KNOWLEDGE ON PHYSIOTHERAPY AMONG THE INTERN DOCTORS OF DHAKA MEDICAL COLLEGE HOSPITAL

Faculty of Medicine

University of Dhaka

Eshita Akter Eva

Bachelor of Science in Physiotherapy (B.Sc. PT)

DU Roll no: 1263

Reg. no:10226

Session: 2017 - 2018

Department of Physiotherapy

SAIC College of Medical Science and Technology

SAIC Tower, M - 1/6, Mirpur-14, Dhaka-1216

Bangladesh

November, 2023

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

KNOWLEDGE ON PHYSIOTHERAPY AMONG THE INTERN DOCTORS OF DHAKA MEDICAL COLLEGE HOSPITAL

Submitted by **Eshita Akter Eva** for the partial fulfillment of the requirement for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

……..
Abid Hasan Khan
Lecturer
Department of Physiotherapy
SCMST, Mirpur-14, Dhaka.

……
Md. Shahidul Islam
Assistant Professor & head outdoor patient service
Department of Physiotherapy
SCMST, Mirpur-14, Dhaka.

……
Zahid Bin Sultan Nahid
Assistant Professor
Head of the Department of Physiotherapy
SCMST, Mirpur-14, Dhaka.

…….
Md. Furatul Haque
Lecturer
Department of Physiotherapy
SCMST, Mirpur-14, Dhaka.

.

…….
Zakia Rahman
Lecturer
Department of Physiotherapy
SCMST, Mirpur-14, Dhaka.

……
Dr. Abul Kasem Mohammad Enamul Haque
Principal
Saic College of Medical Science and Technology
SCMST, Mirpur-14, Dhaka.
Supervisor

DECLARATION

This work has not previously been accepted in substance for any degree and isn't concurrently submitted in candidature for any degree. This dissertation is being submitted in partial fulfillment of the requirements for the degree of B.Sc. in Physiotherapy.

I confirm that if anything identified in my work that I have done plagiarism or any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority. I confirm that the electronic copy is identical to the bound copy of the Thesis.

In case of dissemination the finding of this project for future publication, research supervisor will highly concern, it will be duly acknowledged as graduate thesis and consent will be taken from the Department Physiotherapy of SAIC College of Medical Science and Technology (SCMST).

Signature: **Date:**

Eshita Akter Eva
Bachelor of Science in Physiotherapy (B.Sc. PT)
DU Roll no: 1263
Reg.no: 10226
Session: 2017 - 2018

CONTENTS

Acknowledgement

I start with the name of Almighty Allah who allows me completing this project in time with great success.

I am grateful to the Ethical committee of the research project and faculty members of the Department of Physiotherapy of SAIC collage of Medical Science and Technology (SCMST) for giving me the permission to carry out this study.

It is a matter of great pleasure to express my deepest regard and indebtedness to Dr. Abul Kasem Mohammad Enamul Haque, MBBS, M. Phil (PSM), Principal of SAIC College of Medical Science and Technology (SCMST) for his scholarly guidance and supervision for completion of my dissertation.

I would like to express my thanks to Mr. Mohammad Shahidul Islam, B.Sc in Physiotherapy, MPT, Head of the Department of Physiotherapy of SAIC College of Medical Science and Technology (SCMST) for his inspiration and valuable suggestion to carry out the study.

I am grateful to Brigadier General Md Nazmul Haque, Director of Dhaka Medical College Hospital and Dr. H A Nazmul Hakim intern course coordinator of DMCH who allowed me to collect data from Dhaka Medical College Hospital. I am especially grateful to Dr A H Muhammad Ullah (Sajol) and Dr Tanim of Department of Surgery of Dhaka Medical College Hospital for helping me in collecting data.

Moreover, it was impossible to carry out this study without all teachers' proper direction and advice. I also pay my thanks to the staff of SCMST library who helped me to find out books for collecting literature of the study.

I would like to thank the participants of the research for giving me their valuable time. Lastly, I would like to express my gratitude to all of my friends and those entire individuals who are directly or indirectly involved with this study.

I got full support from my family members. Their encouragement and continuous inspiration helped me in completion of this work. I am ever grateful to them.

Acronyms

DMCH	: Dhaka Medical College Hospital
B.Sc	: Bachelor of Science
TENS	: Transcutaneous Nerve Electrical Stimulation
IRR	: Infrared Ray Radiation
UST	: Ultrasound Therapy
USG	: Ultrasonogram
ICU	: Intensive Care Unit

List of Tables

List of Figures

Abstract

Background: Physiotherapy is a branch of medicine that uses physical interventions to diagnose, treat and prevent disease and disability. Physiotherapy is recognized as dynamic providers of rehabilitation services and plays a key role in health care environments. In order to improve the quality of life for people with disabilities, comprehensive rehabilitation is essential. Health care providers now know relatively little about the function of physiotherapy in the health care system. Lack of awareness led to improper recognition of patient referrals to physiotherapy.

Aim: In order to determine the level of knowledge on physiotherapy among the MBBS medical interns.

Methods: It was a cross sectional type of descriptive study carried out with the aim of assessing the level of knowledge of intern doctors about physiotherapy working in Dhaka Medical College Hospital, Dhaka. A questionnaire was prepared according to the objectives of the present study. The questionnaire contained both open ended and close ended questions. A self-administered questionnaire was used to collect data from the respondents. Data were analyzed by using SPSS program.

Result: The findings of the study have been presented by frequency tabulation of the characteristics. The results were also presented by various charts, graphs and description of the variables. The study showed that 69.00% participants had average level of knowledge about physiotherapy, 12.00% participants had poor and 19.00% intern doctors had good knowledge. The mean level of knowledge of the respondents was 17.8276 and SD was 5.01003.

Conclusion: The findings of the study provided information about the lack of knowledge and understanding of the intern doctors about physiotherapy. Therefore, it is important to arrange training for the future doctors about physical therapy in order to improve patient care.

Keywords: Knowledge, Physiotherapy, Intern doctors, MBBS.

CHAPTER – I

INTRODUCTION

1.1 Background

Physiotherapy is a branch of medicine that uses physical interventions to diagnose, treat and prevent disease and disability. The field is dedicated to promoting healthy living and a high standard of living that includes a variety of therapeutic physical and physiological interventions and tools (Abichandani and Radia, V.,2015). Medical doctors have a significant impact on other health professions including physiotherapist because they are at the top of the pyramid of healthcare workers. Despite the widespread acceptance and advancement of physiotherapy, medical practitioners are not familiar with it. There is a chance that medical professionals do not fully understand all physiotherapy treatments. The study found that only 17% of interns felt their knowledge of physiotherapy practice was adequate (Mahto, et al., 2021).

Physiotherapy is recognized as dynamic providers of rehabilitation services and plays a key role in health care environments. Following First World War, the medical profession of physiotherapy was officially acknowledged in the second decade of the 20th century whereas the field was supported because of the high number of poliomyelitis cases that began to emerge after Second World War. In 2013 physiotherapy was ranked eight among the 100 greatest careers and fifth among the finest health care jobs.

In order to improve the quality of life for people with disabilities, comprehensive rehabilitation is essential. Health care providers now know relatively little about the function of physiotherapy in the health care system. Lack of awareness led to improper recognition of patient referrals to physiotherapy. The world accepts physiotherapy's ability to treat aliments, but the troubled face does not benefit from it (Afzal, et al., 2022). It is now acknowledged that physiotherapy is a well-known type of medical care that lowers patient's dependency and level of handicap. Multidisciplinary health care organizations nevertheless insist that they be acknowledged.

Physiotherapy has grown in prominence as a medical specialty in recent years and the industry as a whole is increasing significantly, particularly in developing countries. Due to its effectiveness in decreasing the prevalence and degree of disability, physiotherapy is crucial in community rehabilitation and health education. Physiotherapy can accurately diagnose their patients and safely manage them in the emergency room according to research of Saudi Arabian doctors. Doctors in the United States have positive opinions of physiotherapists who work in the emergency room and view them as a crucial component of the multidisciplinary team that treats patients in a medical emergency (Aimen, et al.,2022).

Physiotherapists use a variety of physical modalities, techniques and apparatus including therapeutic ultrasound, TENS, laser, heating agents as diathermy, traction and movement techniques. Everyone has the legal right to obtain primary health care in the majority of the world's nations and physical therapists are an essential member of the primary healthcare team. Physiotherapy is a well established and regulated profession, although it employs a variety of techniques and methods depending on the needs of each countries health care system, economy and needs (Ahmad, Z., and Zohra, 2021).

Basic information and expertise regarding the medical condition are necessary for the comprehensive care of any particular patient, which the physician cannot give alone (Afzal, R. et al.,2022). According to several researches, medical professionals might not be fully aware of all physiotherapy services offered or how physiotherapy can benefit their patients (Odebiyi, et al., 2008). Through the inclusion of physical therapy–related themes in their curricula, future medical professional will be better educated. Knowledge on Physical therapy among medical practitioners helps with prompt and appropriate patient referral, which leads to better patient care (Shemjaz ,et al., 2016).

Every career has a variety of specialized knowledge and abilities that are either distinct from those of other professions or have much greater development than they do. The roots of the profession of physiotherapy can be traced in massage. Massage and other manual methods like manipulation and reflexology are still used in physiotherapy (Zangata, et al.,2019). Communication, cooperation and agreement between doctors and physiotherapists are crucial for providing patients with appropriate care (AL-Eisa, et al., 2016).

The advent of multidisciplinary healthcare, where individuals from several complementary professions collaborate to care for the health requirements of the whole person, is one aspect of the evolving health care landscape. Teamwork is achieved through recognizing and valuing the professional qualities of other team members and comprehending how their capabilities may contribute to the patients' care, which has been defined as a fundamental requirement to modern clinical care (Odebiyi, et al.,2008).

The profession of physiotherapy has experienced unprecedented growth as a result of contemporary techniques and evidence-based practice. Despite the fact that this profession is growing, there is still a need to raise awareness among other medical professionals, particularly doctors. It is vital to assess the existing outlook and expertise of the medical interns in order to prepare efforts to increase the level of awareness of physiotherapy (Shemjaz, et al.,2016).

1.2 Rationale

Physiotherapy is one of the health professions using physical interventions to treat patients with musculoskeletal disorders. It can diagnose, treat and prevent disease and disability. Physiotherapy as a profession needs to work with other health disciplines. So, it is one of the members of a health care team. It plays an important role in various medical departments such as burn unit, emergency department, ICU, Pre and Post-operative care.

A doctor can refer her/his patient to a physiotherapist timely who needs physiotherapy. But a good number of doctors in our country do not have adequate knowledge about physiotherapy. As a result, patients are deprived of getting timely treatment from the physiotherapists and the patients' sufferings increase gradually. In developed countries patients are getting physiotherapy treatment when needed. Doctors are well aware about the effectiveness of physiotherapy treatment in case of musculoskeletal disorders in western developed countries. So, they can refer the patients timely to the physiotherapist.

Poor referral system regarding physiotherapy is prevailing due to lack of knowledge of the young doctors in Bangladesh. Research in this area will certainly increase the awareness among the intern doctors in our country. Doctors having sufficient knowledge will be confident enough to refer their patients to a physiotherapist when needed.

A few countries have done research on knowledge about physiotherapy among the health professionals especially in doctors. But there is no such research conducted in our country on this topic. So, the researcher planned to carry out a study to assess the level of knowledge about physiotherapy among the intern doctors. The findings of the present study would certainly enrich the existing knowledge of intern doctors about physiotherapy.

The health care providers particularly the health planners and managers will get information regarding level of knowledge of the intern doctors about physiotherapy programme and its application in patient management. The concerned authority will be able to organize training programme for the intern doctors about course curriculum and area of application of physiotherapy in patient management. The future doctors will gain adequate knowledge on physiotherapy as a new specialized subject of health care and ultimately will be able to refer patients in time to the physiotherapy practitioners.

1.3 Research Question

What is the level of knowledge on physiotherapy among the intern doctors of Dhaka Medical College Hospital?

1.4 Objectives of the study

1.4.1 General objective:

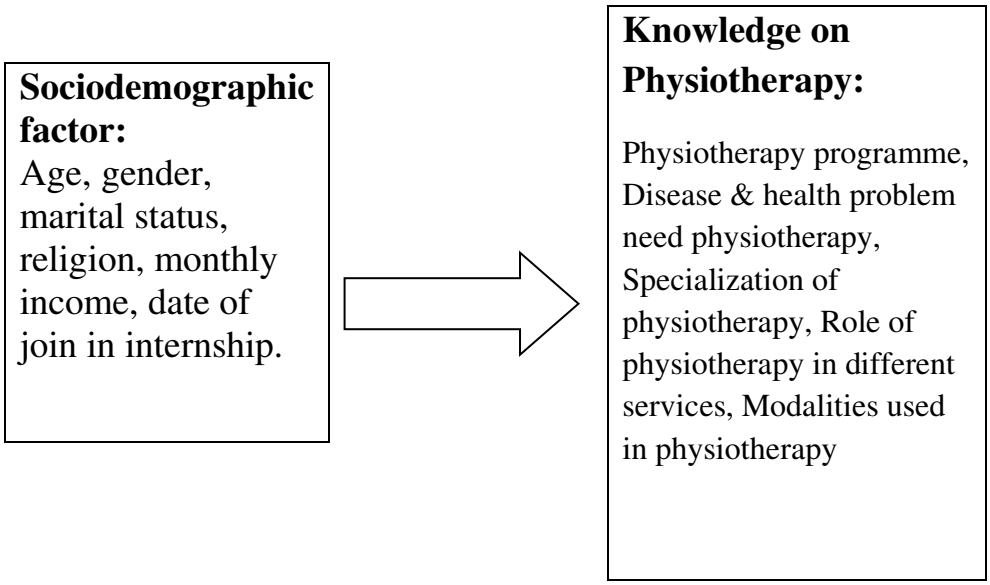
To assess the level of knowledge on physiotherapy among the intern doctors of Dhaka Medical College Hospital**.**

1.4.2 Specific objectives:

1. To inquire of the intern doctors of Dhaka Medical College Hospital about course curriculum, duration, content, post-graduation of physiotherapy program.
2. To assess the level of knowledge of the intern doctors about the disease managed by physiotherapy.
3. To evaluate the knowledge of the study participants about the specialization of physiotherapy.
4. To assess knowledge of the intern doctors about the role of physiotherapy in different conditions.
5. To inquire of the intern doctors about the modalities used in physiotherapy.
6. To collect information on socio-demographic characteristics of the intern doctors.

1.5 List of variables of the study

Independent variable **Dependent variable**



1.6 Operational definitions of the variables

Age: Age of the respondents refers to the biological age and was recorded in completed years.

Gender: The characteristics of women, men, girls and boys that are socially constructed.

Marital status: This category includes persons whose opposite sex spouse is living, unless the couple is separated or a divorce has been obtained.

Religion: Human beings' relation to that which they regard as holy, sacred, absolute, spiritual, divine, or worthy of especial reverence. It is also commonly regarded as consisting of the way people deal with ultimate concerns about their lives and their fate after death.

Monthly income: The combined income in Taka received by all family members, whether they contribute it or not, or part of it, towards covering expenditure.

Internship: An internship is a professional learning experience that offers meaningful, practical work related to a student's field of study or career interest.

Physiotherapy programme: A professional entry program that provides students with theory and practical skills to assess diagnose and treat the human body.

Disease: It refers to Illness or sickness characterised by specific signs or symptoms

Health problem: A disease or medical ailment or an environmental condition that poses the risk of disease or medical ailment.

Physiotherapy: Physiotherapy is one of the allied health professions. It is provided by physical therapists that promote, maintain or restore health through physical examination, diagnosis, management, prognosis, patient education, physical intervention, rehabilitation, disease prevention and health profession.

Specialization: It refers to acquire knowledge and skill in a particular subject or filed with distinct characteristics.

Role of physiotherapy: It refers to the position or purpose that physiotherapy has in a situation, organization, society, or relationship

Modalities used in physiotherapy: The administration of thermal, mechanical, electromagnetic and light energies for therapeutic purposes.

CHAPTER – II

LITERATURE REVIEW

Physiotherapy is a branch of medicine that uses physical interventions to diagnose, treat and prevent disease and disability (Australian Physiotherapy Association). The acute, subacute, and chronic phases of treatment all require a significant amount of physical therapy (Mahto, et al., 2021). According to WHO, Physiotherapists are recognized as dynamic providers of rehabilitation services and play a key role in health care environments. Following world war, the medical profession of physiotherapy was officially acknowledged in the second decade of the 20th century whereas the field was supported because of the high number of poliomyelitis cases that began to emerge after World War 2. In 2013 physiotherapy was ranked eight among the 100 greatest careers and fifth among the finest health care jobs (Pattanshetty, et al., 2019).

Medical physicians are not familiar with physiotherapy despite its widespread acceptance and technological advancements (Shemjaz, et al., 2016). Basic information and expertise regarding the medical condition are necessary for the comprehensive care of any particular patient, which the physician cannot give alone (Afzal, et al., 2022). It is now well acknowledged that physiotherapy is a well-known type of medical care that lowers patient's dependency and level of handicap. Multidisciplinary health care organizations nevertheless insist that they are acknowledged. Physiotherapy has grown in prominence as a medical specialty in recent years and the industry as a whole is increasing significantly, particularly in developing countries. According to the USA Department of Labor, physical therapists are essential medical professionals that evaluate and treat patients of all ages. Both the heart and lungs, Physical therapy has a number of subspecialties that treat patients to lessen dependency handicap including orthopedic, neurology, sports, and others (Al-Eis, et al., 2016).

Due to its effectiveness in decreasing the prevalence and degree of disability, physiotherapy is crucial in community rehabilitation and health education (Karthikeyan et al., 2015). Doctors in the United States have positive opinions of physiotherapist who work in the emergency room and view them as a crucial component of the multidisciplinary team that treats patients in a medical emergency (Fruth et al., 2016).

The profession of physiotherapy has experienced unprecedented growth as a result of contemporary techniques and evidence-based practice. Despite the fact that this profession is growing, there is still a need to raise awareness among another medical professional particularly doctors. It is vital to assess the existing outlook and expertise of the medical interns in order to prepare efforts to increase the level of awareness of physiotherapy (Shemjaz, et al.,2016).

One of the earliest healthcare occupations is physical therapy, which was practiced as early as 460 BC by prominent physicians like Hippocrates and Galen. Events like the First World War, the polio epidemic, and the rise of handicap starting in the 18th century accelerated the development and industrialization of physiotherapy (Doshi, et al., 2017). Physical therapists administer therapy regimens to restore or improve motor functions, manage reduce pain issues, improve post-injury healing, and increase mobility following diseases or impairments. Physiotherapist use a variety of physical modalities, techniques and apparatus including therapeutic ultrasound, TENS, laser, heating agents as diathermy, traction and movement techniques (Shemjaz, et al., 2016).

Physiotherapy is well established and regulated profession, although it employs a variety of techniques and methods depending on the needs of each countries health care system, economy and needs (Karthikeyan, et al., 2015). Physiotherapists are essential members of healthcare teams and are able to coordinate patient care with other practitioners, educate patients and their families, participate in team-based health research, work in a variety of settings including nonclinical ones and primarily support medical activities (Zangata, et al., 2019).

Medical doctors have a significant impact on other health professions including physiotherapist because they are at the top of the pyramid of healthcare workers. Despite the widespread acceptance and advancement of physiotherapy, medical practitioners are not familiar with it. There is a chance that medical professionals do not fully understand all physiotherapy treatment (Mahto, et al., 2021). The way that the medical profession views physiotherapy has undergone a sea change. The only individuals deemed suitable to care for any injured person were medical professionals. Today, health professionals collaborate with physiotherapists to provide patients with the finest options for recovery and treatment (Kutty, et al.,2013).

Mahto (2021) conducted a descriptive cross-sectional study on medical interns at a tertiary hospital in Kathmandu between March 21 and May 20, 2021. All the participants provided their informed consent, and the information gathered was kept private. A decision about ethics was made by the Institutional Review Committee (Ref no. 2603202106) and the result showed that 83% interns had inappropriate knowledge on physiotherapy practice. There may be numerous causes for the lack of awareness and understanding, but it is clear that there is a need to teach the next medical professionals about the various facets of physiotherapy in order to improve the health care system as a whole. Moreover, he recombined that the medical interns are the future doctors, thus training them about physiotherapy by using various techniques is crucial for prompt and suitable patient referrals, which in turn leads to better patient care and the system's overall benefit (Mahto, et al., 2021).

Aimen, et al., (2022) conducted a descriptive cross- sectional study with 150 medical professionals. The study indicated that 66% of the participating clinicians were knowledgeable that the DPT is a 5-year program. According to the study's findings, 104 doctors, or 69.3%, believe that physiotherapists work at fitness and sports facilities in addition to treating patients in hospitals, 4 (2.66%) physicians believed that physiotherapists work at sporting facilities. They discovered that 70 (46.67%) doctors thought their current understanding of physiotherapy was sufficient to counsel a patient in need of physiotherapy, 79 (52.67%) doctors thought their expertise is insufficient to do so. Physical therapy services are expensive, according to 83 (55.3%) doctors, 38 (25.3%) doctors, 28 (18.6%) doctors are unaware of this fact, 84 (56%) doctors believed that physiotherapy has a very significant role

in the healthcare industry. It was 3 doctors that disagreed, and 5 did not know, but 141 strongly feel that physical therapy is an important part of community-based rehabilitation. Physiotherapy services are essential to secondary care strongly agreed upon by 52 (34.6%) doctors. They recombined that medical practitioners should be urged to take part in formal physiotherapy education and training (Aimen, et al., 2022).

Ahmed & Zohra conducted a cross sectional study in Swabi, Khyber Pakhtunkhwa that contain 145 medical professionals with a combined experience of at least two years. Only 22.1% of respondents were unaware the specialties available to physical therapy graduates, while 77.9% respondents were aware of specialization in the profession. Similar to this, 47 (32.4%) people were uninformed of the methods utilized by physical therapists, while 98 (67.6%) participants were aware of these techniques. There were 9.4% of doctors who thought physical therapy and occupational therapy were the same, 60.6% thought they were different, and 30% respondents were not sure. Only 60% of the participants were aware that the nation offers a bachelor's degree in physical therapy. Varied participants had different ideas on how long the physical therapy graduates internships should last. It was found that 91% of participants agreed that physical therapy helps to lessen pain. According to 120 (82.8%) doctors, physical therapy is crucial to community-based healing. There were 40 doctors (or 27.6%) who concurred that exercise is advised for people with diabetes. Only 16 (11.0%) physicians thought physical therapy and orthopedics were related. Physical therapy was rated as an extremely good field by 30 (20.7%) doctors and a good field by 54 (37.2%) doctors. The researcher recombined that medical practitioners need to learn more about physiotherapy immediately (Ahmed, et al., 2021).

Abichandani and Radia did a study “Awareness of Various Aspect of Physiotherapy Among Medical Residents”. This cross-sectional study was conducted to ascertain the level of knowledge medical residents have on several facets of the physiotherapy profession. There were 180 medical residents in all took part in the study. The residents knew the most about sports (93.80%), neuro (86.66%), fitness (85%), and musculoskeletal physiotherapy (97.22%), while they knew the least about industrial therapy (66.10%) and community-based rehabilitation (64.40%). According to the residents, highest referral rates for cardiopulmonary physical therapy are for obstructive (82.20%) and restrictive pulmonary disorders (80%), and lowest referral

rates are for wound healing (59.40%). The majority of pain-relieving devices utilized were electrotherapy devices. Only 54% of the medical residents were aware that physiotherapy is a degree-granting field, as opposed to 44% who were aware that it is a professional field. Only half of all inhabitants were aware of the course's actual length (Abichandani and Radia, 2015).

Shemjaz et al conducted an institute based cross sectional study in Bangalore, India title “Awareness and Knowledge of Physical Therapy among Medical Interns”- A Pilot Study. The study's goal was to determine how much physiotherapy the medical interns knew and understood. The findings show that medical interns have a need for physiotherapy education. Only 45% of medical trainees were aware of physiotherapy and 42% had knowledge about it. Q Data study revealed that 82%of medical interns knew they could enroll in a physiotherapy degree. In accordance with 22% of interns, physiotherapy education lasts for five years, 56% of respondents think that physiotherapy has a set assessment methodology. Most interns are aware that physiotherapy has connections with various specialties in addition to orthopedics. Overall, ultrasound was the physiotherapy technique that the interns were most familiar with. The researcher reintegrates that education on physiotherapy for young medical professionals is necessary to improve patient care (Shemjaz, et al., 2016).

Zangata (2019) conducted a cross sectional study at the University of Zambia, Lusaka that showed that bulk of participants ranged in age from 25 to 31. The study found that medical students are not well-informed about the relationship between the role of physiotherapists and the role of medical professionals. Therefore, it is essential that physiotherapists teach medical students about the numerous subspecialties of physiotherapy, such as geriatrics, cardiac dysfunction, industrial health, and women's health. Additionally, the majority of respondents strongly agrees that physical therapists may perform in intensive care units and arrange effective treatments based on assessments. The medical students’ awareness of the significance of physiotherapists in healthcare was not significantly influenced by their gender (Zangata, et al., 2019).

Al-Eisa et al conducted a cross sectional study in Saudi Arabia where 51% of respondents said they have some familiarity with PT. It appears that respondents who had attended PT awareness lectures or had gotten specialized training on instances that could benefit from PT were more informed than other respondents. In total 17% of the respondents said they have gone to PT awareness seminars. Additionally, 41%

of respondents said they were aware of the various PT specializations. Out of 280 respondents, 11% said they regularly send patients to physical therapy departments when appropriate, while 49% said they never refer patients to a PT department. The remainder reported rarely referring patients (26%) and occasionally (14%) referring patients to PT departments on a frequent basis was reported by 67% of respondents with 1–5 years of experience and 13% of respondents with 11–15 years of experience. While the remaining respondents either believed that PT was not a professional course or were unaware of its status, 44% of respondents stated that PT is a professional course. Overall, 58% of respondents said they had a poor opinion of PT (AL-Eisa, et al., 2016).

Mohammed Ali et. Al., conducted a cross sectional questionnaire-based study in Saudi Arabia. In this study 80 percent of participants said physiotherapists had the training to assist with respiratory care. The majority of participants expressed their agreement that physiotherapists are a crucial component of the ICU team and 48.4% said they were unaware of the physiotherapists function in the situation. The majority of survey participants thought they needed additional information on the function of physiotherapy in respiratory treatment. Doctor referral like specialized physicians was more likely to recommend PT to physiotherapists working in respiratory care settings than no specialists. Within the respiratory team, respiratory physiotherapists must define their roles, skill sets, and areas of expertise. This procedure could be complicated and would probably differ between various institutions and healthcare systems (Mohammedali, et al., 2016).

Karthikeyan & Jones conducted a study title “Knowledge of Physiotherapy Services among Hospital Based Health Care Professionals in Papua New Guinea”. It is unclear how much knowledge there is about the physiotherapy and rehabilitation services offered to the medical staff in Papua New Guinean hospitals. A simple self-administered closed and open-ended questionnaire was used in a study to evaluate the degree of knowledge and perception of physiotherapy among hospital-based healthcare workers. Only 145 (15%) of the 200 questionnaires that were issued to each of the five major hospitals received replies from the various health professional cadres. Nursing officer’s responses made up 46% of the total (n = 67), whereas medical officers responses made up only 10% (n = 14). In general, the respondents' awareness of physiotherapy services was lacking. To ensure that all medical students and health

professionals are aware of the significance and importance of inter professional training and communication, it is advised that inter professional training and communication services for physiotherapy are important (Karthikeyan, P. & Jones, A., 2015).

Shimpi et al. conducted cross-sectional research of awareness and viewpoints among referring doctors in colleges in Mumbai and Pune. It was discovered that a significant portion of doctors (69.9%) were familiar with the physiotherapist who was treating them. They also discovered that nearly all of the physicians in their research (95.5%) made recommendations for physiotherapy. Due to the poliomyelitis outbreak in Mumbai in 1952, physiotherapy was first used in India. First physiotherapy school opened in 1953 and Government of India, Brihanmumbai Municipal Corporation (BMC) and WHO collaborated to create the center at Seth G.S Medical College and K.E.M Hospital (Shimpi, et al., 2014).

A study by Dhiraj et al. in rural areas about awareness of physiotherapy among medical professionals working in rural settings showed that doctors working in rural areas were uninformed of the services offered by physiotherapy and the value of the same. There were a variety of responses, demonstrating increased awareness of neurological, athletic, and musculoskeletal dysfunctions. When asked if physical therapy aids in the management and prevention of diseases like diabetes, people typically mention conditions like hypertension and diabetes mellitus. The greatest treatment to prevent impairment or save patients from injury is physiotherapy paired with medication. There was general agreement that different forms of communication should be used to raise awareness of the subject of physiotherapy (Doshi, et al., 2017).

Vincent-Onabajo et al stated in a study titled “Medical student’s awareness of the role of physiotherapists in multidisciplinary healthcare” that Physiotherapy interdepartmental lectures and clinical rounds can help raise knowledge of the profession. The research indicated that there was no significant difference in the level of knowledge between male and female medical students for physiotherapy. The majority of medical students in this study agreed or strongly agreed that physiotherapists in the healthcare team primarily help medical work and can only plan appropriate treatments in collaboration with physicians, according to the study's other findings (Vincent-Onabajo, et al., 2014).

Doshi et al conducted a study that showed Interactive interdepartmental workshops about the area of physiotherapy, particularly among medical professionals, can be held in medical colleges, hospitals and clinics. The principles of the field, the responsibilities of a physiotherapist, the evaluation and assessment performed by a therapist, the research and evidence behind each treatment program, and how it helps to prevent injuries and disabilities should all be covered in such seminars. Implementing such approaches can significantly help increase doctor's familiarity with the profession of physiotherapy, improving referrals for the same (Doshi, et al., 2017).

A study conducted by Agni et al found that general practitioners are well aware of PT. Regarding the various physiotherapy specialties, the most common fields are neurology and orthopedic. Cardio-respiratory and community-based rehabilitation were two lesser-known specialties. The general practitioner's graduation was found to be the main source of awareness among the various sources. The researcher shows that only 20% of participant agree to treating patients by physiotherapy in intensive care and up to 79% are unaware that patients can benefit from receiving physiotherapy in these settings. Hence, we can conclude that less is known about the physiotherapist function in cardiac and pulmonary disorders (Agni, et al., 2017).

According to a study by Callejo - Tiuseco et al, doctors who have worked with PTs or attended lectures about their roles are more likely to refer patients to them than those who have never worked with one. Filipino doctors think that physiotherapist can handle a variety of patients, build trusting connections with the man, be aware of their duties in clinical and research contexts. According to the data, Filipino doctors exhibit adequate fundamental knowledge, favorable perceptions, and high awareness of physiotherapist's duties and areas of practice. However, there is still a need to expand the chances for physiotherapists and doctors to collaborate during their academic careers and in programs that emphasize the promotion of PT responsibilities and scope of practice ((Callejo**,** et al., 2022).

Shah et al conducted a study tittle ‘Prevalence of Awareness of Physiotherapy Amongst Health Care Professionals in Surat City’. The study found that the majority of volunteers told patients should only go to a physiotherapy facility upon a doctor's recommendation. While neuro and ortho rehabilitation are well-known, community-based rehabilitation is not as well-known among volunteers. Only 64% of volunteers knew that physiotherapists treated burn patients, despite the fact that burns are the leading cause of unintentional death (Shah, et al., 2022).

Rajan et al conducted a study sought to examine how patient’s perceptions on their referring physicians (physicians and surgeons) attitudes regarding physical therapy compared to those physicians. Secondarily, it was intriguing to observe how the physiotherapists’ treatment approaches impact patient satisfaction. The study was carried out in a tertiary care hospital in Mumbai, India, at the orthopedic pain center of the Physiotherapy division. It was 193 patients participated in personal interviews using a reliable questionnaire. The subjects were 47.5 years old on average. Low back pain was the most prevalent type of pain, with an average duration of nearly 8 years. The majority of patients (37.32%) were not referred for any specific physiotherapy treatment. Nearly the same number of participants (33.16%) was sent to the physiotherapy division for both exercise and electrotherapy treatments. The majority of the time (about 68%), the treatment modalities recommended by the attending physiotherapist and the referring physician were in accord. However, there appeared to be a mismatch in roughly 32% of the individuals that were referred. The treating physicians granted the physiotherapists a great deal of latitude in treating persistent musculoskeletal pain. There was dissatisfaction among patients regarding the treatment methodologies suggested by the physiotherapist because some of them appeared to suggest electrotherapy as a treatment mode (Rajan, et al., 2013).

CHAPTER – III

METHODOLOGY

3.1 Study design

It was a cross sectional type of descriptive study carried out with the aim of assessing the level of knowledge of intern doctors about physiotherapy in a selected medical college hospital.

3.2 Study place

Data for the present study was collected from the intern doctors working in Dhaka Medical College Hospital, Dhaka.

3.3 Study period

The duration of the study was 12 months from 1st July 2022 to 30th June 2023.

3.4 Study population

Intern doctors working presently at Dhaka Medical college Hospital constituted the study population for the present study.

3.5 Sample size

The required sample size for the proposed study was calculated by using the following statistical formula.

$$n = \frac{z^2 \times p \times q}{d^2}$$

Here p = 17% = 0.17 [Reference: Mahto, P.K., Manadhar, N., Joshi, S.K. (2021). Knowledge of physiotherapy practice among medical interns in a tertiary care Hospital. J Nepal med Assoc; 59 (240); P.P. (771-774)].

$q = 1 - 0.17$

$= 0.83$

d = 5% = 0.05; z = 1.96 at 95% Confidence level

So, putting the value into above equation

$$= \frac{1.96^2 \times 0.17 \times 0.83}{0.05^2} = 216.81 = 217$$

At Dhaka Medical College Hospital, the average number of intern doctors is 200.

So, the corrected sample size is as follows:

$$n_c = \frac{n_0}{1+\frac{n_0}{N}} = \frac{217}{1+\frac{217}{200}} = 104.076$$

$$= 105$$

Considering 10% dropout or unwillingness to participate or any other unexpected loss during data collection, so the sample size was increased by adding 10% more. Ultimately it became 105+11 = 116

3.6 Sampling technique

A purposive sampling technique was applied to select respondents from the intern doctors.

3.7 Eligibility criteria

3.7.1 Inclusion criteria

- Both male and female intern doctors working in the hospital.
- Age: 23 – 28 years.
- Willing to participate in this study.

3.7.2 Exclusion criteria

The interns who were not physically present.

3.8 Method of data collection

A Self-administered questionnaire was used to collect data from the study participants.

3.9 Instrument and tools of data collection

A questionnaire was prepared according to the objectives and variables of the present study. The questionnaire contained both open and close ended questions. The questionnaire had two parts. First part contained questions on socio-demographic information. The second part included questions on knowledge on various aspects about physiotherapy such as course content, duration of the course, modalities, role of physiotherapy, specialization of physiotherapy, disease condition, effectiveness in pain etc.

3.9 Procedure of data collection

The researcher obtained permission from the authority of Dhaka Medical College hospital to carry out the study. Then intern doctors of different wards of the hospital were approached by the researcher herself. The aims and objectives of the study were explained in detail to the intern doctors. Those who agreed to participate were included in the study. Obtaining written informed consent from the intern doctors the researcher handed over the questionnaire to the participants. The participants were requested to read it thoroughly and put their answers accordingly. After collection of the data the researcher thanked the intern doctors for their cooperation.

3.9.1 Data editing

After collection of the questionnaire from the participants, these were checked for any error or inconsistency in the responses. Necessary corrections were done accordingly. The responses were coded for the entry into the computer program.

3.9.2 Data entry

Data from the questionnaire were entered into SPSS program by the researcher herself.

3.9.3 Data analysis

Analysis of the data was carried out according to the objectives of the study. Mean and percentage were two measurements of descriptive statistics used in the most of the cases. Relationship was assessed between dependent and independent variables.

3.9.4 Result:

The findings of the study have been presented by frequency tabulation of the characteristics. The results were also presented by various charts, graphs and description of the variables.

3.10 Ethical consideration

The researcher submitted a research proposal to the department of physiotherapy for approval and obtained the written permission in time from the Ethical review board of SAIC College of Medical Science and Technology (SCMST) to carry out the study.

No physical examination or any invasive technique was used in the present research. There was no direct benefit to respondents; however, the study findings might be beneficial for the intern doctors. The purpose of the study was explained to every participant and asked for their response. The respondents who gave informed verbal consent included in the study. The participant was also informed of his/her right to discontinue at any point of interview. Refusal to participate involved no loss of benefits which he/she was otherwise entitled.

Data of the participants were maintained with strict confidentiality. Every participant was given a unique code number for this study. The documents for these code numbers linking subjects were kept in a locked cabinet under the direct supervision of the researcher.

CHAPTER – IV

RESULTS

The objective of the present study was to assess the level of knowledge of the intern doctors about physiotherapy as a subject. The required data were collected from the respondents by using a pretested questionnaire and analyzed with the help of SPSS program. The result has been presented by tabulation, graphs and description below.

4.1: Sociodemographic Information

Table no. 1: Frequency distribution of the respondents by age.

Age group in years	Frequency	
	N	%
23 - 25	74	63.80
26 - 28	42	36.20
Total	116	100.00

Mean = 25.25, SD = $\pm$ 0.94

Regarding frequency distribution of the respondents by age, it was found that out of 116, 74 (63.80%) belonged to the age group of 23 – 25 years. It was also found that 42(36.20%) respondents were in the age group of 26 – 28 years. The mean age of the participants was 25.25 and SD was 0.94063 (Table no.1).

Table no. 2: Frequency distribution of the respondents by age and gender.

Age group in years	Gender				Total	
	Male		Female			
	N	%	N	%	N	%
23-25	22	29.70	52	70.30	74	63.80
26-28	18	42.90	24	57.10	42	36.20
Total	40	34.50	76	65.50	116	100.00

About frequency distribution of the respondents by age and gender, it was revealed that out of 116, 74 (63.8%) belonged to the age group of 23 – 25 years. Among them, 22 (29.70%) subjects were male and 52 (70.30%) respondents were female. In case of age group of 26 – 28 years, it was found that 18 (42.9%) respondents were male and 24 (57.10%) were female respectively (Table no.2).

Table no. 3: Frequency distribution of the respondents by religion.

Religion	Frequency	
	N	%
Islam	102	87.90
Hindu	13	11.20
Buddhist	1	0.90
Total	116	100.00

The study showed that the religion of the most of the participants [102(87.90%)] was Islam and 13 (11.20%) respondents were Hindu (Table no.3).

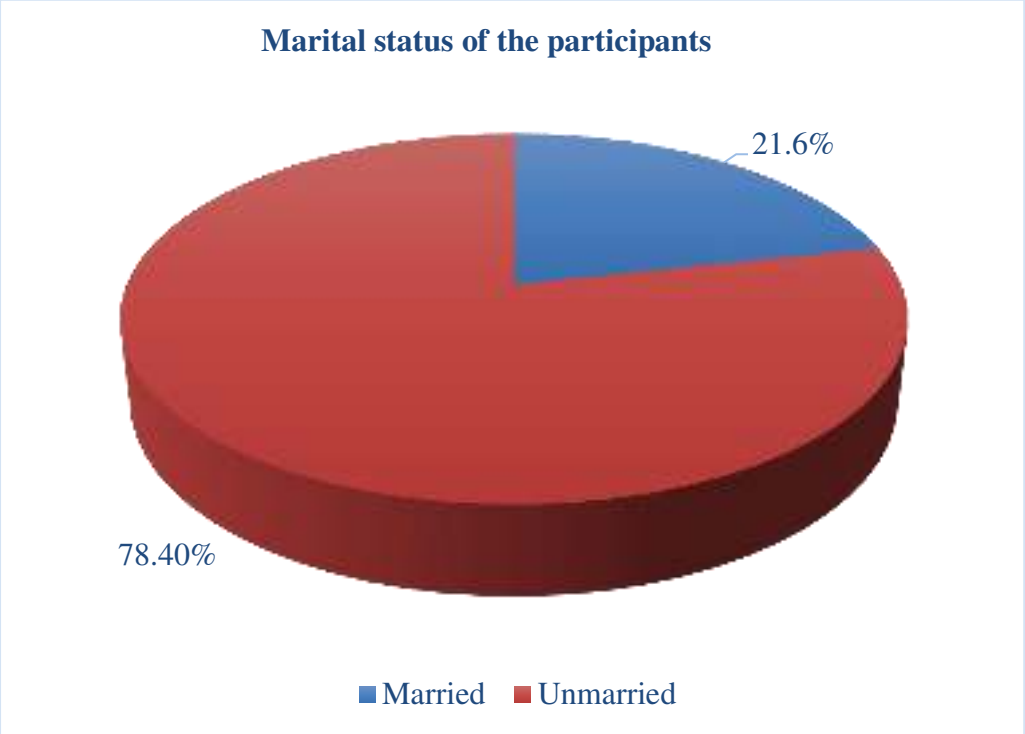


Figure no.1: Marital status of the participants

Regarding marital status, it was found that 91 (78.40%) intern doctors were unmarried and 21.6% doctors were married (Figure no.1).

Table no. 4: Frequency distribution of the respondents by monthly income.

Monthly income	Frequency	
	N	%
Taka 10000 or less	5	4.30
Taka 10001- 15000	106	91.40
Taka 15001 and above	5	4.30
Total	116	100.00

Mean = 15155, SD = ±2749.24005

About frequency distribution of the respondents by monthly income, it was revealed that out of 116, 106 (91.40%) intern doctors had monthly income Taka 10001-15000. It also found that 5 (4.30%) intern doctors had monthly income Taka 10000 or less and 5 (4.30%) intern doctors had monthly income Taka 15001 and above. The mean income of the participants was Taka 15155.1724 and SD was 2749.24005 (Table no. 4).

4.2: Knowledge about physiotherapy

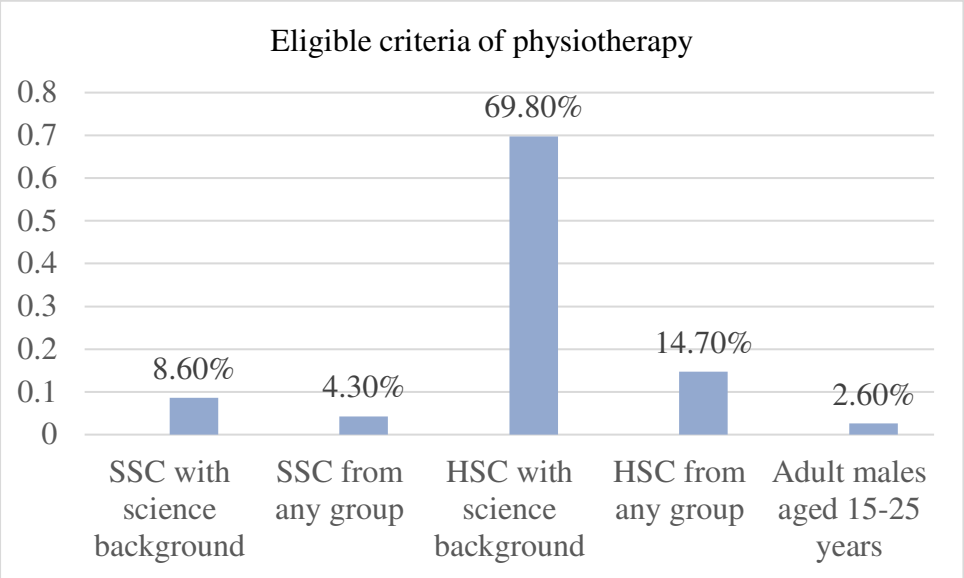


Figure no.2: Eligible criteria for entering into a B.Sc physiotherapy course

The survey showed that 81 (69.80%) participants said HSC with science background is the eligible criteria for entering into B.Sc in physiotherapy course. It also showed that 17 (14.70%) respondents told that HSC from any group is the eligible criteria for studying B.Sc in physiotherapy (Figure no.2).

Table no.5: Frequency distribution of the respondents by mentioning specialization of physiotherapy.

n =116

Specialization	Frequency	
	N	%
Orthopedic	93	80.20
Neurology	77	66.40
Ophthalmology	3	2.60
Gynecology	7	6.00
Pediatric	17	14.70
Dermatology	1	0.90
Sports	63	54.30
Don't know	13	11.20

*Multiple responses.

The study revealed that, 93 (80.20%)) participants mentioned that orthopedic is the specialization of physiotherapy. It was found that 77 (66.40%) intern doctors told neurology is the specialization and 63 (54.30%) respondents told sports as a specialization (Table no.5).

Table no.6: Mentioning the modalities that used in physiotherapy

n = 116

Modalities	Frequency	
	N	%
Autorefractor	14	12.10
Cryotherapy	32	27.60
Ultrasonography	7	6.00
IRR	69	59.50
UST	36	31.00
TENS	88	75.90
Don't know	9	7.80

*Multiple responses.

Regarding mentioning the modalities that used in physiotherapy, it was found that 88 (75.90%) respondents informed TENS is the modalities that used in physiotherapy. It was also found that 69 (59.50%) intern doctors told IRR, 36(31.00%) respondents mentioned UST, 32 (27.60%) said Cryotherapy used as modalities in physiotherapy (Table no.6).

Table no. 7: Frequency distribution of the respondents by their knowledge on different aspects of physiotherapy.

n = 116

Questions related to different aspects of physiotherapy	Frequency					
	Yes		No		Don't know	
	N	%	N	%	N	%
Is physical therapy and occupational therapy same	4	3.40	95	81.90	17	14.70
Are there post graduation in physiotherapy	59	50.90	2	1.70	55	47.40
Does physiotherapy follow a definite assessment protocol	77	66.40	7	6.00	32	27.60
Exercise prescription is done in physiotherapy for type-2 diabetes	49	42.20	27	23.30	40	34.50
WHO has classified physiotherapist as an independent practitioners	30	25.90	23	19.80	63	54.30
Physiotherapy services should be available in all hospital	106	91.40	4	3.40	6	5.20
Physiotherapy is related only with orthopedics	10	8.60	97	83.60	9	7.80
Physiotherapy professionals create awareness about physiotherapy	85	73.30	17	14.70	14	12.10

* Multiple responses.

About Frequency distribution of the respondents by their knowledge on different aspects of physiotherapy, it was found that 3.40% participants said physiotherapy and occupational therapy is same and 81.90% said not same. It was revealed that 59 (50.90%) respondents told that there is post-graduation course in physiotherapy. The study showed that 77 (66.40%) respondents told physiotherapy follow definite assessment protocol, 49(42.20%) doctors mentioned exercise prescription is done in physiotherapy for type -2 diabetes, 30 (25.90%) respondents told that WHO has classified physiotherapist as an independent practitioners, 106 (91.40%) participants told that physiotherapy services should be available in all hospitals respectively (Table no. 7).

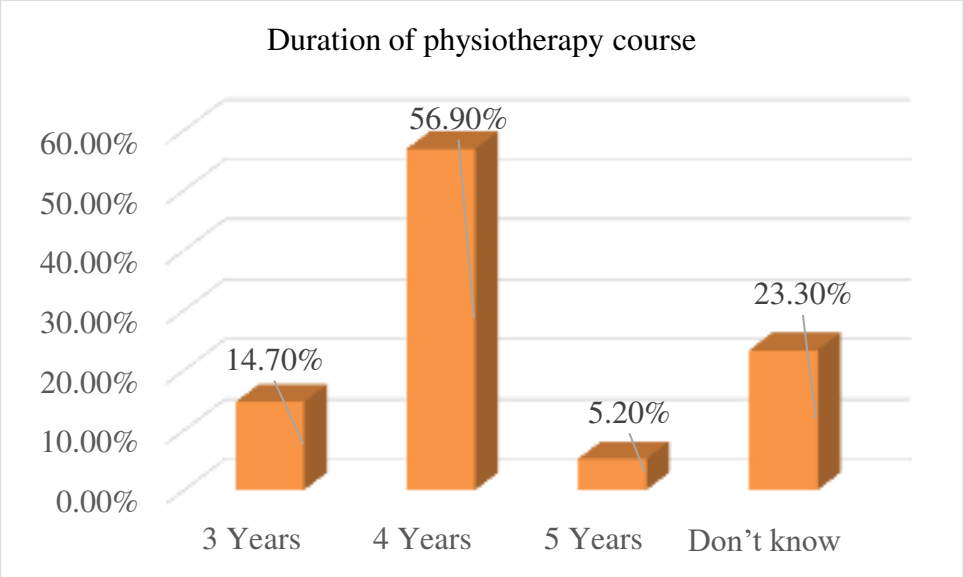


Figure no. 3: Duration of Bachelor of Physiotherapy course

The study revealed that, out of 116, 66 (56.90%) participants said that the duration of B.Sc in Physiotherapy course is 4 years. It was found that 17 (14.70%) participants said that the duration of B.Sc in Physiotherapy course is 3 years. The study showed that 27 (23.30%) participants told that they did not know the duration of physiotherapy course (Figure no. 3).

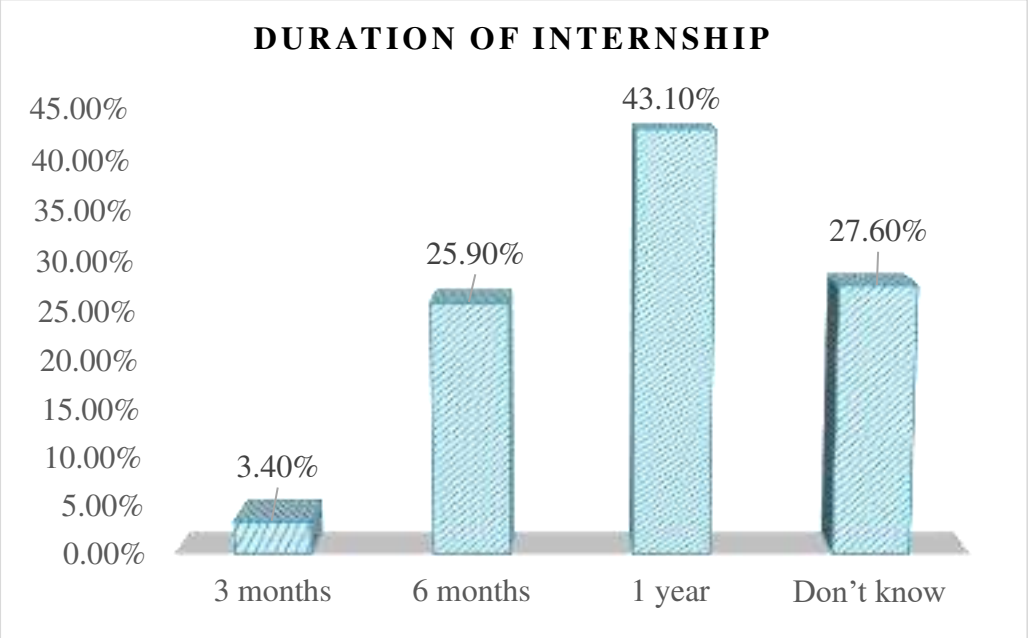


Figure no. 4: Duration of Bachelor of Physiotherapy Internship

About duration of B.Sc in physiotherapy internship, it was found that out of 116, 50 (43.10%) participants said that it is 1 year. The study also revealed that 30 (25.90%) and 4 (3.40%) participants said the duration of physiotherapy internship is 6 months and 3 months respectively. It was reported that 32 (27.60%) participants did not know about the duration of physiotherapy internship (Figure no. 4).

Table no. 8: Mentioning the subjects taught in physiotherapy.

n = 116

Subject	Frequency	
	N	%
Anatomy	87	75.00
Physiology	75	64.70
Sociology	4	3.40
Geriatric	36	31.00
Dermatology	4	3.40
Electrotherapy	65	56.00
Don't know	22	19.00

*Multiple responses.

About mentioning the subjects taught in physiotherapy, it was found that 87 (75%) intern doctors said anatomy is taught in physiotherapy course. It was also found that 75 (64.70%) respondents told physiology, 65 (56%) doctors told Electrotherapy and 36 (31%) participants said Geriatric are taught in physiotherapy course. The study showed 4 (3.40%) participants told Sociology and Dermatology are taught in physiotherapy course. There were 22 (19%) participants told that they did not know the subjects are taught in physiotherapy course (Table no. 8).

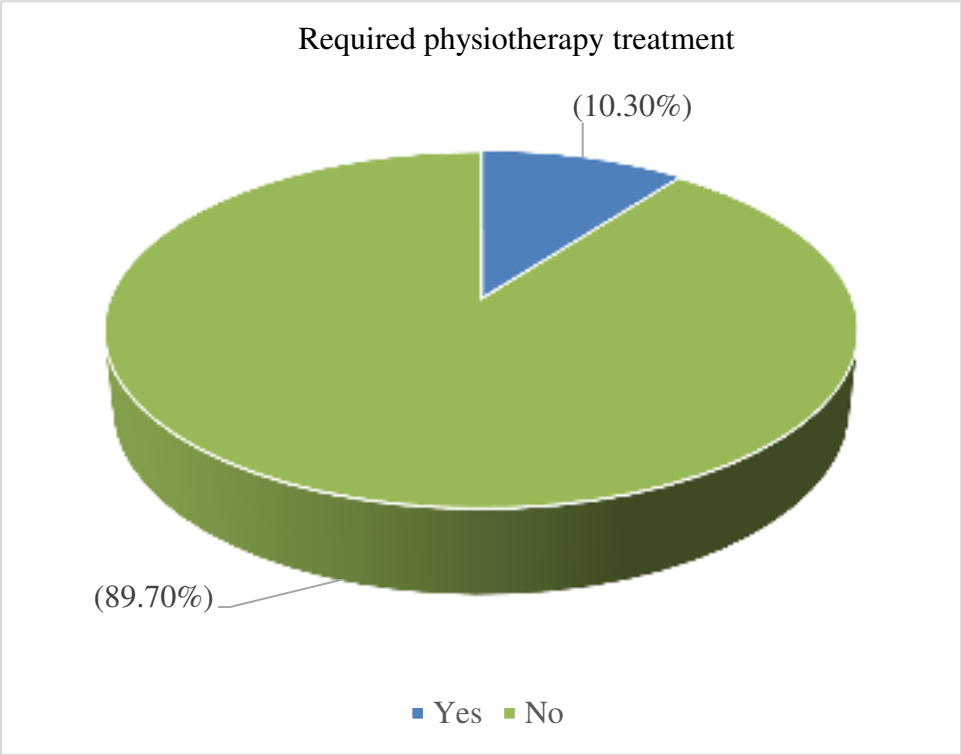


Figure no. 5: Required physiotherapy treatment of the respondents

The study showed that 104 (89.70%) participants had no musculoskeletal problem and 12(10.30%) participants had problem that required physiotherapy treatment (Figure no. 5).

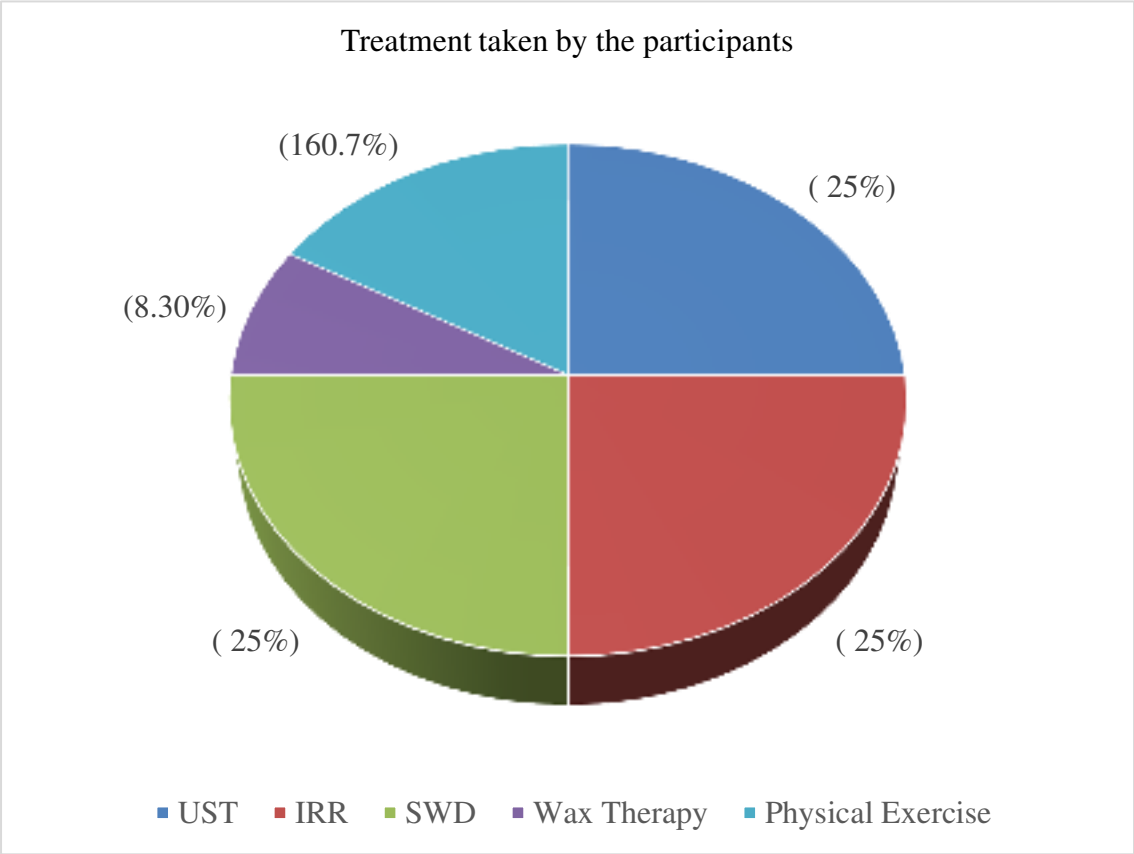


Figure no. 6: Treatment taken by the respondents

The study revealed that out of 12, 3(25%) participants needed UST. It was also found that 25% participants needed IRR and SWD. It was observed that 8.30% and 16.70% participants required wax therapy and physical exercise respectively (Figure no. 6).

Table no. 9: Physiotherapy is effective in reducing pain.

n = 116

Effective in reducing pain	Frequency	
	N	%
All types of musculoskeletal pain	105	90.50
Pain only in muscular injury	19	16.40
Pain only in joint disorder	19	16.40
Sports injury pain	67	57.80
Don't know	1	0.90

*Multiple responses.

The study showed that 105 (90.50%) participants said physiotherapy is effective in reducing all types of musculoskeletal pain. It was also found that 67 (57.80%) participants told physiotherapy is effective in reducing Sports injury pain. About 16.40% participants knew about the effectiveness of physiotherapy in muscular injury pain and pain in joint disorder (Table no. 9).

Table no. 10: Common conditions treated by physiotherapy.

n = 116

Common conditions	Frequency	
	N	%
Musculoskeletal disease	110	94.80
Neurological disease	67	57.80
Respiratory disease	2	1.70
Others	12	10.30

*Multiple responses.

Regarding common conditions treated by physiotherapy, it was found that 110 (94.80%) participants mentioned that musculoskeletal diseases are treated by physiotherapy. It was also found that 67 (57.80%) participants told that neurological disease is treated by physiotherapy. Only 2 (1.70%) participants told respiratory disease is treated by physiotherapy (Table no. 10).

Table no. 11: Frequency distribution of the respondents by mentioning the important role of physiotherapy.

n = 116

Role of physiotherapy	Frequency	
	N	%
ICU	14	12.10
Secondary care	81	69.80
Emergency department	10	8.60
Burn Unit	17	14.70
Dermatology care	2	1.70
Pre and post operative case	46	39.70
Sports injury	99	85.30
Don't know	5	4.30

*Multiple responses.

Regarding frequency distribution of the respondents by mentioning the important role of physiotherapy, it was found that 99 (85.30%) participants told about the important role of physiotherapy in the field of sports injury. It was also found that 81(69.80%) participants informed that physiotherapy plays an important role in secondary care. The study showed that 14 (12.10%) participants knew physiotherapy plays an important role in ICU and 46 (39.70%) respondents told about pre and post operative cases. It was revealed that physiotherapy has particular role in Emergency department 10 (8.60%), Burn Unit 17 (14.70%), Dermatology care 2 (1.70%). The study showed that 5 (4.30%) participants did not know about the role of physiotherapy at all (Table no. 11).

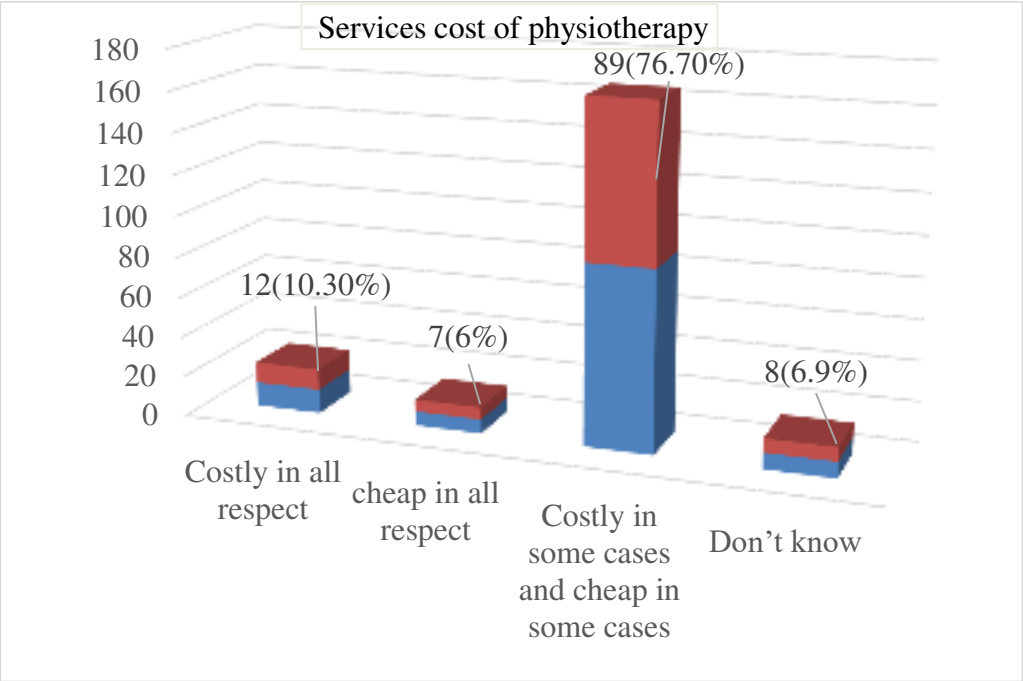


Figure no.7: Opinion about cost of services in physiotherapy

The study showed that out of 116, 89 (76.70%) respondents said physiotherapy service is costly in some cases and cheap in some cases. It was found 12 (10.30%) respondents said physiotherapy services is costly and 7 (6%) respondents said physiotherapy services is cheap in all respect. It was revealed that 8 (6.90%) intern doctors did not know about cost of services in physiotherapy at all (Figure no. 7).

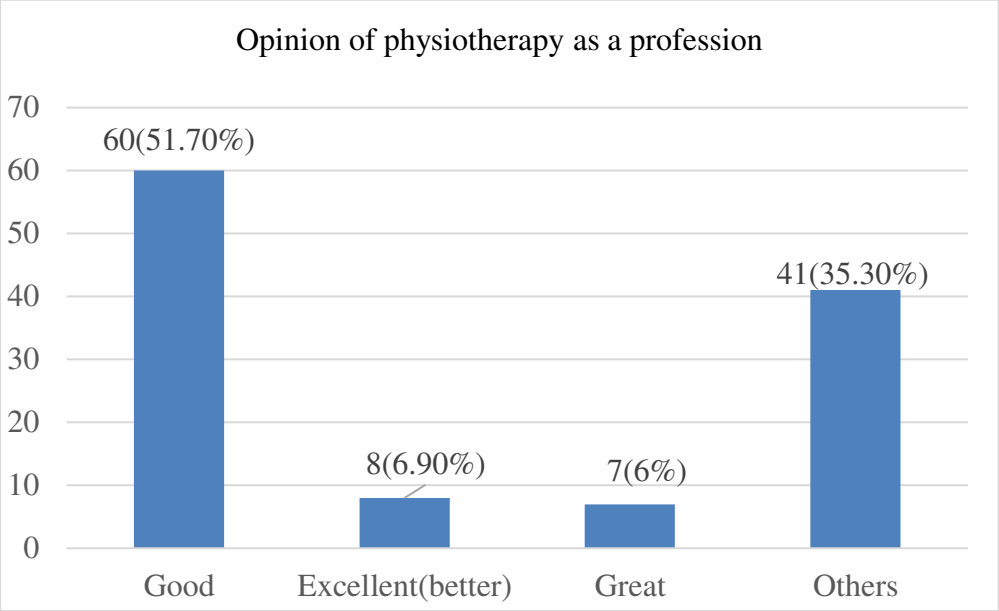


Figure no.8: Opinion of physiotherapy as a profession

Regarding frequency distribution of the respondents by opinion of physiotherapy as a profession, it was found that out of 116, 60 (51.70%) respondents said physiotherapy is a good profession, 8 (6.90%) said physiotherapy is excellent or better and 7 (6%) said great as a profession respectively (Figure no. 8).

Table no. 12: Respondents source of information about physiotherapy.

n = 116

Source of information	Frequency	
	N	%
Newspaper	21	18.10
TV	17	14.70
You Tube	23	19.80
Books	39	33.60
Friends	33	28.40
Patients	69	59.50
Awareness Program	40	34.50
Others	10	8.60

*Multiple responses

The study showed that out of 116, 69 (59.5%) participants said patients are the source of information about physiotherapy. It was reported that 40 (34.50%) participants came to know about physiotherapy from awareness program and 39 (33.60%) participants knew about physiotherapy from books. It was also revealed that 33 (28.40%) respondents told that they got information about physiotherapy from their friends, 23 (19.80%) participants from YouTube, 21(18.10%) from newspaper, 17(14.70%) from TV and 10 (8.60%) from other sources respectively (Table no. 12).

Table no. 13: Frequency distribution of the respondents by their level of knowledge.

Knowledge in score	Frequency	
	N	%
Poor (< 12.83)	14	12.00
Average (12.8 – 22.84)	80	69.00
Good > 22.84	22	19.00
Total	116	100.00

Mean = 17.83, SD = $\pm$ 5.01003

The study showed that out of 116, 80 (69.00%) participants had average level of knowledge about physiotherapy. It was found that 14 (12.00%) participants had poor and 22 (19.00%) intern doctors had good knowledge. The mean of the respondents' level of knowledge was 17.8276 and SD is $\pm$ 5.01003 (Table no. 13).

Table no. 14: Frequency distribution of the respondents by age and level of knowledge.

Age group in years	Level of knowledge						Total	
	Poor <12.83		Average (12.83 – 22.84)		Good >22.84			
	N	%	N	%	N	%	N	%
23-25	11	9.50	47	40.50	16	13.80	74	63.80
26-28	3	2.60	33	28.40	6	5.20	42	36.20
Total	14	12.1	80	69.0	22	19.0	116	100.0

$\chi^2 = 2.96$, $df = 2$, $p = 0.227$

The study showed that out of 116, 74 (63.80%) were in the age group of 23 - 25 years. Among them 11 (9.50%) respondents had level of knowledge was less than 12.83, 47 (40.50%) respondents had in between 12.83 – 22.84 and 16 (13.80%) respondents had more than 22.84. It was also found that 42 (36.20%) respondents were in the age group 26 – 28. Among them 3 (2.60%) intern doctors had level of knowledge was less than 12.83, 33(28.40%) had 12.83 – 22.84 and 6 (5.20%) respondents had more than 22.84. The association between age of the respondents and level of knowledge was found not statistically significant ($\chi^2 = 2.96$, $df = 2$, $p = 0.227$) [Table no 14].

Table no. 15: Frequency distribution of the respondents by gender and level of knowledge.

Gender	Level of knowledge						Total	
	Poor <12.83		Average (12.83 – 22.84)		Good > 22.84			
	N	%	N	%	N	%	N	%
Male	6	5.20	29	25	5	4.30	40	34.50
Female	8	6.90	51	44	17	14.70	76	65.60
Total	14	12.1	80	69	22	19	116	100

$\chi^2 = 1.891$, $df = 2$, $p = 0.389$

The study revealed that out of 116, 40 (34.50%) respondents were male. Among them 6 (5.20%) respondents had the level of knowledge less than 12.83, 29 (25%) respondents had in between 12.83 – 22.84 and 5 (4.30%) respondents had more than 22.84. It was also found that 76 (65.60%) intern doctors were female. Among them 8 (6.90%) intern doctors had level of knowledge less than 12.83, 51(44%) respondents had level of knowledge in between 12.83 – 22.84 and 17 (14.70%) respondents had more than 22.84. The association between gender of the respondents and level of knowledge was found not statistically significant ($\chi^2 = 1.891$, $df = 2$, $p = 0.389$) [(Table no. 15)].

CHAPTER – V

DISCUSSION

The present study was carried out with the aim of determining the level of knowledge on physiotherapy of the intern doctors of Dhaka Medical College Hospital. The information was collected by a self-administered questionnaire and analyzed by SPSS program. The discussion part has been presented in the following sections.

Sociodemographic Information

About age distribution the study revealed that 63.80% belonged to the age group of 23 – 25 years and 36.20% respondents were in the age group of 26 – 28 years. The mean age and SD of the participants was 25.25 $\pm$ 0.94063 (Table no.1). Most of the participants were young. The findings of the present study regarding age were similar to the study conducted by Zangata, et al., and Odebiyi, D.O. Zangata showed that the bulk of participants ranged in age from 25 to 31 (Zangata, et al., 2019) and Odebiyi, D.O showed that mean age and SD of the respondents was 24±1.40 (Odebiyi, D.O., et al., 2008).

About distribution of the respondents by gender, it was found that 70.30% interns were female and 29.70% were male. The result indicated that the proportion of female participants were higher than that of male counterpart (Table no.2). The findings of the present study regarding gender were similar to the study conducted by Afzal et al (Afzal, et al., 2022).

The study showed that 87.90% respondents were Muslim and 11.20% respondents were Hindu. It indicated that most of the participants were Muslim (Table no.3). Bangladesh is a country where Muslims are majority. A study at Kathmandu in Nepal by Mahto, et al., stated that most of the participants were Hindu and it was 94%. It was also revealed that only 2.1% participants were Muslim (Mahto, et al., 2021). The Muslims are minority in Nepal.

Regarding marital status, it was found that 78.40% intern doctors were unmarried and 21.6% doctors were married. Most of the intern doctors were unmarried

(Figure no.1). The intern doctors were students few months back. Most of the students do not get married during student life. Just after passing their final examination few months back, they join the internship. So, most of them were found unmarried.

The study showed that 91.40% intern doctors had monthly income Taka 10001-15000 and 4.30% intern doctors had monthly income Taka 10000 or less. The mean and SD of the participants income was Taka 15155.1724 $\pm$ 2749.24005. It reported that most of the intern doctor's income was around Taka 15000 (Table no. 4).

Knowledge about Physiotherapy

The survey showed that 69.80% participants said HSC with science background is the eligible criteria for entering into B.Sc in physiotherapy course (Figure no.2). Shemjaz, et al., 2016 stated that the eligibility to enroll in a physical therapy degree program was known to 82.00% of medical interns. The findings in this regard were higher than the present study.

The present study found that 80.20% participants mentioned that orthopedic is the specialization of physiotherapy. Additionally, it was discovered that 54.30% respondents listed sports as a specialist, while 66.40% trainee doctors identified neurology. The result indicated that most of the participants know about Orthopedic as a specialization (Table no.5). The findings of the present study regarding specialization of physiotherapy were similar to the study conducted by Shemjaz, et al., Abichandani, D., et al., and Bolarinde, S. et al. Shemjaz , et al., 2016 stated that various specializations were available. Among them orthopedic was selected by 76.00% of them, followed by neurology (54%) and sports physical therapy (54%) (Shemjaz , et al., 2016). Abichandani, D., et al., 2015 showed that musculoskeletal physiotherapy (97.22%) were the areas that the residents knew the most about (Abichandani, D., et al., 2015). Bolarinde, S. et al., stated that over half of the participants (51.6%) were unaware of the many specialties available in physiotherapy. The most frequently mentioned specialization for physiotherapy was orthopedics and it was 86.9%. (Bolarinde, S. et al., 2021). Vincent-Onabajostated that the medical students need to be educated about the several specializations of physiotherapy, such as geriatrics and gynecology by physiotherapists.

A cross – sectional study in Saudi Arabia by AL-Eisa stated that only 41.00% of respondents said they were aware of the different PT specializations. (AL-Eisa, E.S., etal.,

2016). Martin Ebenezer. C GCXH, et al., stated that there was a shortage of knowledge among the participants about various physical therapy specialties such as physical therapy for women's health (Martin Ebenezer. C GCXH, et al., 2019). Karthikeyan, P., et al., 2015 showed that 83.00% of those who were interviewed said they were aware of the hospital's rehabilitation services (Karthikeyan, P., et al., 2015). A study conducted by Agni et al., found that 36.00% participants said musculoskeletal, 24% said neuroscience and 14.66% said sports is the specialization of physiotherapy (Agni, et al., 2017).

According to the survey, 74.9% respondents knew that TENS was a modality utilized in physical treatment. Additionally, it was discovered that 27.60% respondents and 59.50% intern doctors indicated cryotherapy and IRR as a modality in physiotherapy. The result showed that most of the participants knew about TENS as physiotherapy modalities (Table no.6). The findings of the present study regarding modalities that used in physiotherapy were similar to the study conducted by Shemjaz, et al., 2016. They stated that 60.00% participants told TENS is the modalities that used in physiotherapy. It was also found that 26.00% participants told cryotherapy is the modalities that used in physiotherapy course (Shemjaz, et al., 2016). Another descriptive cross-sectional study in Pakistan found that only 28.00% medical professionals were knowledgeable with all treatment modalities, including ultrasound and cryotherapy, while the remaining (71.3%) medical professionals were aware of several significant modalities, including TENS and Ultrasound (Aimen, I., 2022).

The study revealed that 3.40% participants thought that physiotherapy and occupational therapy are similar, whereas 81.90% respondents disagreed. The results showed that 50.90% respondents knew there was a postgraduate program in physiotherapy. According to the study, 91.40% participants said that physiotherapy services should be available in all hospitals, while 66.40% respondents said that physiotherapy follows a specific assessment protocol, 42.20% doctors mentioned that exercise prescription is done in physiotherapy for type-2 diabetes, 25.90% respondents said that WHO classified physiotherapists as independent practitioners. It was also revealed that 7.80% intern doctors told Physiotherapy is related only with orthopedics (Table no. 7).

According to Mahto, et al., 24.5% of medical interns were aware that physiotherapists are considered independent practitioners by the WHO. Senior faculty members and well-known practicing doctors fall under this category as well. Only

28.00% of respondents knew that exercise prescription is also done in physiotherapy for any disease, while 58.5% of respondents claimed that physiotherapy had a specific assessment methodology (Mahto, et al., 2021).

Shemjaz, et al., 2016 showed that 18.00% participants told exercise prescription is done in physiotherapy for type – II diabetes mellitus. It was also found that 12.00% participants told Physiotherapy is related to only orthopedics and 56.00% of them thought physical therapy follows a particular assessment process and 6.00% participants said that physical therapy and occupational therapy are same. Most interns were aware that physical therapy has connections with other specialties in addition to orthopedics (Shemjaz, et al., 2016).

Ahmed, Z., stated that there were 27.60% doctors who agreed and 36.60% doctors who disagreed that exercise is advised for people with diabetes mellitus and 35.90% doctors who were ignorant of the fact. Only 11.00% physicians thought physical therapy and orthopedics were related; 80.70% doctors disagreed and 8.30% doctors were unsure. It was 9.40% of medical professionals thought physical therapy and occupational therapy were equivalent (Ahmed, Z., et al., 2021).

The study revealed that 56.90% participants said that the duration of BSc in Physiotherapy course is 4 years, 14.70% participants said 3 years and 23.30% participants told that they did not know the duration of physiotherapy course. The result indicated that half of the participants knew about the actual duration of BSc in physiotherapy course (Figure no. 3). The findings of the present study regarding duration of physiotherapy course were similar to the study conducted by Shemjaz , et al., Abichandani, et al., and Agni, et al.,

Shemjaz, et al., 2016 stated that majority of interns (68.00%) were aware that physical therapy is a four-year course of study. Abichandani, et al., 2015 showed that only around half of the residents were aware of how long the course actually lasted (Abichandani, D., et al., 2015). Agni et al., found that 73.00% interns were conscious of the amount of time of the physiotherapy bachelor's degree program (Agni, et al., 2017).

The study found that 43.10% participants said that the duration of physiotherapy internship is 1 year and 25.90% participants said 6 months. It was reported that 27.60% participants did not know about the duration of physiotherapy internship. The result indicated that most of the participants did not know about the actual duration of

physiotherapy internship (Figure no. 4). The findings of the present study regarding duration of physiotherapy internship were similar to the study conducted by Shemjaz, et al., 2016 stated that 44.00% respondents thought that a physiotherapy internship lasts for a year.

It was found that 75.00% intern doctors said anatomy is taught in physiotherapy course. It was also found that 64.70% respondents told physiology, 56.00% doctors told Electrotherapy and 31.00% participants said Geriatric medicine are taught in physiotherapy course. There were 19.00% participants who told that they did not know the subjects that are taught in physiotherapy course. The study indicated that maximum intern doctors knew anatomy and physiology were taught in physiotherapy course (Table no. 8). The findings of the present study regarding the subject taught in physiotherapy were similar to the study conducted by Shemjaz , et al. They showed that 74.00% respondents said anatomy is taught in physiotherapy course. It was also revealed that 72.00% respondents told physiology and 46.00% participants told Electrotherapy are taught in physiotherapy course (Shemjaz, et al.,2016). Another poll of undergraduates studying the medical and health sciences revealed that there was still a lack of awareness and knowledge of the subject included in the curriculum (Martin Ebenezer. C GCXH, et al., 2019).

The study showed that 89.70% participants had no musculoskeletal problem and 10.30% participants had problem that required physiotherapy treatment. The result indicated that most of the intern doctors had no problem that required physiotherapy treatment (Figure no. 5).

The study revealed that 25.00% participants needed UST. In addition, 25.00% patients required IRR and SWD. It was observed that 8.30% and 16.70% participants required wax therapy and physical exercise respectively. It was indicated that most of the participants took UST, IRR & SWD (Figure no. 6).

It was found that 90.50% participants said physiotherapy is effective in reducing all types of musculoskeletal pain and 57.80% participants said physiotherapy is beneficial in reducing the pain associated with sports injuries. About 16.40% participants were aware of the benefits of physical therapy for treating pain from joint disorders and muscular injuries. The result indicated that most of the participants knew physiotherapy is effective in reducing all types of musculoskeletal pain (Table no. 9).

The findings of the present study regarding the effectiveness of physiotherapy in reducing pain were similar to the study conducted by Mahto, et al., Shemjaz, et al., Ahmed, et al., Abichandani, et al**.,** Mahto, et al., stated that 94.70% medical trainees acknowledged that physiotherapy is beneficial in relieving pain (Mahto, et al., 2021). Shemjaz, et al., 2016 stated that approximately 92.00% interns thought physical therapy was useful in relieving their pain (Shemjaz, et al., 2016). Ahmed, Z., et al., stated that 91.00% interns agreed that physical therapy can help people with pain (Ahmed, Z., et al., 2021). Abichandani, D., et al., 2015 showed that according to residents, the most common benefit of the electrotherapy equipment utilized by physiotherapists was pain reduction (87.2%) [Abichandani, D., et al., 2015].

It was revealed that 94.80% participants said that physiotherapy is used to treat musculoskeletal problems and 57.2%said neurological diseases. Only 1.7% participants were informed that physiotherapy is used to treat respiratory diseases. The result indicated that most of the participants knew Musculoskeletal disease is a common condition that treated by physiotherapy (Table no. 10).

Ahmed, Z., et al., stated that the volunteers in the latter trial had knowledge on musculoskeletal physical therapy, neuro physical therapy, cardiac physical therapy, and sports physiotherapy (Ahmed, Z., et al.,2021). Mohammedali, et al., conducted a cross sectional questionnaire-based study in Saudi Arabia. In that study 80 percent of the participants said physiotherapists had the training to assist with respiratory care (Mohammedali, et al., 2016).

The study found that 85.30% participants talked about the important role of physiotherapy in the field of sports injury and 69.80% participants informed that physiotherapy plays an important role in secondary care. The research revealed that 4.30% individuals had no knowledge about the role of physiotherapy at all. The result indicated that most of the participants know physiotherapy plays an important role in case of sports injury (Table no. 11). The findings of the present study regarding the role of physiotherapy were similar to the study conducted by Abichandani, D., et al., and Agni, et al. Abichandani, D., et al., 2015 stated that medical residents informed that physiotherapy had 50.0% postoperative benefit, 48.00% preoperative benefit and 2% benefit for both surgical procedures (Abichandani, D., et al., 2015). Agni et al., found that only 20.00% participants agreed to treating patients by physiotherapy in intensive

care and up to 79.00% participants were unaware that patients can get benefit from receiving physiotherapy in these settings (Agni, et al., 2017).

Another study conducted by Aimen, et al., 2022 showed that 34.60% physicians strongly concur with the statement that the use of physiotherapy services in secondary care is essential, 42.66% physicians believed that physiotherapists work in athletic facilities (Aimen, et al., 2022). Zangata, et al., 2019 conducted a cross sectional study at the University of Zambia, Lusaka that showed the majority of respondents strongly agreed that physical therapists might perform in intensive care units and arrange effective treatments based on assessments. Mohammed Ali, et al., conducted a cross sectional study and found that majority of the participants expressed their agreement that physiotherapists are a crucial component of the ICU team (Mohammed Ali, et al., 2016).

The study showed that 76.70% respondents said physiotherapy service is costly in some cases and cheap in some cases, 10.30% respondents thought they were expensive. It was revealed that 6.90% intern doctors did not know about cost of services in physiotherapy at all (Figure no. 7). Similar findings revealed by Shemjaz, et al., and Ahmed, Z., et al., Shemjaz, et al. They stated that 10.00% participants told physiotherapy services are expensive (Shemjaz, et al., 2016) and Ahmed, Z., et al., stated that13.10% individuals said that physical therapy is expensive (Ahmed, Z., et al.,).

It was found that 51.70% respondents said physiotherapy is a good profession, 6.90% participants said excellent and 6.00% intern doctors said great as a profession respectively. The result indicated that half of the participants had positive attitude towards physiotherapy as a good profession (Figure no. 8). Another study by Mahto, et al., stated that 41.00% respondents mentioning that physiotherapy is a good profession (Mahto, et al., 2021).

The study revealed that 59.50% participants said patients are the source of information about physiotherapy. It was reported that 34.50% participants came to know about physiotherapy from awareness program and 33.60% participants knew about physiotherapy from books. It was also showed that 28.40% respondents said they heard about physiotherapy from friends, while 19.80% participants said they heard about it on YouTube, 18.10% participants from newspapers, 14.70% participants from television and

8.60% participants from other media. The result indicated that more than half of the participant's source of information about physiotherapy was patients (Table no. 12).

A study by Shemjaz, et al., revealed that 18.00% intern doctors knew about physiotherapy from media (Shemjaz, et al., 2016). Mishra, et al., mentioned that books (60.00%), newspapers/magazines (59.00%), television (51.00%), friends (37.00%), and radio (33.00%) are the most popular ways for doctors to obtain knowledge (Mishra and Vidhyadhari, et al., 2019).

About level of knowledge, it was found that 69.00% participants had average level of knowledge, 12.00% participants had poor and 19.00% intern doctors had good knowledge about physiotherapy. The mean and SD of the respondents' level of knowledge was 17.8276 ± 5.01003. It was observed that most of the participants had average level of knowledge (Table no. 13). Shemjaz, et al., and Bolarinde, S. et al., Shemjaz, et al., 2016 stated that medical interns do not have a sufficient understanding of physical therapy (Shemjaz, et al., 2016). Bolarinde, S. et al., showed that regarding the functions of physiotherapy, 39.40% clinical participants had good knowledge, 59.10% participants had fair knowledge, and 1.50% participants had poor understanding (Bolarinde, S. et al., 2021).

The study showed that 12.00% respondents' level of knowledge was less than 12.83. Among them 9.50% participants were in the age group 23 - 25 years and 2.60% participants were in the age group 26 – 28 years. It was also found that 69.00% intern doctors had level of knowledge in between 12.83 - 22.84. Among them 40.50% participants were in the age group 23 - 25 years and 28.40% participants were in the age group 26 - 28 years. The study showed 19.00% participants had knowledge level more than 22.84 and among them 13.80% participants belonged to the age group 23 - 25 years and 5.20% participants were in the 26-28 years. The association between age of the respondents and level of knowledge was found not statistically significant ($\chi^2 = 2.96$, df = 2, $p = 0.227$) [Table no 14].

The study revealed that 12.00% participants' level of knowledge was less 12.83. Among them 5.20% participants were male and 6.90% participants were female. It was also found that 69.00% intern doctors had level of knowledge in between 12.83 - 22.84. Among them 25.00% participants were male 44.00% participants were female. The association between level of knowledge and gender was not statistically

significant (Table no. 15). Similar findings from a study conducted in Nigeria indicated that there was no appreciable variation in medical students' knowledge of physiotherapy between genders (Vincent-Onabajo, G.O., et al., 2014). According to Zangata, et al., the medical students' awareness on significance of physiotherapists in healthcare was not significantly influenced by their gender (Zangata, et al., 2019). Grace, et al., found that there was no significant difference in the level of knowledge between male and female medical students for physiotherapy (Grace, et al., 2014). But Odebiyi, D.O.et al., showed that the mean scores for knowledge on physiotherapy between the male and female individuals differed significantly. The respondents' knowledge on physiotherapy was above average (Odebiyi, D.O, et al., 2008).

CHAPTER – VI

LIMITATIONS OF THE STUDY

Every study has its own set of limitations. There were some situational limitations while considering the study. Those are as follows:

1. Data for the present study were collected from the intern doctors of Dhaka Medical College hospital only. The sample population does not represent all the intern doctors of the country. As a result, the generalization of the findings of the study could not be achieved. It would be good research if intern doctors from other medical college hospitals could be included in the study.
2. A purposive sampling technique was applied to select the intern doctors from Dhaka Medical College Hospital. As a result, the study is not from selection bias related to the participants. Probability sampling technique is appropriate for such a study and it would increase the quality of the present study.
3. The present study revealed only the level of knowledge on physiotherapy of the intern doctors. There was scope to explore the factors related to the knowledge of the intern doctors in this regard.
4. The researcher is a student of 4^{th} year BSc in physiotherapy. She has no prior exposure to such research activities. The present thesis is her first research work. As a result, there are some shortcomings in the thesis.

CHAPTER – VII

CONCLUSION AND RECOMMENDATION

7.1 Conclusion

The present study was a cross-sectional type of descriptive one carried out with the objective of assessing the level of knowledge on physiotherapy among the intern doctors of Dhaka Medical College Hospital. The information was collected by a self-administered questionnaire from a sample size of 116 intern doctors.

The study showed that 70.30% interns were female and 29.70% were male. The majority of the participants (63.80%) belonged to the age group of 23 – 25 years and the mean age was 25.25 years. The study showed that 87.90% respondents were Muslim and majority of the intern doctors (78.40%) were unmarried.

The survey showed that 69.80% participants said HSC with science background is the eligible criteria for entering into BSc in physiotherapy course. The study found that, 80.20% participants mentioned that orthopedic is the specialization of physiotherapy. Additionally, it was discovered that 54.30% respondents listed sports as a specialist, while 66.40% trainee doctors identified neurology. It was found that 74.9% respondents informed TENS is the modalities that used in physiotherapy. It was revealed that 27.60% and 59.50% intern doctors indicated cryotherapy and IRR as a modality in physiotherapy. The result showed that most of the participants knew about TENS as physiotherapy modalities.

The study revealed that very few of participants (3.40%) thought that physiotherapy and occupational therapy are similar, whereas 81.90% intern doctors disagreed. The findings showed that 50.90% respondents were aware of the existence of a physiotherapy postgraduate program. The study found that 91.40% participants suggested that physiotherapy services should be available in all hospitals, 42.20% of doctors said that exercise prescription is done in physiotherapy for type-2 diabetes, and 25.90 percent of respondents said that the WHO classified physiotherapists as independent practitioners. Additionally, it was observed that 7.80% resident doctors said physiotherapy was only related to orthopedics.

B.Sc. in Physiotherapy program is a four years course according to 56.90% participants and 23.30% doctors admitted that they were not sure of the program's length. The findings showed that half of the participants are aware of the true length of the BSc in Physiotherapy program. It was found that 43.10% participants told that the duration of internship is one year, while 27.60% participants were unaware about the duration of internship. The findings showed that the majority of participants were unaware of the exact duration of a physiotherapy internship.

Anatomy is taught in physiotherapy courses, according to 75.00% of intern doctors. Additionally, it was shown that 31.00%, 56.00% and 64.70% respondents agreed that Geriatric, electrotherapy and physiology are taught in physiotherapy courses, respectively. It was found that 19.00% participants acknowledged that they were unaware of the topics taught in their physiotherapy courses. The study indicated that majority intern doctors knew anatomy and physiology were taught in physiotherapy course.

Most of the participants (90.50%) said physiotherapy is effective in decreasing all types of musculoskeletal pain and 57.80% respondents told physiotherapy is helpful in relieving the pain related to sports injuries. It was revealed that 16.40% intern doctors knew about the advantages of physical therapy for treating joint problems and muscular injuries. The result indicated that most of the participants knew physiotherapy is effective in reducing all types of musculoskeletal pain.

It was revealed that most of the participants (94.80%) said that physiotherapy is used to treat musculoskeletal problems and 57.2% intern doctors told neurological diseases. In the research majority of participants (85.30%) mentioned the importance of physiotherapy in the field of sports injuries while a good proportion of the respondents (69.80%) mentioned the significance of physiotherapy in secondary care. The result indicated that most of the participants knew physiotherapy plays an important role in case of sports injury.

According to the study 59.5% participants stated that they got information about physiotherapy from the patients, 34.50% participants learned about physiotherapy through an awareness program and 33.60% people learned about it from books. It was found that 69.00% participants had average level of knowledge, 12.00% had poor and 19.00% intern doctors had good knowledge about physiotherapy. The association

between age of the respondent and level of knowledge was found not statistically significant (χ^2 = 2.96, df = 2, p = 0.227). The study showed that there was no statistically significant correlation between knowledge level and gender.

7.2 Recommendations

The present study aimed at determining the level of knowledge of the intern doctors about physiotherapy. It was revealed that only 6.00% intern doctors said that physiotherapy could be applied to gynecological patients and 14.70% respondents mentioned that physiotherapy could be used to treat pediatrics cases. About modalities used in physiotherapy, it was found that 12.10% doctors told Autorefractor is used which is not correct. Only 27.60% intern doctors told about the use of cryotherapy in physiotherapy. It was found that 47.40% doctors did not know that there is post-graduation degree in physiotherapy. The study revealed that 14.70% participants said 3 years and 23.30% participants did not know the duration of physiotherapy course. The result indicated that half of the participants did not know about the actual duration of B.Sc in physiotherapy course. It was reported that 27.60% participants did not know about the duration of physiotherapy internship. Only 1.7% participants informed that physiotherapy is used to treat respiratory diseases. The study found that 12.10% participants knew the important role of physiotherapy in ICU. The research revealed that 4.30% individuals had no knowledge about the role of physiotherapy at all. About level of knowledge on physiotherapy, it was found that 69.00% participants had average and 12.00% intern doctors had poor level of knowledge.

The following recommendations are made on the basis of the findings of the present study and have been described in this section.

1. The curriculum for the medical students should include topics on physiotherapy. So that the medical students will be able to acquire knowledge on physiotherapy and it's implication in medical science.
2. The intern doctors are future health care providers for mass people of the country. They should be exposed to physiotherapy as a special medical subject. So, regular workshop and seminars to be organized for the intern doctors in the medical college hospitals. It will create interest about physiotherapy subject among the doctors.
3. The intern doctors may be placed in the department of physiotherapy for adequate clinical training on this subject. It is sure they will be capable of diagnosing the patients independently. They can refer the patients to physiotherapists timely if needed. It will be a great help for the patients if referred to physiotherapists timely for better intervention.

4. Continued and regular study and training on physiotherapy would certainly play an important role in improving the knowledge of intern doctors. Ultimately the patients who need support from physiotherapist will be benefitted.
5. The present study was conducted with small sample size. So, it bears many limitations regarding findings of the study. Similar studies with large sample size will provide adequate information in this field.
6. Qualitative research such as ethnographic study can be carried out among the intern doctors to assess their level of knowledge and attitudes towards physiotherapy will be a great initiative in this field. Ethnographic approach is appropriate for this type of qualitative research.

REFERENCES

Afzal, R., Gillani, S.N.,Khan, N., Naweed, J., Khan, S., Ahmed, S.,(2022). Physical therapy awareness among health care professionals: Cross-sectional study. *Webology*;19(2); P.P. (6162-6168)

Aimen, I., Nawaz, A.,Qayyum, Z., Maqsood, Maqsood, M., and Sultana, R.,(2022). Awareness, Belief, Attitude and Utilization of physiotherapy service among doctors. *Pakistan Journal of Health sciences*; 3(4); P.P. (91-95).

Ahmed, Z., Zohra. (2021). Awareness of physical therapy among medical doctors in SWABI. *Rehman Journal of health sciences*; 3(1); P.P. (43-47).

Abichandani, D., Radia, V. (2015). Awareness of various aspect of physiotherapy among medical Residents. *International Journal of Science and Research*; 4(10); P.P. (1460-1465).

AL-Eisa, E.S., AL- Hoqail, H., AL- Rushud, A.S., AL- Harthi, A., AL-Mass, B., AL-Harbi, B.M., AL-Azzaz, S.Alghadir, A.H., Iqbal,Z.A.,(2016). Awareness, perceptions and beliefs about physiotherapy held by physicians working in saudiarabi: a croos – sectional study. *J. phys. Ther. Sci*;28(12); P.P. (3435-3439).

Agni, P., Battin, S., (2017). Awareness of physiotherapy among gegeral practitioners: A piiot study. *Int J Physiother*; 4(4); P.P. (253-261).

Al Mohammedali, Z., O'Dwyer, T.K. and Broderick, J.M., (2016). The emerging role of respiratory physiotherapy: A profile of the attitudes of nurses and physicians in Saudi Arabia. *Annals of thoracic medicine*;*11*(4); P.P. (243-248).

Bolarinde, S., Omoniyi, O. and Joseph, E., (2021). Awareness and Knowledge about the Roles of Physiotherapy in Healthcare among Clinical and Non-Clinical Staff. *Journal of Clinical Cases & Reports*; 4(S10); P.P. (6-16).

Callejo-Tiuseco, A.J.C., Rimando, C.R.D., Nava, J.B.P., Rueda, E.M.S., Carbonell, K.M.P., Sadiasa, A.N.B., Chiong, A.C., Wee, A.D.L., Lotho, M.K.I., Lapid, C.A.R. and Soriano, M.J.A., (2022). Perception of Filipino physicians on the roles and scope of practice of physical therapy in the Philippines: A multi-method quantitative study. *Philippine Journal of Physical Therapy*; 1(1); pp.1-15.

Doshi, D., Jiandani, M., Gadgil, R. and Shetty, N., (2017). Physiotherapy awareness in medical and non-medical population: A social media survey. *Int J Physiother Res*;*5*(2); P.P. (1971-1975).

Ebenezer, M.C., Goh, C.X.H., Jemeela, S., Abraham, M.M. and Jabbar, M.S., 2019. Awareness and knowledge of physiotherapy among medical and health sciences students: A Cross-Sectional Study. *Research Journal of Pharmacy and Technology*, 12(4), pp.1695-1706.

Fruth, S.J. and Wiley, S., 2016. Physician impressions of physical therapist practice in the emergency department: descriptive, comparative analysis over time. *Physical therapy*, 96(9), pp.1333-1341.

Karthikeyan, P. and Jones, A., (2015). Knowledge of physiotherapy services among hospital-based health care professionals in Papua New Guinea. *Papua New Guinea Medical Journal*; *58*(1/4); P.P (55-60).

Kutty, R., Gebremichael, H. and Vargehese, S., (2013). Knowledge, attitude, practice and associated factors of physiotherapy among medical doctors in Tigray,Northern Ethiopia-A cross sectional study. *GJBAHS*; 2(4), p.p. (74-81).

Mishra, P. and Vidhyadhari, B.S., 2019. Awareness & perception of physiotherapy intervention among medical practitioner & medical students: A cross sectional study. *International Journal of Advanced Research and Development*, *4*(1), pp.22-27.

Mahto, P.K., Manadhar,N., Joshi, S.K., (2021). Knowledge of physiotherapy practice among medical interns in a tertiary care hospital. *J Nepal Med Assoc*; 59(240); P.P(771-774).

Odebiyi, D.O., Omotunde, A.O. Aiyejusunle, C.B., Olalekan, T.A., (2008). Knowledge and perception of physiotherapy by final year medical students of a Nigerian University. *Nig. Qt. J. Hosp*;18(3); P.P. (156-161).

Pattanshetty, R. and Metgud, D.C., (2019). Awareness of physiotherapy among other health professionals in India: Current scenario. *Indian Journal of Physical Therapy and Research*; 1(2), p.p. (69-70).

Rajan, P. and Bellare, B., (2013). Referring doctor's perspectives about Physiotherapy management for chronic musculoskeletal pain. *International Journal of Therapies and Rehabilitation Research*; 2(1); p.p. (15-21).

Shemjaz A.M., ThakralAnju, Saddam, M.H., (2016) Awareness and knowledge of physical therapy among medical interns – A pilot study. *Int J Physiother*;3(2); P.P. (170-176).

Shimpi, A., Writer, H., Shyam, A. and Dabadghav, R., (2014). Role of physiotherapy in India–A cross-sectional survey to study the awareness and perspective among referring doctors. *Journal of Medical Thesis*; 2(2); pp.18-22.

Shah, D.A. and Mahyavanshi, H.C., 2022. Prevalence of Awareness of Physiotherapy Amongst Health Care Professionals in Surat City. *International Journal of Health Sciences and Research,* 12(6), pp.21-29.

Vincent-Onabajo, G.O., Mustapha, A. and Oyeyemi, A.Y., (2014). Medical student's awareness of the role of physiotherapists in multidisciplinary healthcare. *Physiotherapy theory and practice*; 30(5), p.p. (338-344).

Zangata, C., Chawle, M.B., Mumba, M.S.S., (2019). Medical student awareness of the Role of Physiotherapy in Healthcare at the University of Zambia-Ridgeway Campus. *Medical Journal of Jambia*;46(4); P.P. (343-348).

Appendix - A

Institutional Review Board (IRB) Permission Letter

SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY
Approved by Ministry of Health and Family Welfare
Affiliated with Dhaka University

Ref : *Date :* .....

Ref.No: *SCMST/PT/ERB-2017-18/1-2023/41*

3rd January'2023

To
Eshita Akter Eva
4th Professional B.Sc. in Physiotherapy
Saic College of Medical Science and Technology (SCMST)
Mirpur-14, Dhaka-1216.

Sub: Permission to collect data

Dear Eva,
Ethical review board (ERB) of SCMST pleased to inform you that your proposal has been reviewed by ERB of SCMST and we are giving you the permission to conduct study entitled "Knowledge of physiotherapy among the intern doctor in Dhaka medical college and hospital" and for successful completion of this study you can start data collection from now.

Wishing you all the best.

Thanking You,

11.01.'23
Head of ERB
Ethical Review Board
Saic College of Medical Science and Technology

11.01.23
Principal
Saic College of Medical Science and Technology
Mirpur-14, Dhaka-1216

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1216.Mobile:01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

Appendix - B

Permission letter for data collection

SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY

Approved by Ministry of Health and Family Welfare
Affiliated with Dhaka University

Ref : *Date :* .....

Ref.No: *SCMST/PT/ERB-2017-18/1-2023/41(6)*

19th January'2023

To
Intern Coordinator
Dhaka Medical College and Hospital
Dhaka, Bangladesh.

Sub: Permission to collect data.

Dear Sir/Mam,

Ethical review board (ERB) of SCMST pleased to inform you that Eshita Akter Eva of final year B.Sc. in Physiotherapy student from Saic College of Medical Science and Technology doing a thesis entitle of "Knowledge of physiotherapy among the intern doctor in Dhaka medical college and hospital" which has been reviewed by ERB of SCMST and we are giving permission to her to conduct this study. Her data collection area is Dhaka Medical College and Hospital, so she wants to take data from your hospital.

I hope you will give kind permission to her to collect data to complete her study successfully and oblige thereby.

Thanking You,

19/01/23
Head of ERB
Ethical Review Board
Saic College of Medical Science and Technology

02.02.23
Principal
Saic College of Medical Science and Technology
Mirpur-14, Dhaka-1216

Forwarded
Dale
2.2.23
Dr. M A Nazmul Hakim
MBBS (DMC), FCPS (Surgery)
Associate Professor
Dept. of Surgery
Dhaka Medical College & Hospital

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1206. Mobile: 01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

Appendix - C

Consent Form (English)

AssalamuAlaikum,

I am Eshita Akter Eva 4th Professional B.Sc. in Physiotherapy student, Saic College of Medical Science and Technology under the Faculty of Medicine, University of Dhaka. To obtain my Bachelor degree, I have to conduct a research project and it is a part of my course. My research title is **Knowledge on physiotherapy among the intern doctors of Dhaka Medical College Hospital.** To fulfil my research project, I need some information from you. So, you can be a respected participant of this research and the time for interview will be 10-15 minutes. I would like to inform you that it is a purely academic study and the information will not to be used for any other purpose. I assure that all data will be kept confidential. Your participation will be voluntary. You may have the rights to withdraw consent and discontinue participation at any time of the study. You also have the rights to reject a particular question that you don't like.

May I start the interview? (put the tick mark)

Yes ☐

No ☐

Signature of the participant and Date…….

Signature of the researcher and date……

Signature of the Witness and date …….

Appendix - D

QUESTIONNAIRE

KNOWLEDGE ON PHYSIOTHERAPY AMONG THE INTERN DOCTORS OF DHAKA MEDICAL COLLEGE HOSPITAL

Date: ……

Name of respondent……...

Address: ……..

Mobile Number…….

Part A: Sociodemographic related Question:

Q. No	Question	Response	Code
1	How old are you?	Years	
2	Gender of participant	1. Male 2. Female 3. Others	
3	What is your religion?	1. Islam 2. Hindu 3. Buddhist 4. Christian	
4	Marital status	1. Married 2. Unmarried 3. Divorced	
5	What is your monthly income (BDT)?	……. (BDT)	
6	What is the joining date in internship?		

Part B: Knowledge about physiotherapy

[Please put tick (√) marks where necessary]

1.Please tell the eligible criteria (educational qualification) for entering into a BSc physiotherapy course.

[1] class viii pass student are eligible to study physiotherapy.

[2] SSC with science background

[3] SSC from any group

[4] HSC with science background

[5] HSC from any group

[6] Adult males aged 15-25 years are eligible for physiotherapy course

2. Which of the following are specialization of physiotherapy? [Multiple responses might be elicited]

[1] Orthopedic [2] Neurology [3] Ophthalmology

[4] Gynecology [5] Pediatric [6] Dermatology

[7] Sports [8] Don't know

3. Which modalities (machine) are used in physiotherapy? [Multiple responses might be elicited]

[1] Autorefractor [2] Cryotherapy [3] Ultrasonography

[4] IRR (Infrared Radiation) [5] UST(Ultrasound Therapy)

[6] TENS (Transcutaneous Electrical Nerve Stimulation)

[7] Don't know

4. Is physical therapy and occupational therapy the same?

[1] Yes [2] No [3] Don't know

5. What is the duration of Bachelor of physiotherapy course?

[1] 3 Years [2] 4 Years [3] 5 Years [4] Don't know

6. What is the duration of physiotherapy internship?

[1] 3 months [2] 6 months [3] 1 Year [4] Don't know

7. Are there post-graduation in physiotherapy?

[1] Yes [2] No [3] Don't know

8. What are the subjects taught in physiotherapy course? [Multiple responses might be elicited]

[1] Anatomy [2] Physiology [3] Sociology [4] Geriatrics

[5] Dermatology [6] Electrotherapy [7] Don't know

9. (a) Did you ever have any problem that required physiotherapy?

[1] Yes [2] No

(b) If yes, what was the treatment taken? _____

_____

10. Physiotherapy is effective in reducing: [Multiple response might be elicited]

[1] All types of musculoskeletal pain [2] Pain only in muscular injury

[3] Pain only in joint disorder [4] Sports injury pain

[5] Don't know

11. Does physiotherapy follow a definite assessment protocol?

[1] Yes [2] No [3] Don't know

12. What are the common conditions treated by physiotherapy?

[1] ——————————

[2] ——————————

[3] ——————————

13. Physiotherapy play an important role in: [Multiple responses might be elicited]

[1] ICU (Intensive Care Unit)

[2] Emergency department

[3] Burn unit

[4] Dermatology care

[5] Secondary care

[6] Pre & post operative case

[7] Sports injury

[8] Don't know

14. Do you think physiotherapy services are –

[1] Costly in all respect

[2] Cheap in all respect

[3] Costly in some cases and cheap in some cases

[4] Don't know

15. Do you know exercise prescription is done in physiotherapy for type – 2 Diabetes Mellitus?

[1] Yes [2] No [3] Don't know

16. Do you know that WHO has classified physiotherapist as an independent practitioner?

[1] Yes [2] No [3] Don't know

17. Do you think physiotherapy service should be available in all hospitals?

[1] Yes [2] No [3] Don't know

18. Do you think physiotherapy is related only with orthopedics?

[1] Yes [2] No [3] Don't know

19. Do you think physiotherapy professionals create awareness about physiotherapy?

[1] Yes [2] No [3] Don't know

20. What is your opinion about physiotherapy as a profession?

_____

21. Your source of information concerning physiotherapy:

[1] Newspaper [2] TV [3] You Tube

[4] Books [5] Friends [6] Patients

[7] Awareness program [8] Others:

22. Will you refer your patient for physiotherapy treatment?

_____

23. How will you rate this survey?

[1] Helpful [2] Not helpful

[3] Time waste [4] Can't say

GANT CHART

Activities	July 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23
Proposal presentation												
Introduction												
Literature Review												
Methodology												
Data Collection												
Data Analysis												
Result												
1st progress Presentation												
Discussion												
Conclusion And Recommendation												
2nd Progress Presentation												
Communication With Supervisor												
Final Submission												