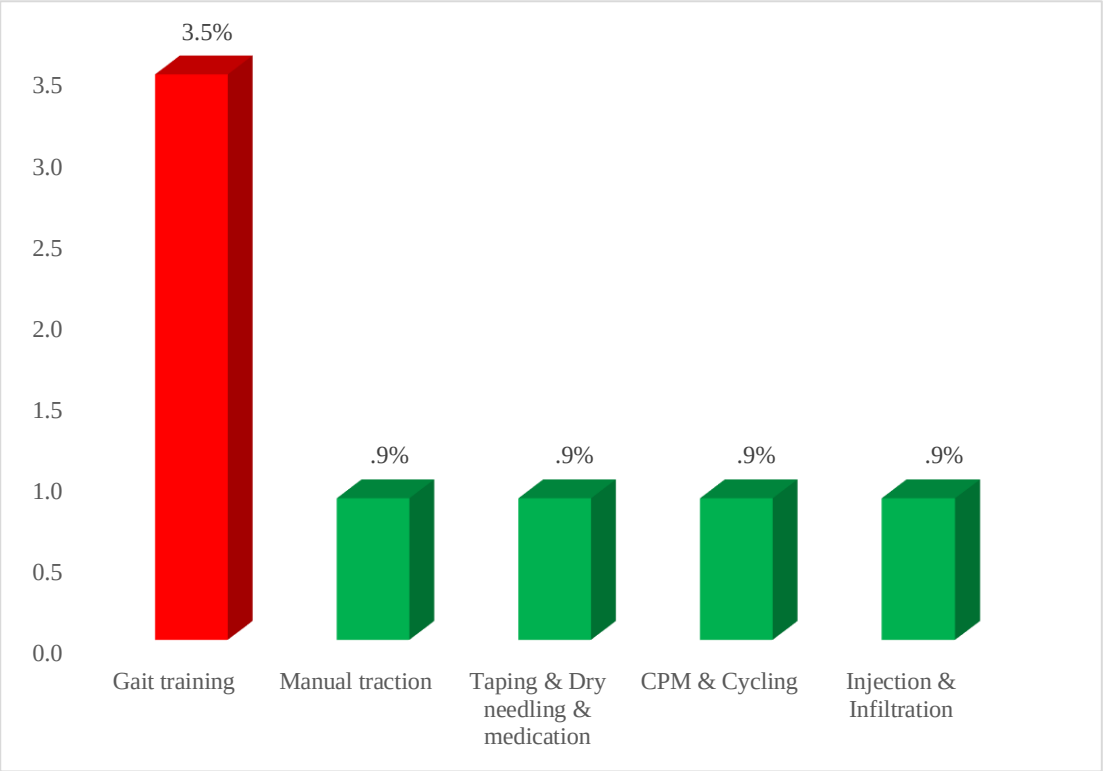


Figure 7: Others treatment preferences

4.4.1. Decision about treatment choice

Among the professionals, 8.7% were Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=10) and 0.9% were Undergraduate education & Recommendations from colleagues & Journal articles/research evidence (n=1).

Table 13: Decision about treatment choice

Treatment choice	Number (n)	Percent (%)
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	10	8.7
Undergraduate education & Journal articles/research evidence & Textbooks and other reference materials & Experience	9	7.8
Undergraduate education & Masters/PhD education & Journal articles/research evidence & Textbooks and other reference materials & Experience	9	7.8
Undergraduate education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	7	6.1
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials	4	3.5
Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues &	3	2.6

Journal articles/research evidence & Textbooks and other reference materials & Experience		
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Experience	3	2.6
Undergraduate education & Hospital treatment protocol & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	3	2.6
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	3	2.6
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	3	2.6
Undergraduate education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Undergraduate education & Seminars/Conferences attended & Hospital treatment protocol & Journal articles/research evidence & Textbooks and other reference materials	2	1.7
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7

Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Masters/PhD education & Journal articles/research evidence & Experience	2	1.7
Undergraduate education & Masters/PhD education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Undergraduate education & Hospital treatment protocol & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Undergraduate education & Seminars/Conferences attended & Recommendations from colleagues & Experience	2	1.7
Undergraduate education & Masters/PhD education & Journal articles/research evidence & Experience	2	1.7
Undergraduate education	1	0.9
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence	1	0.9
Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Journal	1	0.9

articles/research evidence & Textbooks and other reference materials & Experience		
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Hospital treatment protocol & Journal articles/research evidence & Textbooks and other reference materials	1	0.9
Post graduate certification courses & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Experience	1	0.9
Post graduate certification courses & Journal articles/research evidence & Experience	1	0.9
Undergraduate education & Experience	1	0.9
Masters/PhD education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Experience	1	0.9

Undergraduate education & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Doctor's prescription & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Doctor's prescription & Journal articles/research evidence & Experience	1	0.9
Masters/PhD education & Post graduate certification courses	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence	1	0.9
Undergraduate education & Journal articles/research evidence & Textbooks and other reference materials	1	0.9
Undergraduate education & Journal articles/research evidence	1	0.9
Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Hospital treatment protocol & Textbooks and other reference materials & Experience	1	0.9

Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Seminars/Conferences attended & Doctor's prescription & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9

4.4.2. Decision about treatment choice for a unique or new case

Among the professionals, 6.1% were Recommendations from colleagues & Journal articles/research evidence & Experience (n=7) and 0.9% Undergraduate education & Doctor's prescription & Journal articles/research evidence & Textbooks and other reference materials & Experience were (n=1).

Table 14: Decision about treatment choice for a unique or new case

Treatment choice	Number (n)	Percent (%)
Recommendations from colleagues & Journal articles/research evidence & Experience	7	6.1
Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	7	6.1
Undergraduate education & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	7	6.1
Undergraduate education & Masters/PhD education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	7	6.1
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	6	5.2
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	5	4.3
Undergraduate education & Post graduate certification courses & Seminars/Conferences attended & Hospital treatment protocol & Recommendations from colleagues & Doctor's prescription & Journal	4	3.5

articles/research evidence & Textbooks and other reference materials & Experience		
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials	4	3.5
Undergraduate education & Recommendations from colleagues & Doctor's prescription & Journal articles/research evidence & Experience	3	2.6
Masters/PhD education & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	3	2.6
Recommendations from colleagues & Journal articles/research evidence	3	2.6
Doctor's prescription	2	1.7
Journal articles/research evidence	2	1.7
Seminars/Conferences attended & Journal articles/research evidence & Experience	2	1.7
Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Experience	2	1.7
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Experience	2	1.7
Undergraduate education & Recommendations from colleagues & Experience	2	1.7
Hospital treatment protocol & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Recommendations from colleagues & Experience	2	1.7
Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials	2	1.7

Undergraduate education & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Undergraduate education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials	2	1.7
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Undergraduate education & Doctor's prescription & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Post graduate certification courses	1	0.9
Doctor's prescription & Textbooks and other reference materials	1	0.9
Undergraduate education & Recommendations from colleagues & Journal articles/research evidence & Experience	1	0.9
Recommendations from colleagues & Textbooks and other reference materials & Experience	1	0.9

Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence & Experience	1	0.9
Masters/PhD education & Post graduate certification courses & Experience	1	0.9
Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence	1	0.9
Undergraduate education & Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Seminars/Conferences attended & Recommendations from colleagues & Experience	1	0.9
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials	1	0.9
Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Textbooks and other reference materials	1	0.9
Recommendations from colleagues	1	0.9

4.4.3. Internet access for clinical work

Among the professionals, 6.1% were Always (76-100%of the time) (n=7), 37.4% were Most of the time (50-75% of the time) (n=43), 40% were Sometimes (less than 50% of the time (n=46).

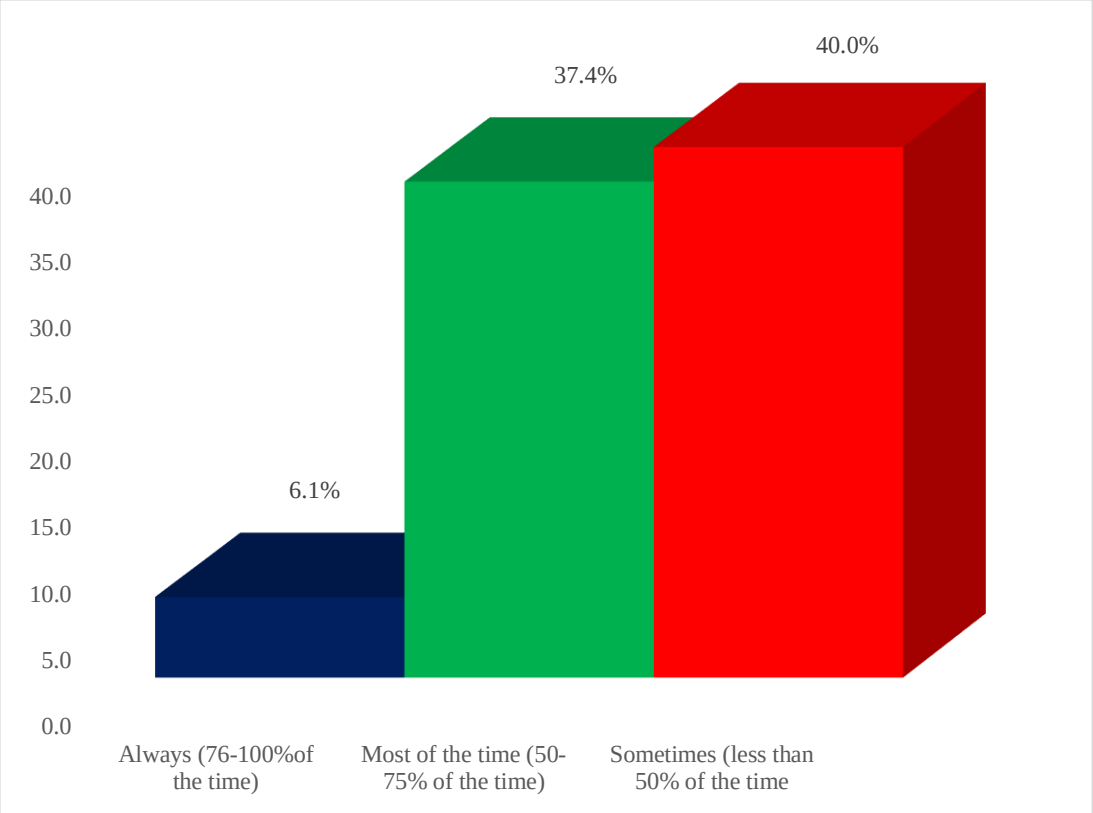


Figure 8: Internet access for clinical work

4.4.4. Access to the library

Among the professionals, 45.2 % were Yes (n=52) and 38.3% were No (n=44).

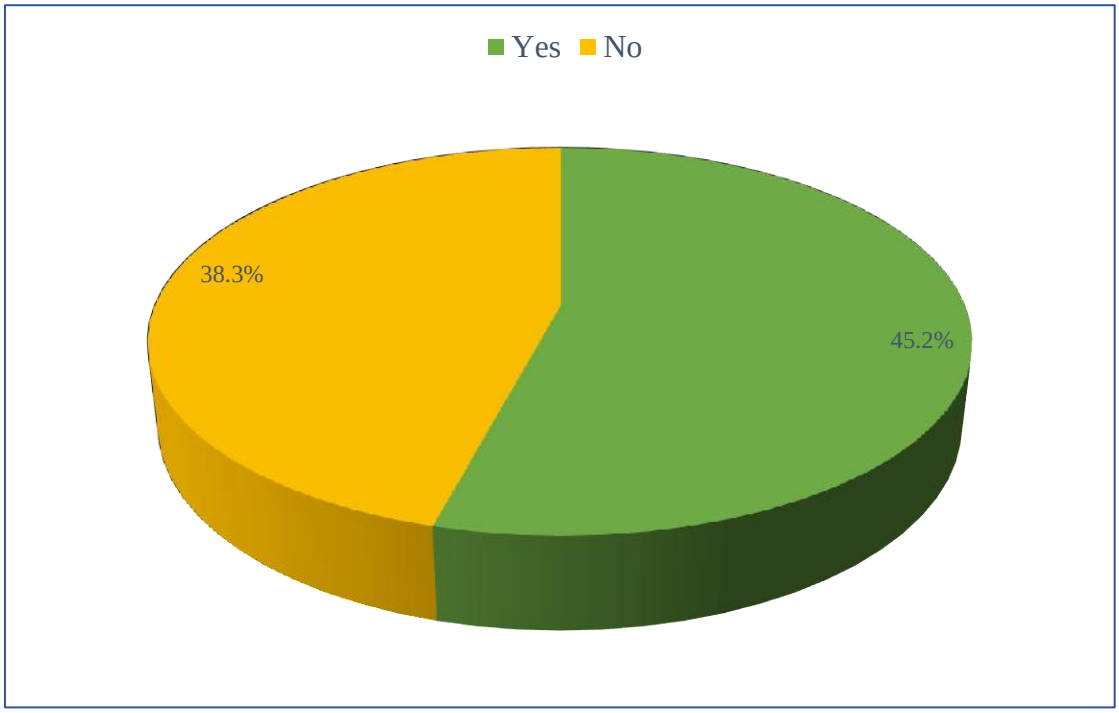


Figure 9: Access to the library

4.4.5. Library access for information about clinical work

Among the professionals, 0.9% were Always (76-100%of the time) (n=1), 7.8% were Most of the time (50-75% of the time) (n=9), 33.9% were Sometimes (less than 50% of the time (n=39), 12.2% were Never (n=14).

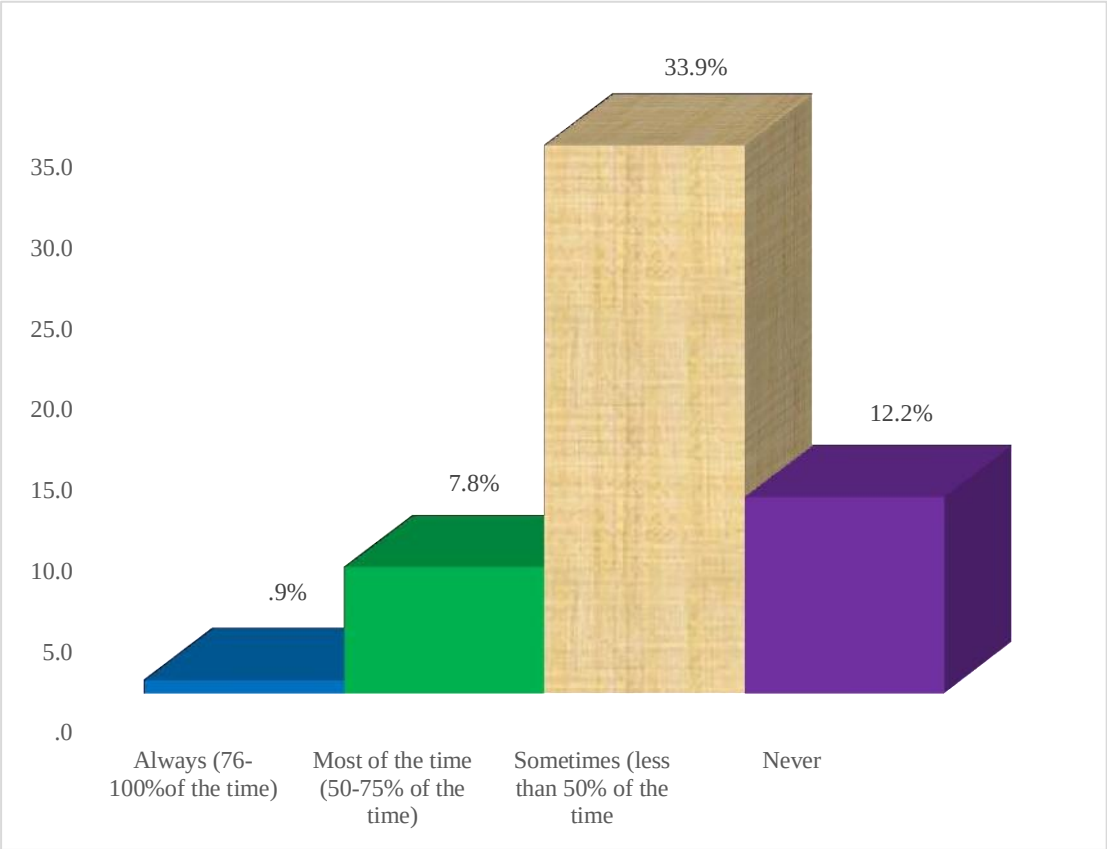


Figure 10: Library access for information about clinical work

4.4.6. Familiar with databases and evidenced based research

Among the professionals, 80.9% were Yes (n=93) and 1.7% were No (n=2).

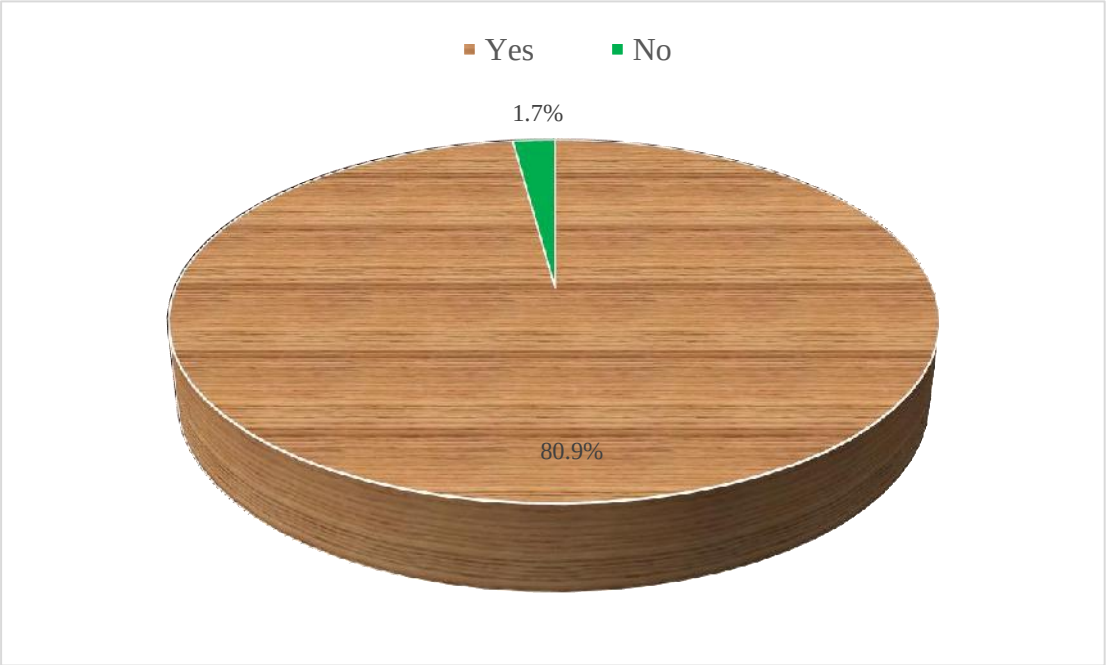


Figure 11: Familiar with databases and evidenced based research

4.4.7. Database access for search

Among the professionals, 13.9% were Pub Med & Pedro & Google scholar & Expert opinion (n=16) and 0.9% were Cochrane Library & Pub Med & Medline & Pedro & Science Direct & CINAHL & Google scholar & Expert opinion (n=1).

Table 15: Database access for search

Database access	Number (n)	Percent (%)
Pub Med & Pedro & Google scholar & Expert opinion	16	13.9
Pub Med & Google scholar	15	13.0
Pub Med & Pedro & Google scholar	13	11.3
Cochrane Library & Pub Med & Pedro & Google scholar	6	5.2
Cochrane Library & Pedro & CINAHL & Google scholar	5	4.3
Pub Med & Medline & Google scholar & Expert opinion	4	3.5
Pub Med & Google scholar & Expert opinion	3	2.6
Cochrane Library & Pub Med & Pedro & Google scholar & Expert opinion	3	2.6
Pedro & CINAHL & Google scholar & Expert opinion	3	2.6
Cochrane Library & Pub Med & Google scholar	2	1.7
Cochrane Library & Pub Med & Pedro & Science Direct & Google scholar & Expert opinion	2	1.7
Cochrane Library & Pub Med & Medline & Pedro & Science Direct & CINAHL & Google scholar	2	1.7
Pub Med & Medline & Pedro & CINAHL & Google scholar	2	1.7
Pub Med & Science Direct & Google scholar	2	1.7
Pub Med & Pedro & Science Direct & Google scholar	2	1.7

Pub Med & Science Direct & Google scholar & Expert opinion	2	1.7
Pedro	1	0.9
Science Direct	1	0.9
Google scholar	1	0.9
Cochrane Library & Pub Med & Medline & Expert opinion	1	0.9
Pub Med	1	0.9
Pub Med & Physiopedia	1	0.9
Pub Med & Science Direct & Expert opinion	1	0.9
Pub Med & CINAHL & Google scholar	1	0.9
Medline & Pedro & Google scholar	1	0.9
Medline & Pedro & Science Direct & Google scholar & Expert opinion	1	0.9
Cochrane Library & Pub Med & Medline & Pedro & Science Direct	1	0.9
Cochrane Library & Pub Med & Medline & Pedro & Science Direct & CINAHL & Google scholar & Expert opinion	1	0.9

4.4.8. Identifying the best approach for clinical cases

Among the professionals, 17.4% were Clinical Guidelines & Randomized controlled Trails (n=20) and 0.9% were Systemic Reviews/Meta Analyses & Randomized controlled Trails & Any experimental study & Descriptive/Observational studies & Discussion with senior (n=1).

Table 16: Identifying the best approach for clinical cases

Approach for clinical case	Number (n)	Percent (%)
Clinical Guidelines & Randomized controlled Trails	20	17.4
Systemic Reviews/Meta Analyses & Randomized controlled Trails	14	12.2
Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled Trails	12	10.4
Clinical Guidelines	8	7.0
Clinical Guidelines & Any experimental study	7	6.1
Clinical Guidelines & Randomized controlled Trails & Descriptive/Observational studies	6	5.2
Clinical Guidelines & Systemic Reviews/Meta Analyses	5	4.3
Randomized controlled Trails	4	3.5
Clinical Guidelines & Descriptive/Observational studies	3	2.6
Clinical Guidelines & Systemic Reviews/Meta Analyses & Descriptive/Observational studies	3	2.6
Systemic Reviews/Meta Analyses	2	1.7
Systemic Reviews/Meta Analyses & Descriptive/Observational studies	2	1.7
Clinical Guidelines & Systemic Reviews/Meta Analyses & Any experimental study	2	1.7

Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled Trails & Any experimental study	2	1.7
Randomized controlled Trails & Any experimental study	1	0.9
Any experimental study	1	0.9
Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled Trails & Consensus Statements	1	0.9
Systemic Reviews/Meta Analyses & Randomized controlled Trails & Descriptive/Observational studies	1	0.9
Clinical Guidelines & Randomized controlled Trails & Any experimental study	1	0.9
Systemic Reviews/Meta Analyses & Randomized controlled Trails & Any experimental study & Descriptive/Observational studies & Discussion with senior	1	0.9

4.4.9. Time spend in planning for the treatment

Among the professionals, 23.5% were 1-10 Minutes (n=27), 46.1% were 11-30 Minutes (n=53), 9.6% were 31-45 Minutes (n=11), 4.13% were 46-60 Minutes (n=5).

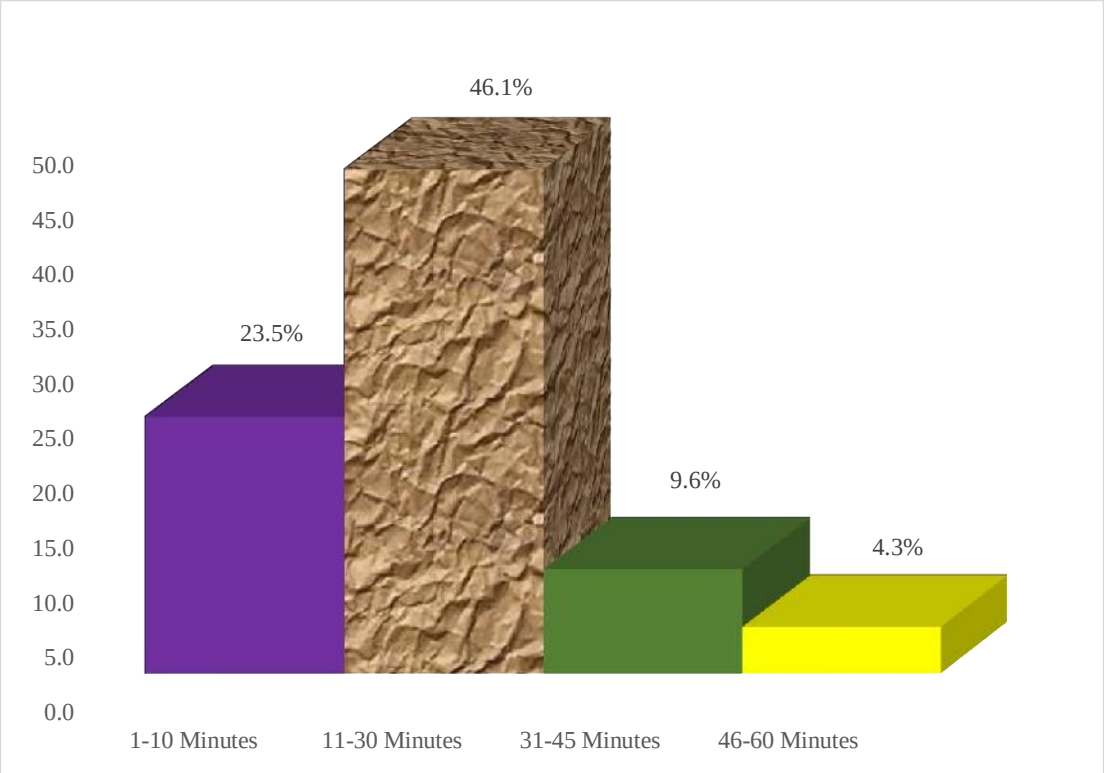


Figure 12: Time spend in planning for the treatment

4.4.10. Conduct regular meetings/case conferences in work place setting

Among the professionals, 71.3% were Yes (n=82) and 12.2 % were No (n=14).

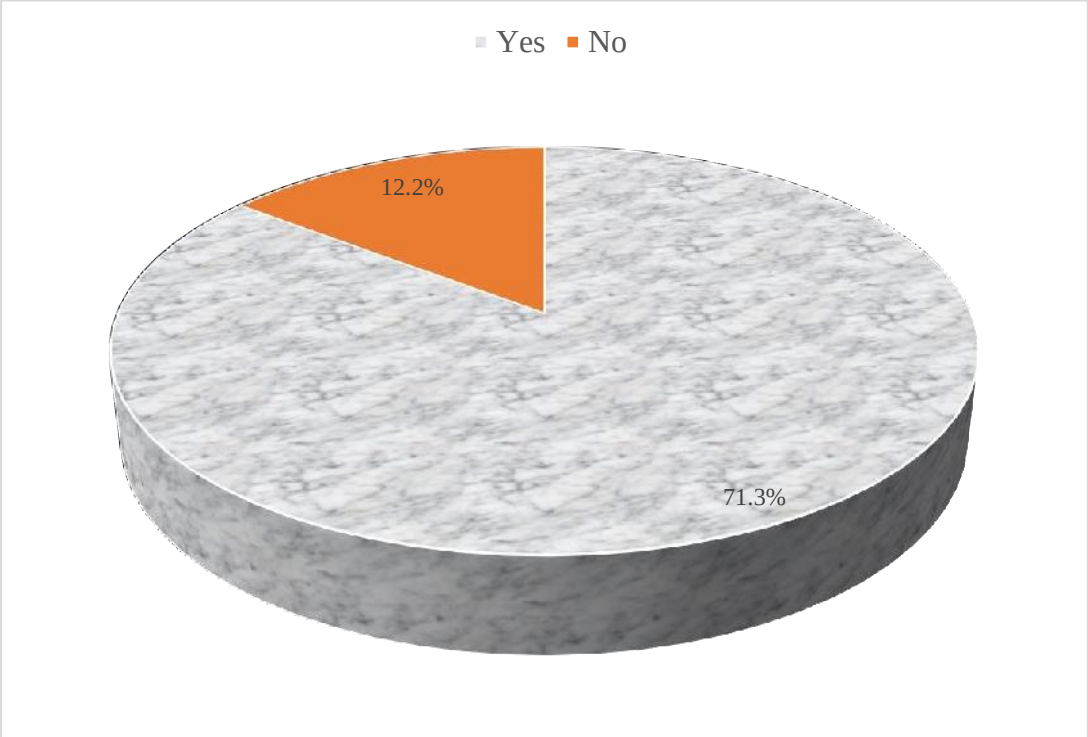


Figure 13: Conduct regular meetings/case conferences in work place setting

4.4.11. People involved in meetings

Among the professionals, 38.3% were PT practitioners (n=44) and 0.9% were PT practitioners & Medical Doctors & Coach (n=1).

Table 17: People involved in meetings

Involving in meetings	Number (n)	Percent (%)
PT practitioners	44	38.3
PT practitioners & OT practitioners & SLT	10	8.7
PT practitioners & Medical Doctors & OT practitioners & SLT	8	7.0
PT practitioners & Medical Doctors	7	6.1
PT practitioners & OT practitioners	5	4.3
PT practitioners & Medical Doctors & OT practitioners & SLT & Nurse	2	1.7
PT practitioners & Prosthetics and Orthotics	2	1.7
PT practitioners & Medical Doctors & Prosthetics and Orthotics	1	0.9
PT practitioners & Medical Doctors & OT practitioners	1	0.9
PT practitioners & Medical Doctors & Trainers	1	0.9
PT practitioners & Medical Doctors & Coach	1	0.9

4.4.12. Format conduct in the meeting

Among the professionals, 29.6% were Case conference (SOAP of case) (n=34) and 0.9% were Case conference (SOAP of case) & In-service training (n=1).

Table 18: Format conduct in the meeting

Meeting conduct	Number (n)	Percent (%)
Case conference (SOAP of case)	34	29.6
Case conference (SOAP of case) & Journal Presentation	20	17.4
Case conference (SOAP of case) & Lecture presentation	12	10.4
Case conference (SOAP of case) & Lecture presentation & Journal Presentation	9	7.8
Lecture presentation	4	3.5
Lecture presentation & Journal Presentation	1	0.9
Case conference (SOAP of case) & Daily Injury Report	1	0.9
Case conference (SOAP of case) & In-service training	1	0.9

4.4.13. Helps work in future

Among the professionals, 10.4% were Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice (n=12) and 0.9% were Post graduate certification courses & Updated textbooks and other reference materials & Exposure to local and international Practice (n=1).

Table 19: Helps work in future

Helps work in future	Number (n)	Percent (%)
Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	12	10.4
Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	8	7
Masters/PhD education & Seminars/ Trainings & Updated textbooks and other reference materials & Exposure to local and international Practice	8	7
Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	7	6.1
Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	6	5.2

Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence	5	4.3
Masters/PhD education & Post graduate certification courses & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	4	3.5
Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Exposure to local and international Practice	4	3.5
Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials	3	2.6
Masters/PhD education & Seminars/ Trainings & Updated textbooks and other reference materials & Exposure to local and international Practice	3	2.6
Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Exposure to local and international Practice	3	2.6
Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	3	2.6
Post graduate certification courses & Seminars/ Trainings	3	2.6
Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research	3	2.6

evidence & Updated textbooks and other reference materials		
Masters/PhD education & Post graduate certification courses & Time and access to the literature/ databases/ research evidence	2	1.7
Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	2	1.7
Masters/PhD education & Time and access to the literature/ databases/ research evidence & Exposure to local and international Practice	2	1.7
Masters/PhD education & Time to engage in the professional association & Updated textbooks and other reference materials & Exposure to local and international Practice	2	1.7
Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials	2	1.7
Masters/PhD education	1	0.9
Time and access to the literature/ databases/ research evidence	1	0.9
Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Updated textbooks and other reference materials & Exposure to local and international Practice	1	0.9
Seminars/ Trainings & Updated textbooks and other reference materials & Exposure to local and international Practice	1	0.9

Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Exposure to local and international Practice	1	0.9
Masters/PhD education & Post graduate certification courses & Exposure to local and international Practice	1	0.9
Post graduate certification courses & Seminars/ Trainings & Exposure to local and international Practice	1	0.9
Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence	1	0.9
Masters/PhD education & Time and access to the literature/ databases/ research evidence & Exposure to local and international Practice	1	0.9
Post graduate certification courses & Updated textbooks and other reference materials & Exposure to local and international Practice	1	0.9
Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice & Online training and videos	1	0.9
Masters/PhD education & Time and access to the literature/ databases/ research evidence	1	0.9
Seminars/ Trainings & Time and access to the literature/ databases/ research evidence	1	0.9
Masters/PhD education & Post graduate certification courses & Seminars/ Trainings	1	0.9

4.5.1. Teaching content AND/OR research work to search

Among the professionals, 5.2% were Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=6) and 0.9% were Undergraduate education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=1).

Table 20: Teaching content AND/OR research work to search

Teaching content /research work	Number (n)	Percent (%)
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	6	5.2
Undergraduate education & Journal articles/research evidence	2	1.7
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials	2	1.7
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials	2	1.7
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7
Journal articles/research evidence	1	0.9

Masters/PhD education & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Experience	1	0.9
Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Experience	1	0.9
Undergraduate education & Masters/PhD education & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9
Undergraduate education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9

4.5.2. Teaching/ tutorial/ lecture/ research project for a unique or new best approach to search

Among the professionals, 6.1% were Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=7) and 0.9% were Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=1).

Table 21: Teaching/ tutorial/ lecture/ research project for a unique or new best approach to search

Approach to search	Number (n)	Percent (%)
Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience	7	6.1
Undergraduate education & Masters/PhD education & Post graduate certification courses & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	4	3.5
Recommendations from colleagues & Journal articles/research evidence & Experience	2	1.7
Masters/PhD education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials	2	1.7
Undergraduate education & Seminars/Conferences attended & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	2	1.7

Masters/PhD education & Journal articles/research evidence & Textbooks and other reference materials	1	0.9
Journal articles/research evidence	1	0.9
Post graduate certification courses & Recommendations from colleagues & Journal articles/research evidence & Textbooks and other reference materials & Experience	1	0.9

4.5.3. Internet access for educational/research work

Among the professionals, 6.1% were Always (76 to 100 % of the time) (n=7) and 11.3% were Most of the time (50 to 75% of the time) (n=13).

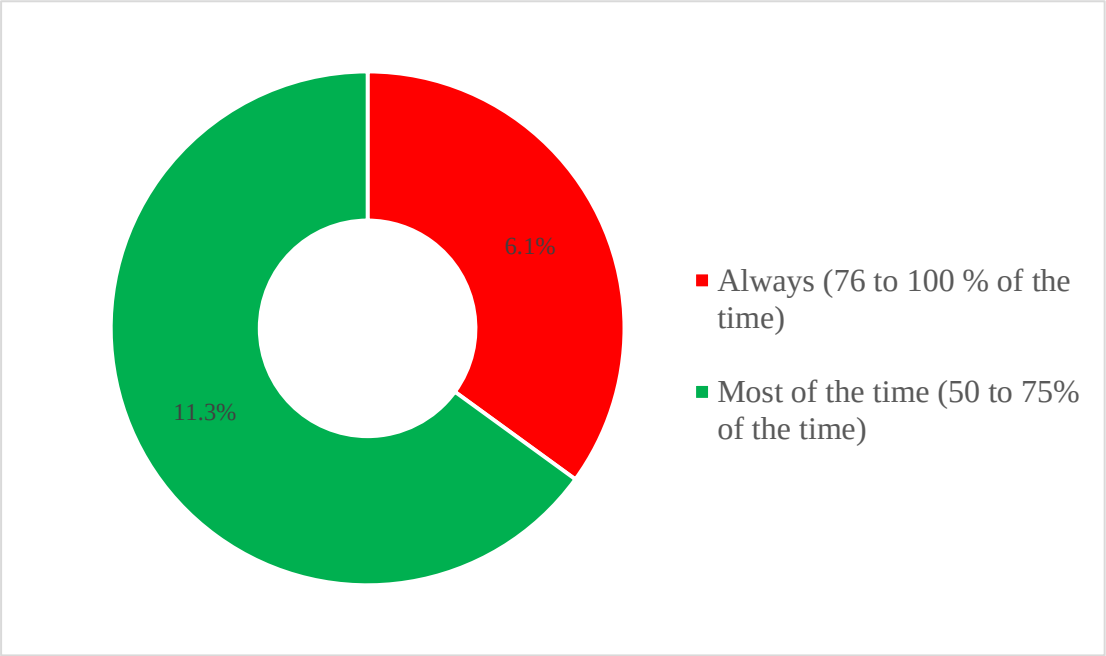


Figure 14: Internet access for educational/research work

4.5.4. Library Access

Among the professionals, 14.8% were (n=17) and 2.6% were (n=3).

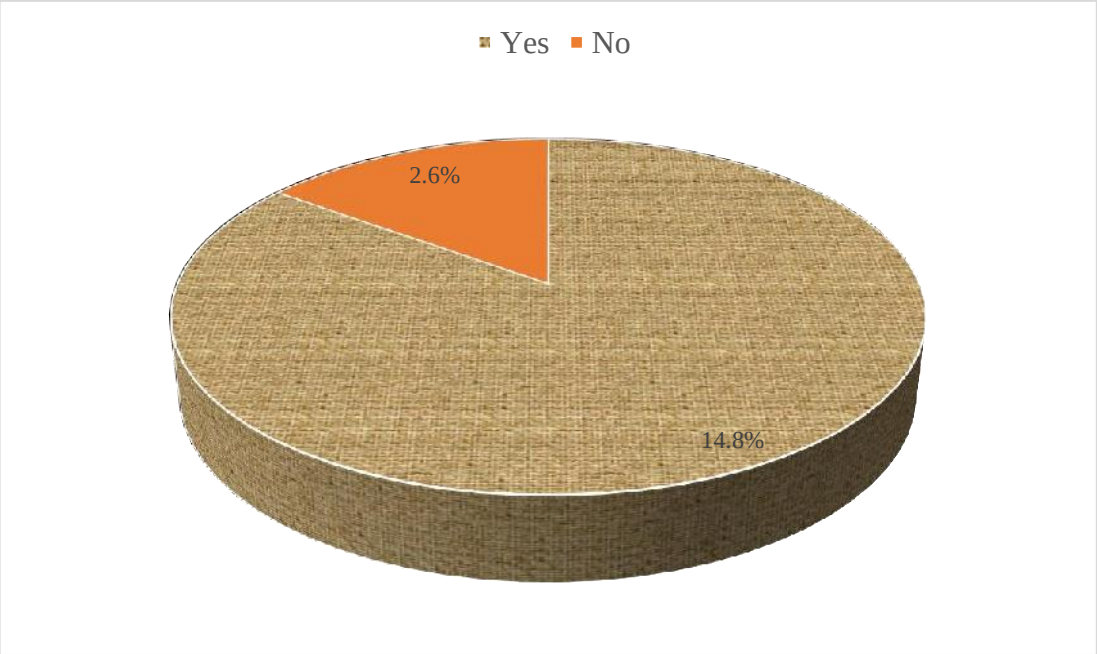


Figure 15: Library Access

4.5.5. Duration of access library for educational/research work

Among the professionals, 6.1% were Most of the time (50-75% of the time) (n=7), 8.7% were Sometimes (less than 50% of the time (n=10), 0.9% were Never (n=1).

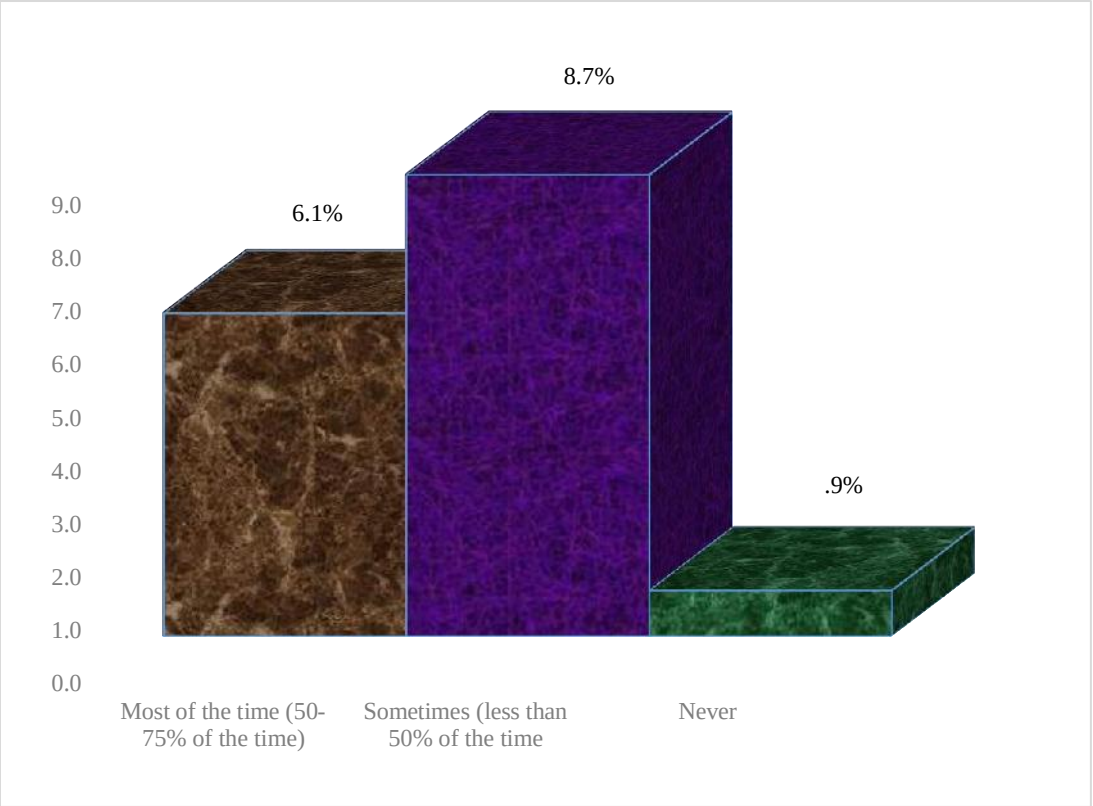


Figure 16: Duration of access library for educational/research work

4.5.6. Familiar databases and evidenced based research

Among the professionals, 5.2% were Cochrane Library & Pub Med & Medline & Pedro (n=6), 4.3% were Pub Med & Medline & Pedro (n=5), 3.5% were Pub Med & Pedro & Google scholar (n=4), 2.6% were Cochrane Library & Pub Med & Medline & Pedro & Science Direct & CINHAL (n=3), 0.9% were Google scholar (n=1), 0.9% were Cochrane Library & Pub Med & Pedro & Google scholar (n=1).

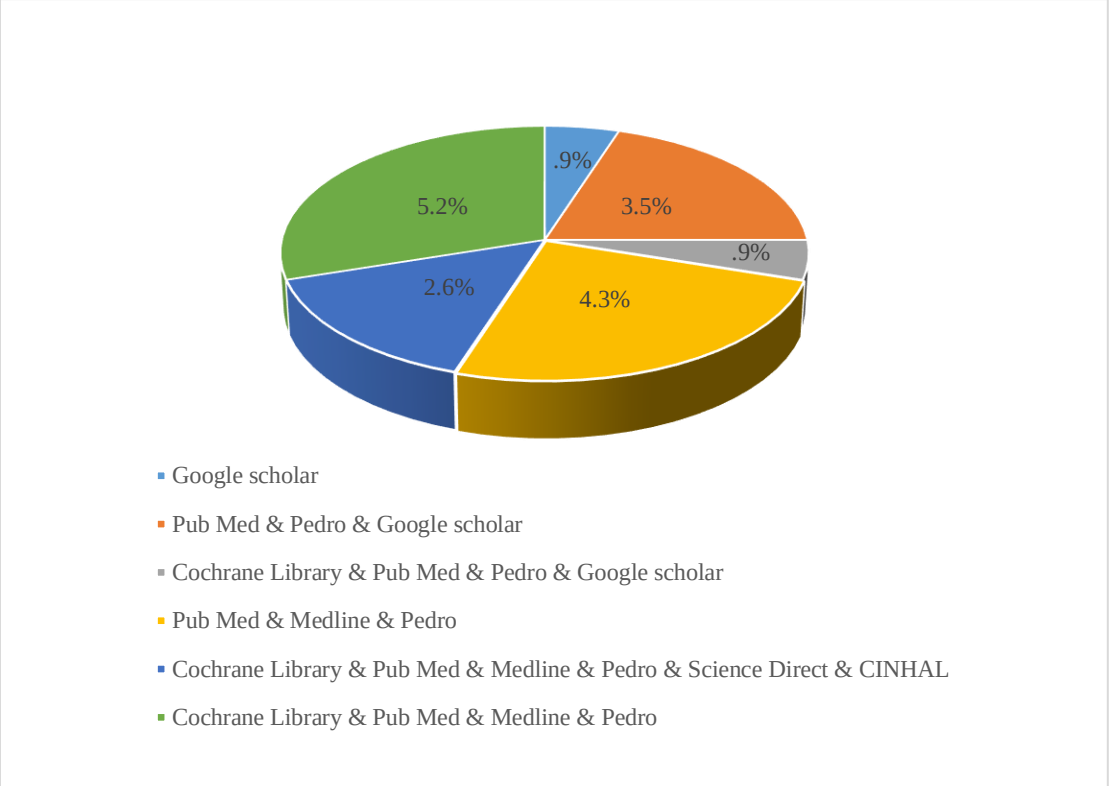


Figure 17: Familiar databases and evidenced based research

4.5.7. Identifying the best approach for clinical cases

Among the professionals, 5.2% were Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled trails (n=6) and 0.9% were Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled trails & Consensus Statement (n=1).

Table 22: Identifying the best approach for clinical cases

Approach for clinical cases	Number (n)	Percent (%)
Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled trails	6	5.2
Clinical Guidelines & Randomized controlled trails & Descriptive/Observational studies	3	2.6
Systemic Reviews/Meta Analyses & Randomized controlled Trails & Any experimental study & Descriptive/Observational studies	3	2.6
Systemic Reviews/Meta Analyses & Randomized controlled trails	2	1.7
Clinical Guidelines & Systemic Reviews/Meta Analyses & Any experimental study & Descriptive/Observational studies	2	1.7
Clinical Guidelines & Systemic Reviews/Meta Analyses	1	0.9
Clinical Guidelines	1	0.9
Randomized controlled trails	1	0.9
Clinical Guidelines & Systemic Reviews/Meta Analyses & Randomized controlled trails & Consensus Statement	1	0.9

4.5.8. Time spend in planning work

Among the professionals, 10.4% were 1-3 hours (n=12), 5.2% were Half day (n=6), 0.9% were <30 Minutes (n=1), 0.9% were One whole day (n=1).

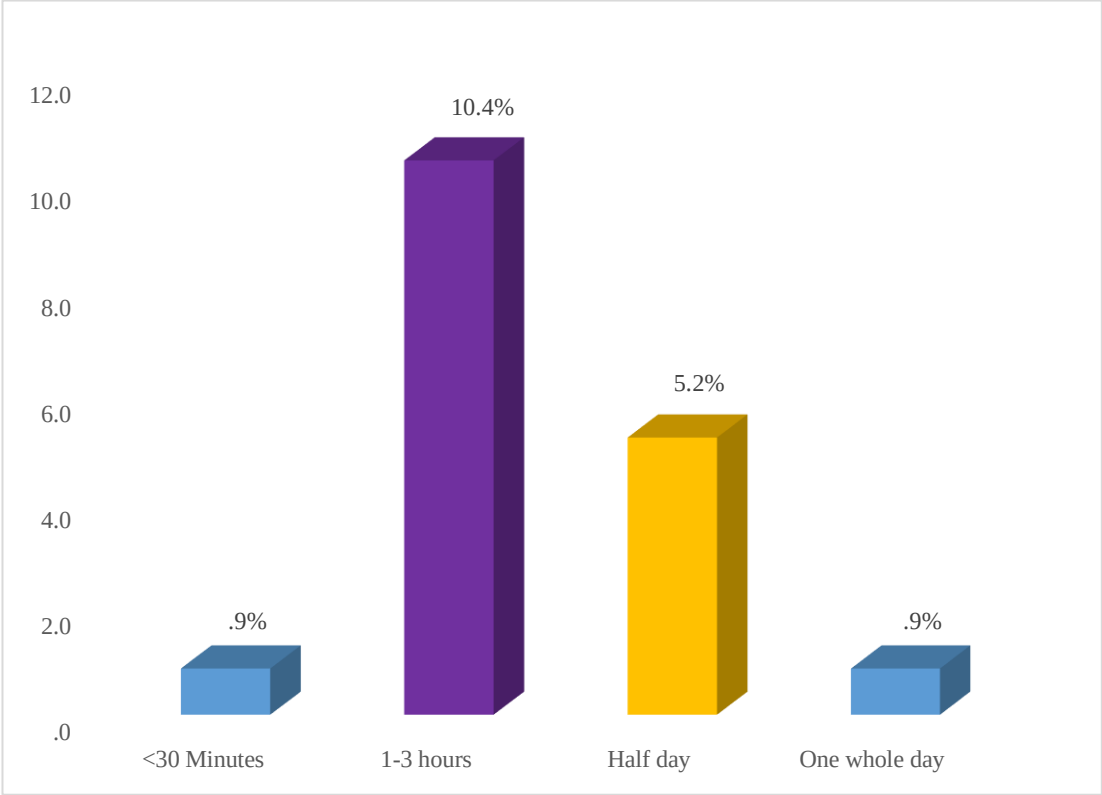


Figure 18: Time spend in planning work

4.5.9. Regular meetings/planning sessions in workplace setting

Among the professionals, 14.8% were Yes (n=17) and 2.6% No (n=3).

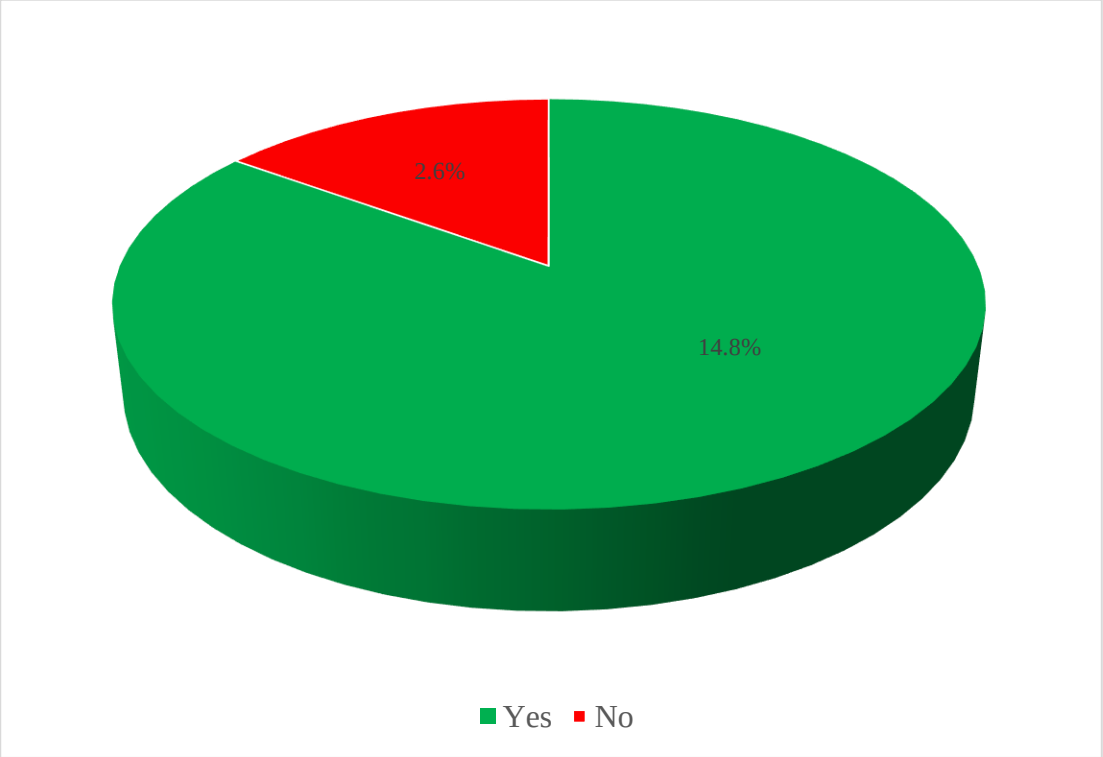


Figure 19: Regular meetings/planning sessions in workplace setting

4.5.10. People involved in the meetings

Among the professionals, 7% were PT practitioners & Instructors/professors (n=8), 5.2% were PT practitioners (n=6), 0.9% were PT practitioners & Instructors/professors & Nurse (n=1), 0.9% were PT practitioners & Medical Doctors & Coaches and players (n=1), 0.9% were PT practitioners & Medical Doctors & OT practitioners & Instructors/professors (n=1).

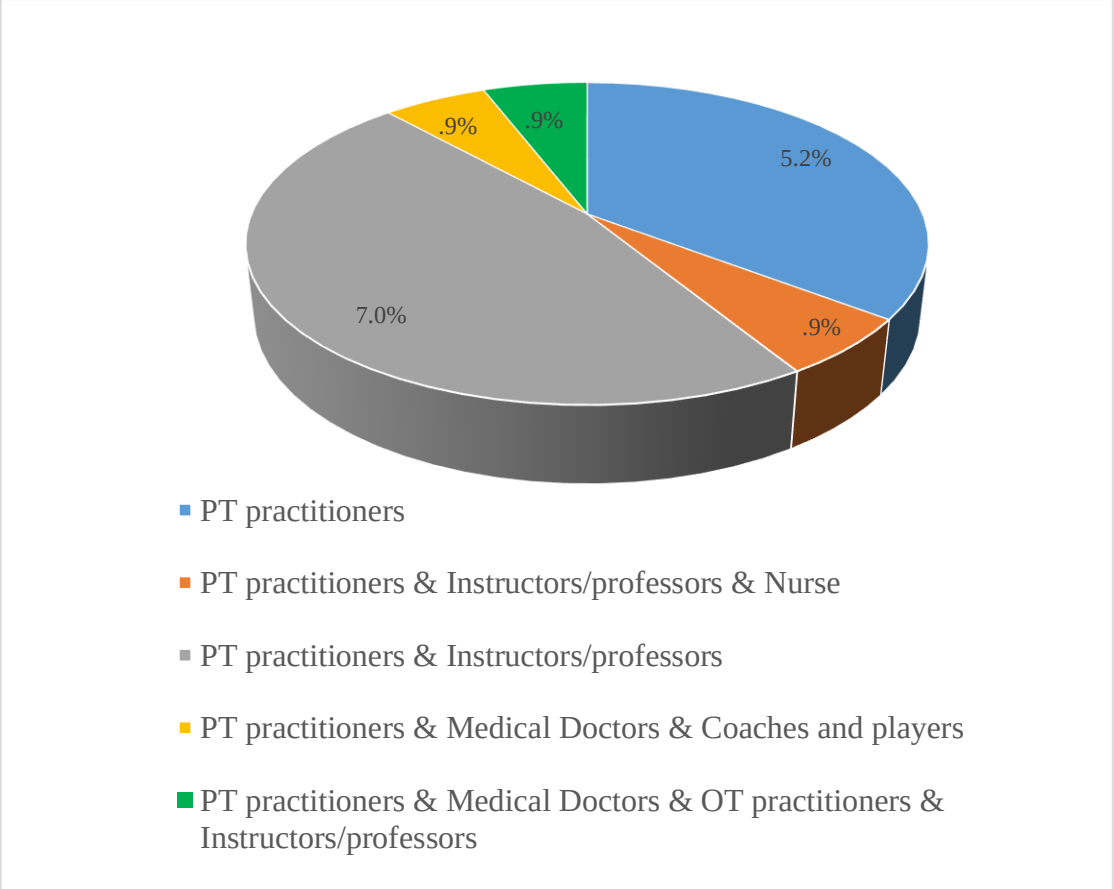


Figure 20: People involved in the meetings

4.5.11. Conduct in the meeting

Among the professionals, 6.1% were Group discussion & Lecture presentation (n=7), 4.3% were Group discussion (n=5), 1.7% were Case presentation & Group discussion & Lecture presentation (n=2), 0.9% were Case presentation (n=1), 0.9% were Lecture presentation (n=1), 0.9% were Case presentation & Group discussion (n=1).

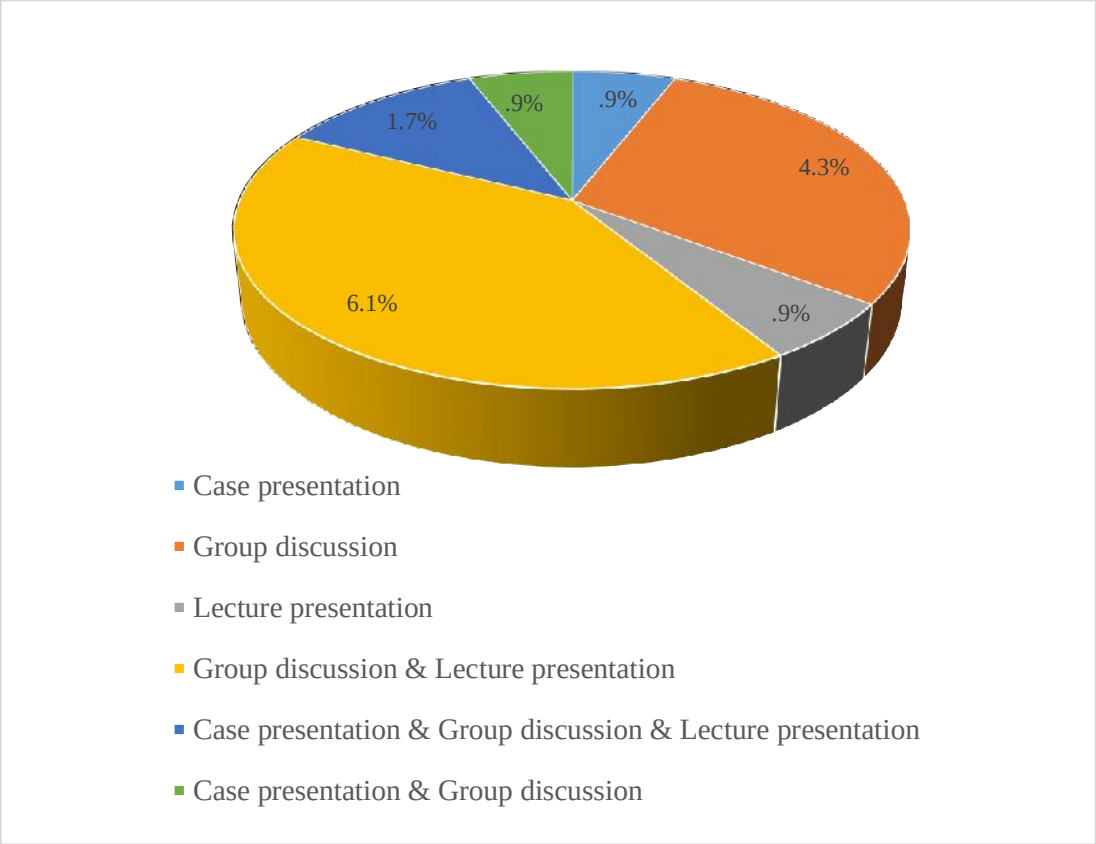


Figure 21: Conduct in the meeting

4.5.12. Helps work in future

Among the professionals, 5.2% were Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice (n=6) and 0.9% were Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence (n=1).

Table 23: Helps work in future

Helps work in future	Number (n)	Percent (%)
Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	6	5.2
Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	6	5.2
Post graduate certification courses & Time and access to the literature/ databases/ research evidence	2	1.7
Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice & Online training and videos	2	1.7
Masters/PhD education	1	0.9

Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	1	0.9
Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence	1	0.9
Masters/PhD education & Post graduate certification courses & Seminars/ Trainings & Time to engage in the professional association & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice	1	0.9

Barriers for professionals

Table 24: Barriers for professionals

Barriers	**Yes (%)**	**No (%)**
Limited access to search engine (Literature search)	40	60
Insufficient time	75.7	24.3
Lack of support from organization	40	60
Lack of support from colleagues	7.8	92.2
Lack of research skills	43.5	56.5
Inability to apply research findings in clinical practice	29.6	68.7
Is that prefix makes you any problem in your practice?	31.3	66.1
Are you felt any conflict in your practice with doctor?	42.6	54.8
Are you prescribing any drugs that makes you problem?	-	98.3
If 'yes' which type of drugs you prescribe and what type of problems, you have faced?	-	-
Are you able to practice independently	93.9	4.3

Value	Dr (%)	Dr/PT (%)	PT (%)
Which prefix or suffix you use in your practice, eg: Dr, PT	1.7	32.2	64.3

Table 25: Cross tab between education and barriers of professionals

Education	Barriers		Total	Chi-Square Value	Df	Significance
	Insufficient time					
	Yes	No				
BSc Degree	48	8	56	7.863	3	0.049*
BSc & MSc Degree	32	18	50			
BSc & MSc Degree & Diploma/Certification course	6	1	7			
BSc Degree & Diploma/Certification course	1	1	2			

*This study found an association in between education and barriers of insufficient time. The chi square value was 7.863 and P value was 0.049 and which was significant (Significant < .05).

CHAPTER-V DISCUSSION

5.1. Discussion

Physical therapy is an essential part of the health and community services delivery systems. Physical therapists practice independently of other health care providers and also collaboratively within interdisciplinary rehabilitation programs that aim to prevent movement disorders or maintain optimal function and quality of life in individuals with movement disorders.

In my study there were 115 participants among them 55.7% were male (n=64) and 44.3% were female (n=51) and majority were 26-30 years 55.7% (n=64). Similar result found in Colombia about 821 were female (77.2%) and 243 were males (22.8%). Major portions aged were 2nd decade (845 participants: 79.4%) (Ramírez-Vélez et al., 2014).

In Bangladesh, Among the professionals, 67% were clinical physiotherapist (n=77), 7.8% were lecturer (n=9), 7% were senior clinical physiotherapist (n=8), 4.3% were Sports physiotherapist (n=5), 2.6% were assistant professor (n=3), 1.7% were associate professor (n=2), 1.7% were project manager (n=2), 1.7% were rehabilitation development officer (n=2), 1.7% were junior consultant & incharge of special seating unit (SSU) (n=2), .9% were senior physiotherapist & project officer ICRC (n=1), .9% were blind assessor officer (n=1), .9% were executive officer (n=1), .9% were advocacy & networking officer (n=1), .9% were consultant (n=1). In USA found that 5.4% of the personnel workforce is Instructors, 1.9% Lecturers, 48.1% Assistant Professors, 28.8% Associate Professors, 14.1% Professors and 1.5% "other". Where Thirty-four percent of the physiotherapist teachers in Nigeria were Senior Lecturers; 19% were Lecturer I, 10% Associate Professor/Reader and 10% Professor (Balogun et al., 2016). In Ghana, the scholarly position of the larger part (half) of the physiotherapist teachers from Ghana is Assistant Lecturer; 33% were Lecturer I and 8% Senior Lecturer (Balogun et al., 2016).

My finding shows 48.7% were Bachelor's Degree (n=56), 43.5% were Bachelor's and Master's Degree (n=50), 6.1% were Bachelor's, Master's Degree and Certification/Diploma Course (n=7), 1.7% were Bachelor's Degree and Certification/Diploma Course (n=2). Similar result found in Nigeria where fifty-nine

(59%) percent is teachers with their Ph.D. degree; 32%, and 9% had earned their MS and BS degrees, individually. Just 8% of the teachers in Ghana have earned their doctorate certificate; the larger part (84%) has MS degree and 8% with BS degree (Balogun et al., 2016).

Among the professionals of Bangladesh duration of practice, 23.5% were <2 years (n=27), 15.7% were 5-10 years (n=18), 50.4% were 2-5 years (n=58), 10.4% were >10 years (n=12). Another research found in Pakistan as the activity 36%(n=36) had 1 to 2 years of experience, 48% (n=48) had 3 to 4 years of experience while 16% (n=16) individuals had over 5 years of involvement with the hour of meeting (Babur et al., 2014).

Most of the professionals, 62.6% were involved in only clinical practice and 4.3% were only researcher on a weekly basis. Another research found in Colombia where 65.2% were clinical practice and 16% were involved in research related activities (Ramírez-Vélez et al., 2015).

In my study there 19.1% were Soft tissue mobilization techniques & Muscle energy techniques & Positional techniques & Mulligan's techniques & Massage (n=22) in most manual therapy technique applied, 23.5% were Bobath exercises & PNF (n=27) in most neurodevelopmental technique applied,47% were Breathing exercise & ADL retraining & Lifestyle modification (n=54) applied in cardiopulmonary, 69.6% were Stability exercise & Stretching exercise & Strengthening exercise & Endurance exercise (n=80) applied in therapeutic exercise mostly applied, 26.1% were Ultrasound & TENS & Infrared radiation & Hot packs/cold packs (n=30 commonly used in electrotherapeutic techniques.

Among the professionals in their clinical practice, 8.7% were Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=10) commonly used to treat a patient. To identifying the best approach for clinical cases, 17.4% were Clinical Guidelines & Randomized controlled Trails (n=20) used in their clinical practice.

Professionals received the assistance for teaching and research work 5.2% were Undergraduate education & Masters/PhD education & Seminars/Conferences attended & Journal articles/research evidence & Textbooks and other reference materials & Experience (n=6) and 10.4% were 1-3 hours (n=12) spend their time to planning. Among the professionals believed that trainings/resources/opportunities may be helpful

for their future work where, 5.2% were Masters/PhD education & Seminars/ Trainings & Time and access to the literature/ databases/ research evidence & Updated textbooks and other reference materials & Exposure to local and international Practice (n=6).

Barriers are typically context-dependent; implementation strategies should thus be tailored according to their context and specific barriers must be identified (Snöljung et al., 2014). The most frequently reported barrier concerns limited time, thereby constraining the identification and interpretation of research evidence; being able to apply research findings to clinical practice has also been reported (Da Silva et al., 2015). In my study there, 40% were limitation to access literature review, 75.7% were insufficient time, 43.5% were lack of research skills, 29.6% were inability to apply research findings in clinical practice. In Colombia, 10% were limitation to access literature review, 43.5% were insufficient time, 56% were lack of research skills, 46.9% were inability to apply research findings in clinical practice (Da Silva et al., 2015).

Barriers limiting EBP use in a particular profession must thus be identified so that strategies might be proposed to facilitate using EBP from training stages onwards (Gorgon et al., 2013).

In my result shows that, significant association P=.049 is being found between education and barriers. Which means professionals don't get enough time to improve their educational background because of their lots of time contribution in professional practice.

5.2. Limitation

In this research their have some limitation like this is a cross sectional study but for further representation it could be more generous if it is being conducted by Randomize clinical trial. Another thing is small sample size due to time limitation. As it is an academic research due to access barrier it is not possible to collect the sample from every institution or organization where physiotherapist's are practicing, that's why, it seems may be a barrier. However academic research usually conducted by a novice researcher so they have some limitation in extensive knowledge in research.

CHAPTER-VI CONCLUSION AND RECOMMENDATION

6.1. Conclusion

Bangladesh tried hard to achieving the millennium development goal (MDG) and sustainable development goal (SDG) but to achieving this goal need to inclusion of physiotherapy in the mainstream of the society. Physiotherapists practicing in Bangladesh are relatively younger and male dominant working mostly in clinical setting. The physiotherapists hold a minimum bachelor degree and deals increasing workloads with the advancement of experience. Majority of Physiotherapists have autonomous practice and time, workload and professional conflict are notable barriers in their continuum of care. They are advancing their skills and specialization in musculoskeletal and neurological fields, and research activities and preparing with the advancement of global standard of physiotherapy profession.

6.2. Recommendation

There are significant improvements in professional practice for physiotherapy professionals in Bangladesh. The study was mostly confined in Dhaka based practitioners, it is recommended to employ the representative samples from other parts of Bangladesh as well with sufficient sample size to generate external validity of the study.

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Appendix

Informed consent

(Please read out to the participant)

Assalamualaikum,

I am Md. Ahnaf Al Mukit I am conducting this study for 4th professional B.sc in Physiotherapy project study dissertation titled **"Nature of practice among the physiotherapy professionals"**. For this study purpose I would like to know about some personal and other related information. You will answer some questions which are mentioned in this form. This will take approximately 30-35 minutes.

I would like to inform you that this is entirely a professional study and will not be used for any other purpose. All the information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains secure. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don't like or do not want to answer during interview.

If you have any query about the study or your right as a participant, you may contact with my supervisor **Professor Md. Obaidul Haque**, Head of the Department of Physiotherapy & Vice Principal of Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343.

Do you have any questions before I start?

So may I have your consent to proceed with the interview?

Yes ☐ No ☐

Name of the Interviewer ……..... Date.....

Signature of the Interviewer ..... Date…….

The Physical Therapy Profile Questionnaire (PTPQ)

A) GENERAL INFORMATION SHEET

Name :	**Age :**
Sex:	**Marital Status:**
Current Work Position :	
Email address and Cell No (For future information) :	

Please fill in the following details about yourself:

Educational background/Training:

Education	**School/University**	**In the case of foreign degree then please indicate which country**
Bachelor's Degree		
Master's Degree Please specify:		
PhD Degree Please specify:		
Postgraduate (masters/PhD) units Please specify:		
Certification /Diploma Course Please specify:		

B) PRACTICE PROFILE

Please circle your answers to the following questions:

1	How many years have you been in practice?	1. < 2 years 2. 5-10 years 3. 2-5 years 4. >10 years
2	What is your current area of practice?(you can choose more than one answer)	1. General practice 2. Geriatric 3. Neurologic 4. Education 5. Sports 6. Musculoskeletal 7. Pediatric therapy 8. Cardiopulmonary rehabilitation 9. Wellness/health promotion 10. Community development 11. Research 12.Others

3	What is your current workplace setting/environment? (you can choose more than one answer)	1. Hospital 2. Private clinic 3. Home care 4. Community clinic 5. School/university 6. Wellness/sports facilities 7. Multidisciplinary setting 8. Others……
4	On a regular basis, how many professionals' colleagues do you work with in your workplace setting?	1. 1-5 2. 6-10 3. 11-15 4. >15
5	What professional colleagues work in your work place setting? (if yes, please answer)	1. PT practitioners 2. Physician 3. OT practitioners 4. SLT practitioners 4. Others……
6	Do you discuss regarding patients update with your colleagues?	1. Weekly 2. Monthly 3. As the need arises 4. Never 5. Others……
7	What roles do you perform as a professional? (you can choose more than one answer)	1. Practitioners 2. Administrator 3.Administrator/ Educator / Practitioners 4. Educator 5. Educator / Researcher 6. Researcher 7. Others…….
8	On a weekly basis, how much time (in percent) do you spend for the roles you perform in Question 7? (e.g. 70% clinician,30%administrator, or 50% administrator, 30% clinician and 20% educator)	_____ _____ _____ _____

***If you perform 100% administrator work, please stop here. Thank you for completing the survey**

****If you perform any clinical work. Please proceed to sections C (Treatment preferences) and D (Basis for clinical work).**

***** If you perform any educational/research work, please proceed to sections E (Basis for educational/research work).**

C) TREATMENT PREFERNCES

Which of the following treatment approaches do you often use and recommended in your practice? (You can choose more than one answer)

1	Manual Therapy techniques	1. Soft tissue mobilization techniques 2. Muscle energy techniques 3. Positional techniques 4. Mulligan's techniques 5. Massage 6. Others (specify):----------
2	Neurodevelopmental techniques	1. Bobath exercises 2. Brunnstrom techniques 3. Proprioceptive neuromuscular facilitation techniques 4. Sensory integration techniques 5. Others (specify) :----------
3	Cardiopulmonary therapy	1. Breathing exercise 2. Postural drainage 3. ADL retraining 4. lifestyle modification 5. Others (specify):----------
4	Therapeutic Exercise	1. Stability exercise 2. Stretching exercise 3. Strengthening exercise 4. Endurance exercise 5. Others (specify):----------
5	Electrotherapeutic techniques	1. Ultrasound 2. Diathermy 3. Electrical stimulation 4. TENS 5. Infrared radiation 6. Laser 7. Hot packs/cold packs 8. Others (specify):----------
6	Others (please specify)	……

D) BASIS FOR CLINICAL WORK

1	In your daily practice, what informs your decisions about treatment choice? (please rank from highest (1) to lowest)	1. Undergraduate education 2. Masters/PhD education 3. Post graduate certification courses 4. Seminars/Conferences attended 5. Hospital treatment protocol 6. Recommendations from colleagues 7. Doctor's prescription 8. Journal articles/research evidence 9. Textbooks and other reference materials 10. Experience 11. Others (specify)…..
2	when you are faced with either a unique or new clinical case scenario, what informs your decisions about treatment choices? (please rank from highest (1) to lowest)	1. Undergraduate education 2. Masters/PhD education 3. Post graduate certification courses 4. Seminars/Conferences attended 5. Hospital treatment protocol 6. Recommendations from colleagues 7. Doctor's prescription 8. Journal articles/research evidence 9. Textbooks and other reference materials 10. Experience 11. Others (specify) : ------
3	Do you have access to the internet?	1. Yes 2. No
4	If you answered YES to Q3,how often do you use the internet to search for information about your clinical work?	1. Always (76-100%of the time) 2. Most of the time (50-75% of the time) 3. Sometimes (less than 50% of the time 4. Never
5	Do you have access to the library?	1. YES

		2. NO
6	If you answered YES to Q5, how often do you go to the library to search for information about your clinical work?	1. Always (76-100%of the time) 2. Most of the time (50-75% of the time) 3. Sometimes (less than 50% of the time 4. Never
7	Are you familiar with databases and evidenced based research?	1. YES 2. NO
8	If you answered YES to Q7, which of the following databases do you search? (you can choose more than one answer)	1. Cochrane Library 2. Pub Med 3. Medline 4. Pedro 5. Science Direct 6. CINAHL 7. Google scholar 8. Expert opinion 9. Others-----
9	Which of the following do you look for when identifying the best approach for clinical cases? (you can choose more than one answer)	1. Clinical Guidelines 2. Systemic Reviews/Meta Analyses 3. Randomized controlled Trails 4. Any experimental study 5. Descriptive/Observational studies 6. Others----------
10	Do you spend time to plan treatment for your patient?	1. YES 2. NO
11	If you answered YES to Q10, how much time do you spend in planning the treatment for each patient?	1. 1-10 Minutes 2. 11-30 Minutes 3. 31-45 Minutes 4. 46-60 Minutes
12	Do you conduct regular meetings/case conferences in your work place setting?	1. YES 2. NO 3. Not applicable
13	If you answered YES to Q12, who are the people involved in the meetings? (you can choose more than one answer)	1. PT practitioners 2. Medical Doctors 3. OT practitioners 4. Others----------
14	If you answered YES to Q13, in what format do you conduct the meeting? (you can choose more than one answer)	1. Case conference (SOAP of case) 2. Lecture presentation

		3. Journal Presentation 4. Others….
15	What do you think are the trainings/resources/opportunities which will help you in your work? (Please rank from highest (1) to lowest)	1. Masters/PhD education 2. Post graduate certification courses 3. Seminars/ Trainings 4. Time to engage in the professional association 5. Time and access to the literature/ databases/ research evidence 6. Updated textbooks and other reference materials 7. Exposure to local and international Practice 8. Others (Specify)…

*__If you perform 100% clinical work, please stop here. Thank you very much for completing this survey.__

__**If you are a clinician with ANY educational or research work, please proceed to Section E (Basis for educational/Research work)__

E) BASIS FOR EDUCATIONAL / RESEARCH WORK

1	In your daily work, what informs your teaching content AND/OR research work? (please rank from highest (1) to lowest)	1. Undergraduate education 2. Masters/PhD education 3. Post graduate certification courses 4. Seminars/Conferences attended 5. Recommendations from colleagues 6. Journal articles/research evidence 7. Textbooks and other reference materials 8. Experience 9. Others (specify) : -------
2	When faced with either a teaching/ tutorial/ lecture/ research project which is unique or new to you, what is your best approach to search for information? (please rank from highest (1) to lowest)	1. Undergraduate education 2. Masters/PhD education 3. Post graduate certification courses 4. Seminars/Conferences attended 5. Recommendations from colleagues 6. Journal articles/research evidence 7. Textbooks and other reference materials 8. Experience 9. Others (specify) : --
3	Do you have access to the internet?	1. Yes 2. No
4	If you answer Yes to Q3, how often do you use the internet to search for information about your educational / research work?	1. Always (76 to 100 % of the time) 2. Most of the time (50 to 75% of the time) 3. Sometimes (Less than 50% of the time) 4. Never
5	Do you have access to the library?	1. YES 2. NO
6	If you answered YES to Q5, how often do you go to the library to search for information about your educational/research work?	1. Always (76-100%of the time) 2. Most of the time (50-75% of the time) 3. Sometimes (less than 50% of the time 4. Never

7	Are you familiar with databases and evidenced based research?	1. YES 2. NO
8	If you answered YES to Q7, which of the following databases do you search? (you can choose more than one answer)	1. Cochrane Library 2. Pub Med 3. Medline 4. Pedro 5. Science Direct 6. CINHAL 7. Others----------
9	Which of the following do you look for when identifying the best approach for clinical cases? (you can choose more than one answer)	1. Clinical Guidelines 2. Systemic Reviews/Meta Analyses 3. Randomized controlled trails 4. Any experimental study 5. Descriptive/Observational studies 6. Others----------
10	Do you spend time to plan your educational/research work?	1.YES 2. NO
11	If you answered YES to Q10, how much time do you spend in planning your work?	1. <30 Minutes 2. 1-3 hours 3. Half day 4. One whole day 5. Others …
12	Do you conduct regular meetings/planning sessions in your workplace setting?	1. YES 2. NO 3. Not applicable
13	If you answered YES to Q12, who are the people involved in the meetings? (you can choose more than one answer)	1. PT practitioners 2. Medical Doctors 3. OT practitioners 4. Instructors/professors 5. Others----------
14	If you answered YES to Q13, in what format do you conduct the meeting? (you can choose more than one answer)	1. Case presentation 2. Group discussion 3. Lecture presentation 4. Others…….

15	What do you think are the trainings/resources/opportunities which will help you in your work? (Please rank from highest (1) to lowest)	1. Masters/PhD education 2. Post graduate certification courses 3. Seminars/ Trainings 4. Time to engage in the professional association 5. Time and access to the literature/databases/research evidence 6. Updated textbooks and other reference materials 7. Exposure to local and international Practice 8. Others (Specify)……

Barriers Related Question

1	Limited access to search engine (Literature search)	1) YES 2) NO
2	Insufficient time	1) YES 2) NO
3	Lack of support from organization	1) YES 2) NO
4	Lack of support from colleagues	1) YES 2) NO
5	Lack of research skills	1) YES 2) NO
6	Inability to apply research findings in clinical practice	1) YES 2) NO
7	Which prefix or suffix you use in your practice, eg: Dr, PT	1) Dr 2) Dr/PT 3) PT
8	Is that prefix makes you any problem in your practice?	1) YES 2) NO
9	Are you felt any conflict in your practice with doctor?	1) YES 2) NO
10	Are you prescribing any drugs that makes you problem?	1) YES 2) NO
11	If 'yes' which type of drugs you prescribe and what type of problems, you have faced?	Drug Generic name: 1) 2) 3) 4) List of Problem 1) 2) 3) 4)
12	Are you able to practice independently	1) Yes 2) No
13	If 'no' which type of barriers you faced?	

***Thank you very much for completing this survey.**

Permission Letter

April 18, 2019

The Head of the Department

Department of Physiotherapy

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain, Savar, Dhaka-1343.

Through: The Head of the Department, Department of Physiotherapy, BHPI.

Subject: Prayer for seeking permission to collect data for research project.

Sir,

With due respect I state that I am a 4th year student of B. Sc. in Physiotherapy Department of BHPI, the academic Institute of CRP. I sincerely seeking your permission to collect the data for my research project as the partial fulfillment of the requirement for the degree of B.Sc. in Physiotherapy. The title of this research project is **"Nature of practice among the physiotherapy professionals in Bangladesh"** under the supervision of **Professor Md. Obaidul Haque,** Vice Principal of Bangladesh Health Professions Institute (BHPI) & Head of the Department of Physiotherapy, CRP, Savar, Dhaka-1343. I would like to assure you that anything of my research project will not be harmful for the participants.

So, I therefore, pray and hope that you would be kind enough to grant my application and permit me to collect data to accomplish this research project.

Sincerely yours,

Md. Ahnaf Al Mukit.

Md. Ahnaf Al Mukit
4th Year, B. Sc. in Physiotherapy,
Roll no: 25, Session: 2014-15,
Bangladesh Health Professions Institute (BHPI),
(An academic institution of CRP)
CRP, Chapain, Savar, Dhaka-1343.

Allowed
20.04.19
Prof. Md. Obaidul Haque
Head, Department of Physiotherapy
BHPI, CRP, Savar, Dhaka-1343

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনষ্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)
CRP-Chapain, Savar, Dhaka. Tel: 7745464-5, 7741404 , Fax: 7745069
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178,8053662-3, Fax: 8053661

CRP-BHPI/04/19/6921

Date : 21.04.2019

To
Md. Ahnaf Al Mukit
4th year B.Sc in Physiotherapy
Session: 2014-2015.

Subject: Data Collection.

Md. Ahnaf Al Mukit
In response to your request, you are permitted to collect data from Physiotherapy professionals in Bangladesh.

Your research title is "Nature of practice among the physiotherapy professionals in Bangladesh."

21.04.19

Prof. Md. Obaidul Haque
Vice Principal
BHPI, CRP.

18th September, 2019

The Chairman

Institutional Review Board (IRB)

Bangladesh Health Professions Institute (BHPI)

CRP-Savar, Dhaka-1343, Bangladesh

Subject: Application for review and ethical approval.

Sir,

With due respect and humble submission to state that I am Md. Ahnaf Al Mukit, student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI)- an academic institute of CRP under faculty of Medicine of University of Dhaka (DU). This is a 4(four) year full time course. Conducting thesis project is partial fulfillment of the requirement for the degree of B.Sc. in physiotherapy. I have to conduct a thesis entitled, **"Nature of practice among the Physiotherapy professionals in Bangladesh"** under the supervision of Professor Md. Obaidul Haque, Vice Principal of Bangladesh Health Professions Institute (BHPI) & Head of the Department of Physiotherapy, CRP, Savar, Dhaka-1343. The purpose of the study is to find out the nature of practice of Physiotherapy in Bangladesh. I would like to assure that anything of my study will not be harmful for the participants. Informed consent will be received from all participants, data will be kept confidential.

May I, therefore pray and hope that you would be kind enough to approve the thesis proposal and to start data collection. I can assure you that I will maintain all the requirements for study.

Sincerely,

Md. Ahnaf Al Mukit.

Md. Ahnaf Al Mukit
4th professional B.Sc. in Physiotherapy
Roll: 25, Session: 2014-15, ID:112140256
BHPI, CRP, Savar, Dhaka-1343, Bangladesh
Recommendation from the thesis supervisor:

Professor Md. Obaidul Haque,
Head of the Department of Physiotherapy &
Vice Principal of Bangladesh Health Professions Institute (BHPI)
CRP, Savar, Dhaka-1343.

Attachment: Thesis proposal including process and procedure for maintaining confidentiality, Questionnaire (English version), Informed consent.

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)
CRP-Chapain, Savar, Dhaka-1343. Tel: 02-7745464-5, 7741404

Ref: CRP-BHPI/IRB/09/19/1344

Date: 18/09/2019

To
Md. Ahnaf Al Mukit
B.Sc. in Physiotherapy
Session: 2014-15, Student ID:112140256
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal **"Nature of practice among the Physiotherapy professionals in Bangladesh"** by ethics committee.

Dear Md Ahnaf Al Mukit,

Congratulations.
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above mentioned dissertation, with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation Proposal
2	Questionnaire (English version)
3	Information sheet & consent form.

The purpose of the study is to find out the nature of practice of Physiotherapy in Bangladesh. The study involves use of a questionnaire that may take 15 to 20 minutes to answer the questionnaire and there is no likelihood of any harm to the participants. Data collectors will receive informed consents from all participants. Any data collected will be kept confidential. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 10.00AM on August, 2018 at BHPI.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh