Level of Physical activity among Rehabilitation Professionals in Bangladesh: Cross Sectional Study

By

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D.U Registration No: 3978

Submitted in Partial Fulfillment of the Requirements for the Degree of

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(BHPI)

Faculty of Medicine

University of Dhaka

Student's Declaration

- This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.

- This dissertation is being submitted in partial fulfillment of the requirements for the degree of M.Sc. in Rehabilitation Science.

- This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by giving explicit references. A Bibliography is appended.

- 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.

Signature:……

Name:……

Date: .....

Thesis Supervisor's Statement

As supervisor of Md.Rejwan Gani Mazumder M.Sc. Thesis work, we certify that we consider his thesis "**Level of Physical activity among Rehabilitation Professionals in Bangladesh: Cross Sectional Study"** to be suitable for examination.

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

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DECLARATION

I am **Md.Rejwan Gani Mazumder;** I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistake or inaccuracies are my own. I also declare that for any publication, presentation, or dissemination of the study. I would be bound to take written consent from my supervisor.

Signature & Date

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Part-II

Session: 2021-2022

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DEDICATION

Dedicated to……

……...My Beloved Family, Friends and My Teachers.

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List of Abbreviations

Abbreviation	Elaboration
BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
PT	Physiotherapy
OT	Occupational Therapy
SLT	Speech and Language Therapy
SPSS	Statistical Package for the Social Science
IPAQ	The International Physical Activity Questionnaire
WHO	World Health Organization
SCMST	Saic College of Medical Science and Technology
NITOR	National Institute of Traumatology, and Orthopedics Rehabilitation
SCHS	State College of Health Science
IHT	Institute of health technology
GB	Gono Bishwabidyalya

Acknowledgement

First of all, I am grateful to the Almighty Allah who gave me life and who gives me the ability to complete this project in time with great success. At the same time my thanks towards my parents who constantly encouraged me to carry out this study. I gratefully acknowledge to my honorable and praiseworthy supervisor **Sk.Moniruzzaman, Associate Professor, Department of Occupational Therapy,** BHPI, CRP, Savar, and Dhaka for his effort with excellent guidance and support without which I could not able to complete this project.

Executive Summery/Abstracts

Purpose: The aim of this study was to identify the Level of Physical activity among Rehabilitation Professionals in Bangladesh: Cross Sectional Study. ***Objective:*** The objective of this study was to find out socio-demographic information, health-related information, and Physical Activity Level among Rehabilitation Professionals in Bangladesh. ***Methodology:*** Cross-sectional design to determine the Physical Activity Level among Rehabilitation Professionals in Bangladesh. The sample was collected through a cluster sampling procedure, resulting in a total of 231 participants. Data was gathered from various regions of Bangladesh using a questionnaire administered via face-to-face interviews and online surveys. The data was analyzed using Microsoft Excel 2019 and SPSS version 22 software, with the chi-square test employed for statistical analysis. ***Results:*** The study included 231 participants, with a standard deviation of 32.30 ± 5.84.The majority were aged 25-30 years (48.5%) and there were more males (64.9%) than females (35.1%).Regarding BMI, 49.4% were within a healthy weight range, 42.9% were overweight, 6.9% were obese, and 0.9% were underweight. Most participants were physiotherapists (82.3%), primarily from institutions like BHPI (35.9%).Educationally, 47.6% were graduates and 51.5% postgraduates. Most were married (77.9%) and predominantly Muslim (84.0%).Health-wise, 87.9% did not smoke, 81.4% rated their health as good, and 67.1% reported no known diseases, with musculoskeletal issues (15.6%) being the most common condition among the rest. In terms of physical activity, 51.5% engaged in vigorous job-related activities, 65.8% in moderate activities, and 81.8% walked for their jobs. Motor vehicle usage was high (83.5%), while bicycling was low (5.2%), but walking was common (91.3%).For home-related activities, 26.8% engaged in vigorous yard work, and 58% in moderate activities. Leisure activities included walking (46.3%), vigorous (15.2%), and moderate activities (8.2%).***Conclusion:*** Overall, participants led a healthy lifestyle with high physical activity levels and a low incidence of serious health conditions. This study found a standard prevalence of physical activity among rehabilitation professionals. The IPAQ questionnaire full version was used, with some modifications made based on a pilot study. To generate adequate evidence to support decision-making processes at the national level, more studies on the level of physical activity among rehabilitation professionals are recommended. Appropriate, adequate, and timely information is needed to build awareness among them. ***Keywords:*** Physical activity, Rehabilitation professionals, Physical activity level, IPAQ

CHAPTER I INTRODUCTION

1.1 Introduction

Physical activity is essential for preventing falls and cognitive decline in older adults. A comprehensive exercise routine should include aerobic workouts, strength training, balance exercises, and flexibility activities. Although many older adults fall short of the recommended activity levels, guidance from healthcare professionals and access to community-based programs can significantly enhance their exercise practices and overall well-being (Eckstrom et al., 2020).

Physical activity stands as a fundamental part of lifestyle changes recommended for managing arterial hypertension, offering benefits that extend beyond simply reducing cardiovascular risks and mortality rates. Guidelines suggest incorporating at least 30 minutes of moderate-intensity exercise most days of the week, although other forms such as interval or resistance training also have their advantages. A comprehensive approach involves a multidisciplinary team including exercise specialists to support patients, while general practitioners assess initial risk factors. Engaging in regular physical activity profoundly impacts both physical and mental well-being, playing a pivotal role in preventing and managing chronic diseases while fostering overall community and societal health. However, it remains concerning that a significant majority, exceeding 60% of adults worldwide, fail to meet these recommended activity levels (Gojanovic, B. 2015).

Encouragement for consistent and adequate physical activity spans all age groups. When health conditions pose challenges to meeting these recommendations, international guidelines advise individuals to engage in physical activity to the best of their ability within their health limitations. Rehabilitation assumes a critical role in healthcare, emphasizing patient functionality alongside disease management. It operates alongside medical treatment, highlighting active patient involvement and collaboration among a diverse team of specialists. Following the bio psychosocial model, rehabilitation interventions begin promptly after a disability arises, aiming for improved outcomes and efficient resource allocation (World Health Organization (WHO), 2020).

The scarcity of physical activity poses a notable public health challenge, prompting healthcare practitioners to actively endorse physical activity during regular patient consultations. This proactive approach aims to alleviate the burden of non-communicable diseases and improve overall individual wellness. Incorporating physical activity advocacy into routine patient care practices emphasizes its significance. Healthcare professionals aspire to empower patients to embrace active lifestyles, ultimately resulting in healthier outcomes and an enhanced quality of life. This concerted endeavor highlights the essential role healthcare provider's play in promoting physical activity as a key element of preventive healthcare (Jones et al., 2021).

The regularity and intensity of an individual's exercise, termed their physical activity level, significantly influence overall health. This level can vary depending on factors like age, fitness level, lifestyle, and personal preferences. Research emphasizes the numerous health benefits associated with maintaining an appropriate physical activity level. Guidelines for adults recommend engaging in 150 minutes of moderate or 75 minutes of vigorous aerobic activity each week, accompanied by muscle-strengthening exercises on two or more days. These activities contribute to better cardiovascular health, muscular strength, flexibility, and overall fitness. Adhering to recommended physical activity levels brings about diverse advantages for optimal health and well-being (Lowe et al., 2018).

Rehabilitation is a complex and interdisciplinary field designed to meet the specific needs of individuals in various settings. Constant research and advancements in specialized areas within rehabilitation are crucial for improving methodologies and achieving better outcomes for those undergoing rehabilitation programs. This continual progress in the field demonstrates a dedication to refining approaches and maximizing results in rehabilitation practices. It underscores the dynamic nature of rehabilitation and its commitment to delivering personalized and efficient interventions to address the varied needs of individuals undergoing rehabilitation processes (Wade, D. T., 2020).

Rehabilitation, as outlined by the World Confederation for Physical Therapy (2019), involves a series of interventions aimed at supporting individuals who are currently experiencing or are expected to experience disabilities. The primary goal is to assist them in achieving and maintaining optimal functioning while effectively interacting with their environment. This definition emphasizes the comprehensive

nature of rehabilitation, stressing the importance of considering both the individual's disability and their interaction with their surroundings to achieve the overarching goal of optimal functioning.

Rehabilitation centers on enhancing or restoring quality of life, emphasizing independence and active involvement in daily activities. Thus, it's vital to consider exercise interventions during rehabilitation and in post-treatment care. Furthermore, assessing how physical activity or exercise therapy can prevent relapses, decrease mortality rates, and alleviate specific side effects related to both the illness and its treatments is crucial within the rehabilitation framework. Incorporating physical activity into rehabilitation and aftercare is not only feasible but also safe, serving multiple purposes (Wirtz & Baumann, 2018).

Rehabilitation practitioners, including physiotherapists, occupational therapists, and speech-language pathologists, play a crucial role in addressing healthcare challenges. Despite recognizing the benefits of physical activity, research conducted internationally indicates that healthcare professionals, including those in rehabilitation, often do not engage in sufficient physical activity, which could affect their well-being and the quality of care they offer. This underscores the necessity for holistic approaches to promote physical activity among rehabilitation professionals to enhance both their personal health and the standard of patient care provided (Melnyk et al., 2018).

The available research underscores the crucial need for interventions and policy revisions aimed at promoting physical activity among rehabilitation professionals. Potential strategies include implementing workplace wellness programs, providing flexible schedules to facilitate exercise, and launching educational campaigns to enhance awareness about the importance of physical activity. Moreover, fostering a supportive and motivating work environment can play a pivotal role in encouraging rehabilitation professionals to adopt healthier lifestyles. This highlights the significance of employing diverse approaches to promote physical activity within the rehabilitation field, ultimately benefiting both the practitioners themselves and the individuals they serve (Hui et al., 2015).

Despite the clear importance of the issue, there's a notable research gap regarding the physical activity levels of rehabilitation professionals in Bangladesh. Existing studies tend to concentrate on various healthcare sectors or lack comprehensive insights into the unique challenges and opportunities faced by

rehabilitation specialists within the country. This highlights the need for dedicated investigations specifically targeting the physical activity behaviors of rehabilitation professionals in Bangladesh. Such studies are essential for gaining a better understanding of their distinct circumstances and tailoring interventions accordingly (Khan et al., 2020).

The engagement of rehabilitation professionals in physical activity is influenced by various factors. These include the demanding workload they face, involving intensive patient care and administrative duties, leaving limited personal time for physical activities. Time constraints, both at work and in personal life, further challenge the establishment of regular exercise routines. Additionally, the level of awareness and understanding among rehabilitation experts regarding the benefits of physical activity significantly affects their motivation to engage in such behaviors. Moreover, the accessibility and availability of recreational facilities, like gyms or sports centers, also impact the opportunities for rehabilitation professionals to participate in physical activities. Factors such as geographical location and financial resources may affect the ease of access to these facilities. Together, these factors interact dynamically, shaping the overall levels of physical activity among rehabilitation professionals (Boyle et al., 2016).

In Geneva in 1998, efforts began to set an international standard for measuring physical activity, which underwent thorough reliability and validity testing across 12 countries (14 sites) in 2000. The results of these assessments affirm the appropriateness of these metrics for evaluating physical activity levels and emphasize their value as a valuable tool for conducting nationwide studies. This highlights the importance of standardized measures in assessing physical activity globally, providing researchers with reliable tools to explore patterns and trends across diverse populations and settings (Craig et al., 2017).

Under the leadership of Dr. Michael Pratt, an international team of researchers collaborated with renowned organizations such as the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) to conceive and formulate the International Physical Activity Questionnaire (IPAQ). This collective endeavor aimed to establish a standardized method for assessing physical activity levels across diverse populations. By amalgamating expertise and resources from various regions, the team aimed to devise a tool capable of comprehensively capturing the nuances of physical activity engagement within different cultural, socioeconomic,

and environmental contexts. Through extensive collaboration and meticulous testing, the IPAQ emerged as a crucial instrument in public health research, furnishing researchers with a dependable means of evaluating physical activity patterns on a global scale. This underscores the significance of international cooperation and interdisciplinary approaches in propelling the development of tools geared towards promoting health and well-being across diverse populations worldwide (Kurth & Klenosky, 2021).

1.2 Rationale of the study:

In Bangladesh, where the incidence of non-communicable diseases (NCDs) is mounting in tandem with rapid population growth and a lower-middle-income status, the necessity of gauging the physical activity habits of rehabilitation professionals becomes increasingly pronounced. These individuals hold pivotal roles within the healthcare framework, offering indispensable assistance to individuals traversing the complexities of injury recovery, disability management, and chronic illness coping mechanisms. However, the inherent demands of their profession often entail prolonged periods of sedentary behavior, raising legitimate concerns about their personal health and well-being. Therefore, this study undertakes a thorough exploration of the activity levels among these professionals, with the aim of extracting insights crucial for devising interventions to counter the escalating burden of NCDs.

While the adverse health implications of physical inactivity are widely acknowledged, this study surpasses mere statistical scrutiny. It endeavors to delve deeper into the health behaviors and activity routines of rehabilitation professionals, probing the intricate nexus between physical activity and cognitive function. By elucidating how their activity levels might impact essential facets such as decision-making and problem-solving, the study aims to shed light on a dimension of professional performance often overshadowed in conventional healthcare dialogues.

Rehabilitation professionals not only serve as bastions of health for their patients but also as exemplars of wellness. Thus, if they exhibit robust engagement in physical activity, it could serve as a catalyst for instilling similar behaviors among their patients. Conversely, if the study uncovers insufficient activity levels among these professionals, it could spur targeted interventions aimed at fostering healthier lifestyles within this cohort, thereby augmenting the efficacy of rehabilitation programs.

Moreover, cognizant of the unique socio-cultural and environmental milieu prevailing in Bangladesh, the study acknowledges the imperative of contextualization. By unraveling these intricacies, it aspires to inform policymaking endeavors geared towards enhancing the occupational health and well-being of healthcare professionals nationwide. Ultimately, this research represents a pivotal stride towards a holistic comprehension of the prevailing landscape of physical activity among rehabilitation professionals in Bangladesh, transcending mere numerical analysis to encompass broader healthcare imperatives

1.3 Research Question:

What is the current level of physical activity among rehabilitation professionals in Bangladesh?

1.4 Objectives:

1.4.1 General Objectives:

To find out level of physical activity (PA) among Rehabilitation Professionals in Bangladesh.

1.4.2 Specific Objectives:

1. To find out the level of physical activity employment related works of the rehabilitation professionals.
2. To find out Transportation physical activity level of the rehabilitation professionals.
3. To find Out the Physical activity level during household works of the rehabilitation professionals.
4. To find out the physical activities level during recreational activities of the rehabilitation professionals.
5. To assess the time spender by rehabilitation professional in sitting position.
6. To explore association on between level of physical activity with Socio demographic data.

1.5 Operational definition:

Physical Activity Level:

Physical activity refers to the amount of bodily movement a person engages in over a specific period, often measured in metabolic equivalents (METs) per week. It includes various activities like walking, running, biking, and different exercises that consume energy. This broad definition emphasizes the wide array of movements and workouts that impact an individual's overall physical activity and energy expenditure.

Rehabilitation:

In Bangladesh, healthcare providers are involved in rehabilitation efforts to aid individuals in their recovery from illness or injury while also improving their physical and mental abilities. These efforts include various therapies and activities designed to promote independence and overall wellness. This comprehensive approach highlights the commitment of healthcare professionals to assisting individuals in their path toward recovery and better quality of life through personalized interventions and supportive care measures.

Rehabilitation Professionals:

Professionals deeply engaged in rehabilitation roles encompass physiotherapists, occupational therapists, and speech therapists. These committed experts are pivotal in guiding individuals through rehabilitation, helping them conquer physical and cognitive obstacles while improving their overall functionality and well-being. Through their combined knowledge and teamwork, they make substantial contributions to individuals' progress towards recovery and optimal health.

Cross-Sectional Study:

A cross-sectional study is a research method that collects data from participants at one specific point in time, giving a snapshot of a population or group. In this study, data on the physical activity levels of rehabilitation professionals will be collected at a single instance, without ongoing follow-up. This method offers insights into the current status of physical activity among the target group, without continuous monitoring over time.

Bangladesh:

Geographic area under examination for this study encompasses the People's Republic of Bangladesh, situated in South Asia. Within the context of this research, specific boundaries have been delineated to focus exclusively on this region. This designation ensures a clear and targeted exploration of factors pertinent to

Bangladesh, facilitating a comprehensive analysis within the specified geographic confines.

CHAPTER II LITERATURE REVIEW

According to an alternative survey, a significant majority of rehabilitation professionals, amounting to 65.6%, reported actively participating in vigorous exercise. Similarly, about 24.9% of physiotherapists engaged in moderate physical activity. Conversely, a smaller fraction, accounting for 10.84% of respondents, admitted to minimal physical activity. Furthermore, the average age of those involved in moderate to vigorous physical activity was noted to be younger compared to those with lower activity levels. This underscores the importance of age differences in the engagement of physical activity among rehabilitation professionals, suggesting potential avenues for targeted interventions to promote healthier lifestyles across various age groups (Mehta et al., 2019).

Upon examination of different healthcare disciplines, noticeable variances are evident in the levels of physical activity involvement. Physiotherapists demonstrate the highest engagement, with around 51% adhering to recommended guidelines, followed by occupational therapists at 38%, and speech therapists at 29%. These findings align with international studies that also identify disparities in physical activity participation among various healthcare professions (Wattanapisit et al., 2018).

Rehabilitation professionals often face specific challenges due to the demanding nature of their work, which can hinder their participation in physical activity. Studies suggest that the healthcare sector, in general, grapples with increased levels of burnout and stress, factors that may contribute to sedentary behaviors among practitioners. This highlights the urgent need for a thorough understanding of the obstacles encountered by rehabilitation practitioners, especially regarding physical activity involvement. Such insights can inform targeted interventions aimed at mitigating the effects of occupational stress and promoting overall well-being within this vital sector (Hoffman, J. M. 2019).

Bianchi and co-authors (2021) emphasized the significant role of physical activity in predicting changes in physical performance among the elderly. This insight is particularly relevant for rehabilitation professionals as it impacts not only their personal health but also the quality of care they deliver to their patients. Therefore, investigating the connection between physical activity and physical performance in

older adults is crucial for refining rehabilitation approaches and enhancing patient outcomes.

The association between physical activity and cognitive function, as well as its subsequent influence on job performance, has become a compelling subject of inquiry. A growing body of literature indicates that regular physical activity significantly impacts cognitive abilities, extending beyond its effects on physical well-being. Numerous studies consistently show that individuals who engage in regular physical activity experience enhancements in cognitive functions like decision-making and problem-solving. This body of research underscores the intricate link between physical activity and cognitive abilities, highlighting the potential for interventions promoting physical activity to improve cognitive function and, consequently, professional effectiveness and performance outcomes (Ludyga et al., 2020)

In their research, Courneya (2020) highlight the significant influence of patient adherence to exercise interventions, emphasizing the crucial importance of understanding the role-model effect. This comprehension is essential not only for improving the efficacy of interventions among rehabilitation professionals but also for enhancing patient outcomes. By delving into the perceptions and actions of patients influenced by their interactions with rehabilitation practitioners, the study aims to uncover the broader societal implications of healthcare professionals' physical activity levels. This detailed exploration seeks to illuminate the intricate relationship between healthcare provider behaviors and patient involvement in physical activity, ultimately guiding the development of more impactful and inclusive healthcare strategies.

In a sample of 106 participants, physiotherapists displayed a notable proficiency in understanding physical activity guidelines when juxtaposed with prosthetists/orthotists and other respondents. The study unveiled a discernible decrease in awareness correlated with factors like increasing age, professional tenure, and elapsed time since qualification. Noteworthy is the prevalence of self-directed learning as the predominant avenue through which surveyed individuals acquire knowledge regarding these guidelines (Deans et al., 2020).

In determining personal physical activity levels, various factors come into play, including age, health status, life stage, hurdles related to calorie expenditure, time constraints, balancing daily commitments, personal attitudes, and past engagement in physical activity. On the environmental front, influences such as

access to professional guidance, inconvenient exercise timings, facility accessibility, financial constraints, transportation limitations, equipment availability, and social support networks play significant roles in shaping physical activity engagement. This comprehensive understanding highlights the intricate interplay between individual characteristics and environmental factors affecting participation in physical activity (Van den Akker et al., 2019).

The research involved 48 rehabilitation professionals, primarily consisting of 40 women (83%) and 8 men (17%). Among them, physiotherapists accounted for 68%, occupational therapists for 31%, and rehabilitation assistants for less than 1%. Their combined professional experience in primary care rehabilitation spanned from 1 to 30 years, with an average duration of 9 years. Notably, a substantial portion of physiotherapists (25%) and the majority of occupational therapists (about two-thirds) had accumulated ten or more years of experience in their respective fields (Neher et al., 2021).

Rehabilitation experts have recognized numerous factors that can either support or impede the establishment and continuity of physical activity promotion initiatives within rehabilitation settings. Drawing from these observations, suggestions have been formulated to improve the smooth inclusion of physical activity promotion across and beyond the rehabilitation continuum. This holistic strategy emphasizes the significance of tackling a range of factors and employing focused tactics to encourage sustained involvement in physical activity as an essential component of the rehabilitation process (Hoekstra et al., 2017).

Rehabilitation experts support a variety of strategies, including defining physical activity clearly, empowering patients to control their activity levels, assigning important roles to physical therapists or doctors in advocating for physical activity, and redesigning hospital environments to encourage patient engagement in physical activity. This wide range of tactics highlights the need for a comprehensive approach to promoting and facilitating physical activity among patients, emphasizing the collaborative efforts of healthcare professionals in this endeavor (Geelen et al., 2021).

Factors that facilitate engagement in physical activity include the assistance and guidance offered by rehabilitation professionals, encouragement from peers and family, internal motivation, positive feedback, diminished fear related to activity, and acknowledgment of the benefits derived from being active. Conversely, barriers to

physical activity participation encompass changes in physical health, environmental limitations like inadequate access to suitable facilities, decreased motivation, fear of injury, and feelings of social isolation or lack of support. This comprehensive understanding highlights the varied influences that can either encourage or impede participation in physical activity, emphasizing the need to address these factors comprehensively in interventions aimed at promoting active lifestyles (Meshe et al., 2017).

Regular engagement in physical activity provides numerous advantages for older individuals, supporting both their physical and mental health and acting as a strong defense against chronic illnesses. Through sustaining an active lifestyle, older adults can preserve their mobility and autonomy, reducing the effects of conditions like cardiovascular and metabolic diseases, obesity, falls, cognitive decline, osteoporosis, and muscle weakness. This highlights the essential importance of consistent physical activity in enhancing the overall well-being and quality of life among older adults (McPhee et al., 2016).

Regular engagement in physical activity offers numerous health benefits, significantly reducing the risk of more than 25 chronic medical conditions and premature mortality by a considerable margin of 20%-30%. Additionally, individuals with higher fitness levels often experience even greater risk reductions, sometimes surpassing 50%. While global guidelines typically recommend 150 minutes of moderate to vigorous physical activity weekly, emerging research indicates that even half of this recommended amount can still yield substantial health advantages. These findings underscore the crucial importance of promoting physical activity as a fundamental aspect of preventive healthcare strategies, highlighting its potential to improve overall health and lifespan (Warburton & Bredin, 2016).

Healthcare systems are encouraged to strongly advocate for physical activity (PA) due to compelling evidence showing that even levels of PA below current guidelines provide notable health advantages. Physical inactivity emerges as a significant public health issue, ranking among the primary risk factors for chronic diseases and early death. This highlights the necessity for healthcare systems to prioritize the promotion of PA as an essential component of preventive healthcare. Such efforts recognize PA's significant impact on overall health and underscore its importance as a foundation for building healthier communities (Sallis et al., 2015).

Physical activity (PA) is increasingly recognized as a significant factor in improving cognitive function across different stages of life. This impact on cognitive and brain health is rooted in the neurobiological concept that PA can positively influence brain processes. Extensive research consistently demonstrates the beneficial effects of PA on various cognitive outcomes. This substantial body of evidence emphasizes the critical role of PA in enhancing cognitive health and highlights its potential as a powerful intervention for promoting brain health at different life stages (Erickson et al., 2019).

Considerable evidence highlights the significant impact of physical inactivity (PI) and sedentary behavior (SB) in elevating the risk of various chronic diseases and shortening life expectancy. PI is a prevalent issue worldwide and is accountable for a notable portion—estimated between 6% and 10%—of the burden of chronic illnesses and premature mortality. Notably, studies indicate that PI independently contributes to around 6% of the overall global disease burden. These findings underscore the urgent need to address physical inactivity to mitigate its detrimental health effects and improve public well-being (Ozemek, Lavie, & Rognmo, 2019).

Physical activity involves actions that activate skeletal muscles and consume energy, while exercise specifically denotes organized and intentional activities such as aerobic exercises (like walking or swimming), resistance exercises (such as weightlifting or push-ups), and flexibility exercises (including stretching). Engaging in physical activity typically results in enhancements in cardiorespiratory fitness, boosted energy levels, improved glycemic control, reduced insulin resistance, optimization of lipid profile, decreased blood pressure, and assistance in weight management (Sigal et al., 2018).

Although a significant proportion of healthcare professionals (94%), particularly physiotherapists (84%), perceive themselves as role models for physical activity, only approximately half (53%) consistently advocate for physical activity to their clients. Notably, professionals working with children with physical disabilities (23%) demonstrate a higher tendency to promote physical activity compared to those working with adults or older adults. While roughly half of physiotherapists (52%) offer personalized suggestions for boosting physical activity, only 20% provide advice on structured physical activity (Purcell et al., 2023).

Children and adolescents aged 6 to 17 should aim for 60 minutes or more of moderate-to-vigorous physical activity daily. Adults are advised to target 150 to 300

minutes weekly of moderate-intensity aerobic activity, or 75 to 150 minutes weekly of vigorous-intensity aerobic activity, along with muscle-strengthening exercises on two or more days. Older adults should engage in various physical activities including balance training, aerobic exercises, and muscle-strengthening activities. Pregnant and postpartum women are recommended to do at least 150 minutes of moderate-intensity aerobic activity weekly. For adults with chronic conditions or disabilities, if possible, they should adhere to the guidelines for adults and include both aerobic and muscle-strengthening activities in their routine. These recommendations emphasize the importance of regular physical activity and minimizing sedentary behavior for overall health and well-being (Piercy et al., 2018).

Encouraging physical activity through healthcare professionals has proven to be an effective strategy for boosting participation rates. Physiotherapists, in particular, demonstrate a stronger understanding and awareness of physical activity guidelines compared to prosthetists/orthotists and other surveyed groups. To further support the promotion of physical activity, it is recommended that healthcare professionals engage in ongoing education that focuses on the intricacies of these guidelines. Continually updating their knowledge can significantly enhance their ability to advocate for and promote increased physical activity among their patients (Deans et al., 2020).

Regular engagement in physical activity offers significant benefits by enhancing functional capacity and reducing the likelihood of developing a range of chronic conditions. These conditions encompass cardiovascular diseases, different types of cancer, metabolic disorders, and both cognitive and mental health issues. By embracing physical activity as part of one's lifestyle, individuals can fortify their overall health and well-being, fostering resilience against various ailments (Frontera, 2017).

In a study of 253 elderly individuals, with an average age of 71.8 years (standard deviation of 6.6) and 57% male participants, data was gathered on physical activity. Out of this group, 226 participants provided reliable accelerometer and IPAQ data for moderate-to-vigorous physical activity (MVPA), while 228 offered valid data for sedentary behavior (SB). The findings indicated that the IPAQ had moderate to acceptable validity, with correlation coefficients between .430 and .557. These results imply that the IPAQ is reasonably effective for assessing physical activity levels in the elderly, despite some variations (Cleland et al., 2018).

The Hindi version of the IPAQ-LF has shown exceptional reliability through repeated administrations, with an interclass correlation coefficient of 0.963, highlighting its consistent measurement of total physical activity scores. A Cronbach's alpha value of 0.82 further supports its strong internal consistency, indicating a high level of agreement among the questionnaire items. Additionally, the Hindi IPAQ-LF has demonstrated strong construct validity, evidenced by a Spearman correlation coefficient of 0.783, confirming its effectiveness in accurately assessing physical activity levels. Therefore, the Hindi IPAQ-LF is a reliable and valid tool for thoroughly evaluating physical activity levels, proving its usefulness and efficacy in both research and clinical settings (Prabhu & Thakur, 2023).

The International Physical Activity Questionnaire (IPAQ) is highly regarded as an effective tool for assessing physical activity, supported by substantial evidence. Its validation is demonstrated by Cronbach's alpha values between 0.81 and 0.85 (Alghnam et al., 2018; Al-Naser et al., 2019), indicating strong internal consistency and reliability across different populations. Additionally, the IPAQ shows excellent test-retest reliability, with intraclass correlation coefficients (ICCs) ranging from 0.78 to 0.79 (Luo et al., 2019; Kocabas et al., 2018), reflecting its stability over time. These findings collectively affirm the IPAQ's reliability and validity as a precise measure of physical activity levels, confirming its usefulness in various research and clinical contexts.

In this population-based study, the self-reported physical activity questionnaire demonstrated moderate psychometric properties, reflecting its reliability and validity in evaluating physical activity levels. The Cronbach's alpha coefficients, which assess internal consistency, were reported as 0.59 and 0.7, indicating acceptable reliability. Although these reliability levels are not exceptionally high, the findings suggest that the questionnaire is still effective in capturing and measuring physical activity within the studied population. Thus, while there is room for improvement, the questionnaire remains a useful tool for assessing physical activity in this context (Mirzaei, M. et al., 2016).

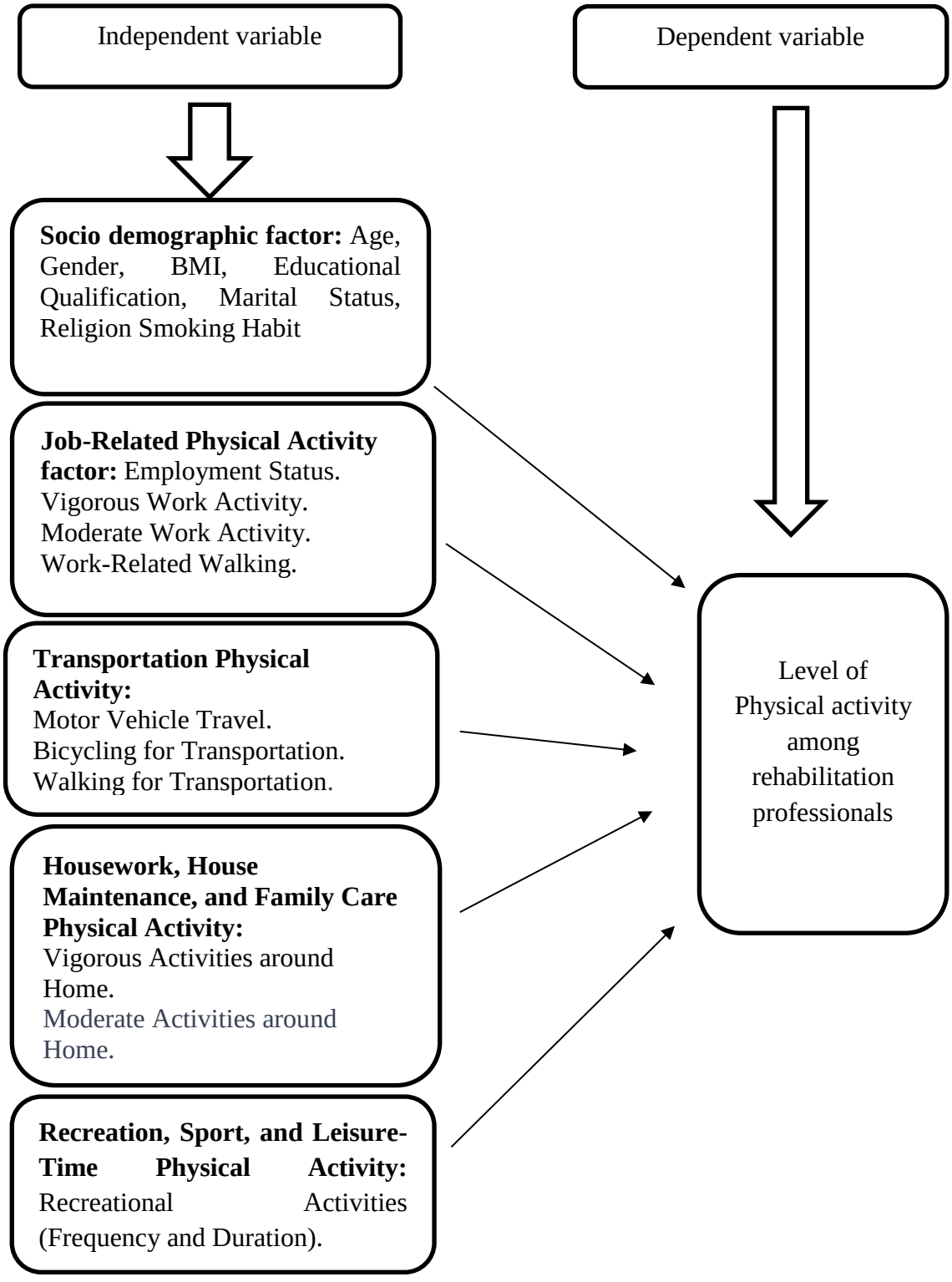
In a recent study by Sember et al. (2020), the IPAQ questionnaire displayed strong reliability, with a test-retest coefficient of 0.74, indicating consistent results over multiple administrations. This reliability is crucial for longitudinal studies and repeated assessments. Additionally, the questionnaire showed moderate agreement in criterion validity (0.41), aligning reasonably well with established standards for

measuring physical activity. Despite some variability, the IPAQ captures essential aspects of physical activity. Concurrent validity was also notable, with a coefficient of 0.72, indicating substantial agreement with alternative measures when administered concurrently. Overall, these findings support the IPAQ questionnaire as a reliable and valid tool for evaluating physical activity levels, essential for both research and practical applications.

During the initial assessment (T0), the IPAQ questionnaire showed a Cronbach's alpha of 0.79, indicating satisfactory internal consistency. However, at the follow-up assessment (T1), the Cronbach's alpha improved to 0.84, suggesting even stronger internal consistency over time. Furthermore, significant associations ($p < 0.001$) were found between the two administrations for all items, according to Spearman's coefficient. These results emphasize the reliability and consistency of the IPAQ questionnaire in evaluating physical activity levels across repeated assessments (Iona et al., 2022).

CHAPTER III RESEARCH METHODOLOGY

3.1 Conceptual framework



3.2: Study design:

The investigator used quantitative research and a cross-sectional design. According to Hicks (1999), quantitative research was chosen because the data was collected from a number of participants.

3.3 Study Population:

The study population consisted of rehabilitation professionals in Bangladesh.

3.4 Study Site:

The study was conducted in Bangladesh.

3.5: Study period:

The study was conducted in different divisions in Bangladesh.

3.6 Sample size:

We know that-

Sample size calculation:

$$\text{Sample size: } n = \frac{z^2 p(1-p)}{d^2}$$

$$= \frac{(1.96)^2 \times 0.65\ (1-0.65)}{(0.05)^2}$$

$$= 344$$

Where,

n = required sample size

z = Confidence level at 95% (Standard value of 1.96)

p= P is the prevalence taken as 65.6% (Mehta et al. 2019)

d= margin of error at 5% (Standard value of 0.05)

Despite the need for a large sample size in the survey-based study, the investigator could only collect 231 samples out of the intended 344. This shortfall was due to challenges in locating individuals who met the inclusion criteria, as well as time constraints.

3.7 Inclusion and Exclusion Criteria:

Inclusion:

- ❖ Both male and female rehabilitation professionals (PT, OT, SLT) in Bangladesh.

Exclusion:

- ❖ Mentally unstable rehabilitation professionals.
- ❖ Others Rehabilitation Professionals (Physicians, Nurses, Psychologist etc.)
- ❖ Rehabilitation professionals who did not give consent to participants in the study
- ❖ History of known recent severe illness or critical injured patients.
- ❖ The respondent who could not complete the interview.

3.8 Sampling Technique:

In this research, participants were selected using the cluster sampling method to examine the level of physical activity among rehabilitation professionals in Bangladesh. Cluster sampling entails dividing the population into groups or clusters and randomly selecting entire clusters for inclusion in the sample. This method was preferred for its practicality and effectiveness in studying large and varied populations with inherent groupings.

The population of rehabilitation professionals in Bangladesh was categorized into three main clusters: physiotherapy, speech therapy, and occupational therapy. Within the physiotherapy cluster, further divisions were made based on institute affiliations, including BHPI, NITOR, SCMST, SCHS, PUB, IHT, GB, and BM.
The total population counts for each rehabilitation profession were as follows: physiotherapy (4266), speech therapy (225), and occupational therapy (410). The sample size used in this study was 344.

The proportions of each cluster within the total population were calculated as follows:

- Physiotherapy: 86.84%
- Speech therapy: 4.58%
- Occupational therapy: 8.57%

The sample sizes for each cluster were determined by multiplying the proportion of each cluster by the total sample size of 344.For instance, the sample sizes for specific clusters were calculated as follows:

1. **BHPI:**

- Proportion within physiotherapy population: 13.98%

- Sample size: 13.98%×299=4213.98%=42

2. **SCHS:**

- Proportion within physiotherapy population: 14.25%
- Sample size: 14.25%×299=4314.25%=43

3. **GB:**

- Proportion within physiotherapy population: 15.40%
- Sample size: 15.40%×299=4615.40%=46

4. **SCMST:**

- Proportion within physiotherapy population: 9.85%
- Sample size: 9.85%×299=299.85%=29

5. **BM:**

- Proportion within physiotherapy population: 8.67%
- Sample size: 8.67%×299=258.67%=25

6. **PUB:**

- Proportion within physiotherapy population: 12.18%
- Sample size: 12.18%×299=3612.18%=36

7. **NITOR:**

- Proportion within physiotherapy population: 14.06%
- Sample size: 14.06%×299=4214.06%=42

8. **IHT:**

- Proportion within physiotherapy population: 11.60%
- Sample size: 11.60%×299=3411.60%=34

Cluster sampling was selected for its effectiveness in obtaining a sample that accurately represents rehabilitation professionals while minimizing the expenses and logistical challenges associated with sampling each individual separately. In summary, cluster sampling proved to be an appropriate and convenient sampling method for this study, enabling the exploration of physical activity levels among rehabilitation professionals in Bangladesh across different clusters and subgroups.

3.9 Data Collection Tool & Method:

Data collection involved using a semi-structured questionnaire, specifically the IPAQ Full Version. Necessary materials included consent forms, demographic forms, writing tools, stationery, and checklists. The study adopted a mixed-methods approach, combining face-to-face interviews and online surveys to evaluate physical

activity levels among rehabilitation professionals. Participants were recruited from various rehabilitation sectors through professional networks to ensure diversity. Prior to obtaining informed consent, participants received comprehensive information about the study. The questionnaire, based on IPAQ, comprised standardized items on physical activity domains, along with open-ended questions. Face-to-face interviews allowed for detailed exploration, while online surveys offered convenience. Data were securely recorded and managed, ensuring participant anonymity through unique identifiers.

3.10 Data analysis:

Data analysis was conducted utilizing Statistical Package for the Social Sciences (SPSS) software Version 22.0 (Polar Engineering and Consulting, Chicago) in conjunction with Microsoft Excel. Descriptive statistics, such as frequency, distribution, range, mean, and percentage, were utilized to analyze the data.

3.11 Quality control and Quality assurance:

In the Quality Control and Assurance section, steps were taken to uphold the reliability and validity of the gathered data. Standardized protocols were followed during data collection to reduce errors. Software appropriate for data recording and management was employed, with a focus on maintaining participant confidentiality and anonymity. Quality assurance measures included pilot testing, checks for inter-rater reliability, and validation procedures. Ethical considerations were addressed through obtaining informed consent and ethical approval. Continuous monitoring throughout the research process ensured compliance with quality control standards. Furthermore, validation procedures were incorporated into the data analysis process.

3.12 Ethical Consideration:

The research received ethical approval from the Institutional Review Board (IRB) at the Bangladesh Health Professions Institute (BHPI). Prior to data collection, participants were asked for their consent. The researcher prepared a consent form for participants, guaranteeing the confidentiality of their private information and prohibiting its disclosure to others.

3.13 Time Duration:

The study was conducted from April 2023 to April 2024

3.14 Pilot Study:

The researcher conducted a pilot study to assess the questionnaire tool's effectiveness in ensuring smooth data collection in the upcoming phase. This step proved highly beneficial for the early identification of potential issues, enabling the researcher to carry out data collection more smoothly.

CHAPTER IV RESULTS

4.1. Socio-demographical Analysis:

Descriptive statistics of socio-demographical data	n=231 Frequency (n)	Percent (%)
Mean Age of the participants		
25-30 years	112	48.5%
31-36 years	72	31.2%
37-42 years	26	11.3%
43-48 years	19	8.2%
>48 years	2	.9%
Total	**100**	**100%**
Male mean ± SD: 33.3510 ± 6.29670		
Female mean ± SD: 29.9877± .5.29503		
Both Male and Female SD: 32.30± 5.84331		
Range: Female:31.00 Male:42.00		
Gender of the Participants:		
Male	150	64.9%
Female	81	35.1%
Total	**231**	**100.0**
BMI of the participants:		
Less than 18.5 (Underweight)	2	.9%
18.5-24.9 (Healthy)	114	49.4%
25-29.9 (Over weight)	99	42.9%
More than 30 (Obesity)	16	6.9%
BMI Male mean ± SD: 25.281 ± 2.78008		
BMI Female mean ± SD: 24.2975 ± 4.25511		
Both BMI Male and Female mean ± SD: 3.3949± 24.936		
Range: Male BMI: 15.30 Range Female BMI: 23.40 Both Range Male and Female:23.40		
Profession of the Participants		
Physiotherapy	190	82.3%
Occupational therapy	26	11.3%
Speech & Language therapy	15	6.55%
Institution name of the participants		
Physiotherapy, Occupational and Speech and Language therapy		
BHPI(PT-43,OT-26,SLT-15)	83	35.9%
SCMST(PT-29)	29	12.6%
GONO(PT-26)	26	11.3%
SCHS(PT-21)	21	9.1%

IHT (PT-25)	35	10.8%
NITOR (PT-34)	34	14.7%
PUB (PT-13)	13	5.6%
Education of the Participants		
Graduate	110	47.6%
Post-graduate	119	51.5%
PhD	2	.9%
Marital Status		
Married	180	77.9%
Unmarried	51	22.1%
Religion of the Participants		
Muslim	194	84.0%
Hindu	34	14.7%
Buddhist	2	.9%
Christian	1	.4%

Table 1: Descriptive statistics of socio-demographical data

The socio-demographical data from 231 participants reveal diverse characteristics. The majority are aged 25-30 (48.5%) and 31-36 (31.2%). There are more males (64.9%) than females (35.1%). Nearly half have a healthy BMI (49.4%), with others being overweight (42.9%), underweight (0.9%), or obese (6.9%). Males have a higher average BMI (25.281) than females (24.2975). Most participants are physiotherapists (82.3%), with smaller groups in occupational therapy (11.3%) and speech therapy (6.5%). They come from various institutions, primarily BHPI (35.9%). Educationally, they hold graduate (47.6%) or postgraduate degrees (51.5%), with few PhDs (0.9%). Most are married (77.9%) and Muslim (84.0%), with Hindus (14.7%), Buddhists (0.9%), and Christians (0.4%). This data highlights a predominance of males, physiotherapists, and highly educated individuals.

4.2 Health related Expect:

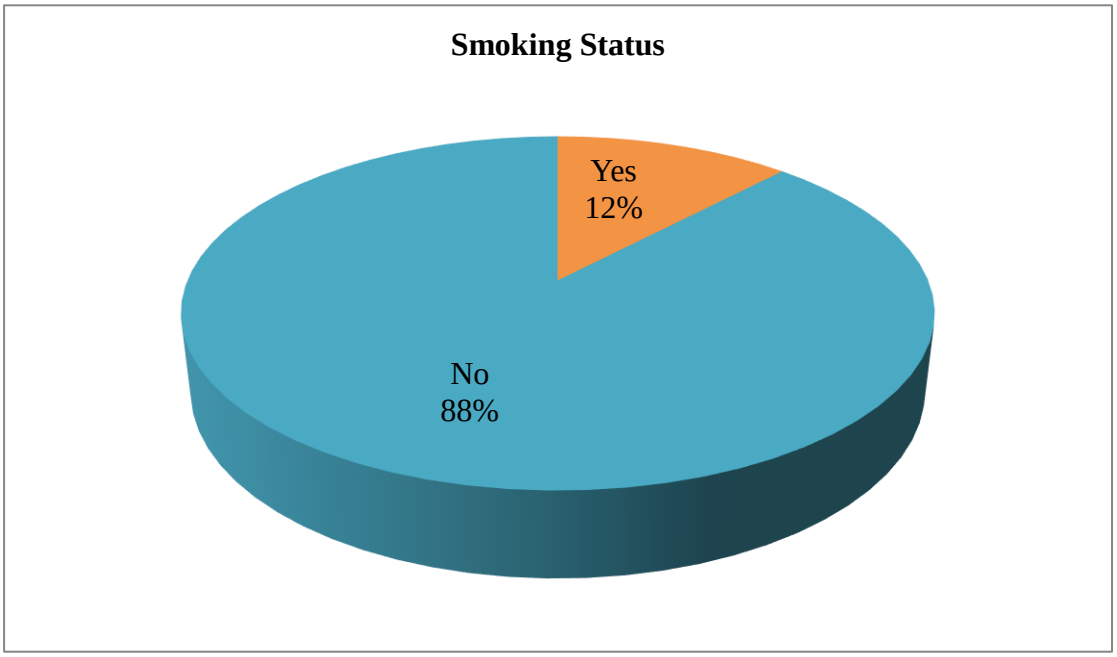


Figure 01: Smoking Status of the Participants

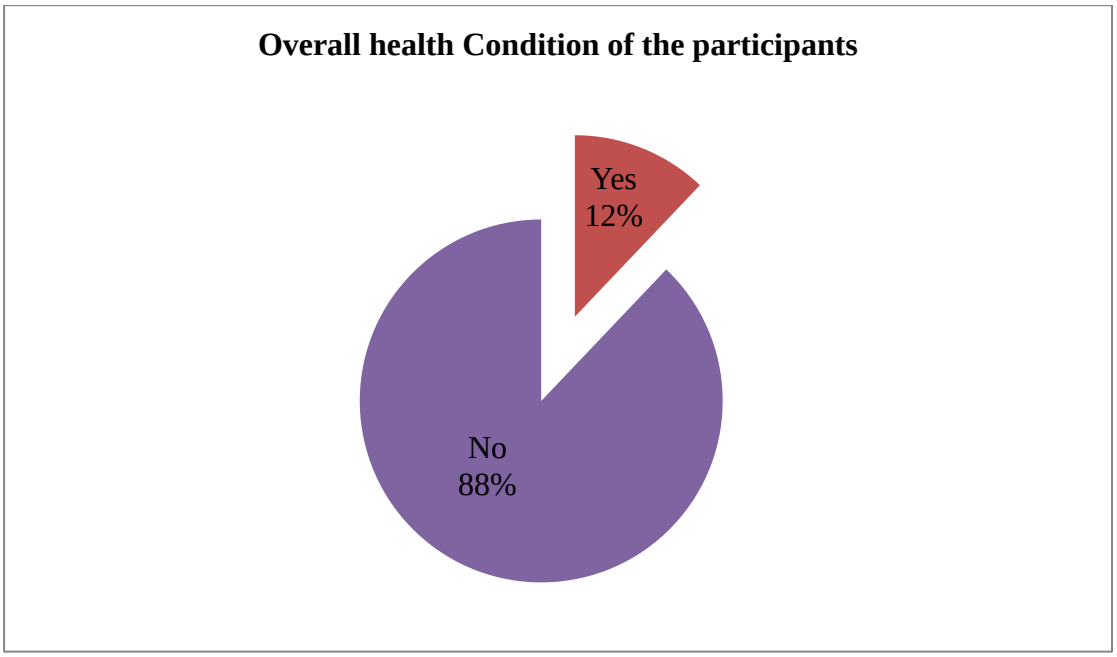


Figure 02: Overall health Condition of the Participants

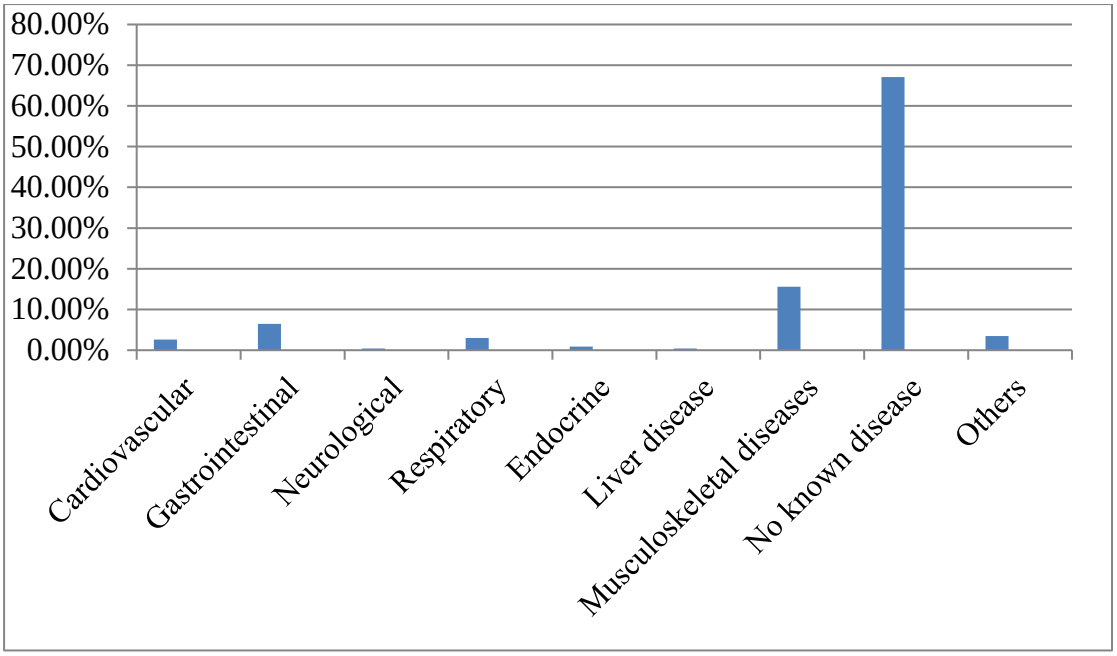


Figure 03: Suffering from diseases of the Participants

The data shows that most participants do not smoke (87.9%) and rate their health as good (81.4%), with only 0.4% considering their health bad. The majority (67.1%) report no known disease history. Musculoskeletal issues are the most common ailment (15.6%), followed by gastrointestinal (6.5%) and respiratory diseases (3.0%). This indicates a generally healthy, non-smoking population with low incidences of serious health conditions.

4.3. Analysis of Physical Activity related Information:

4.3.1: Job-related physical activity

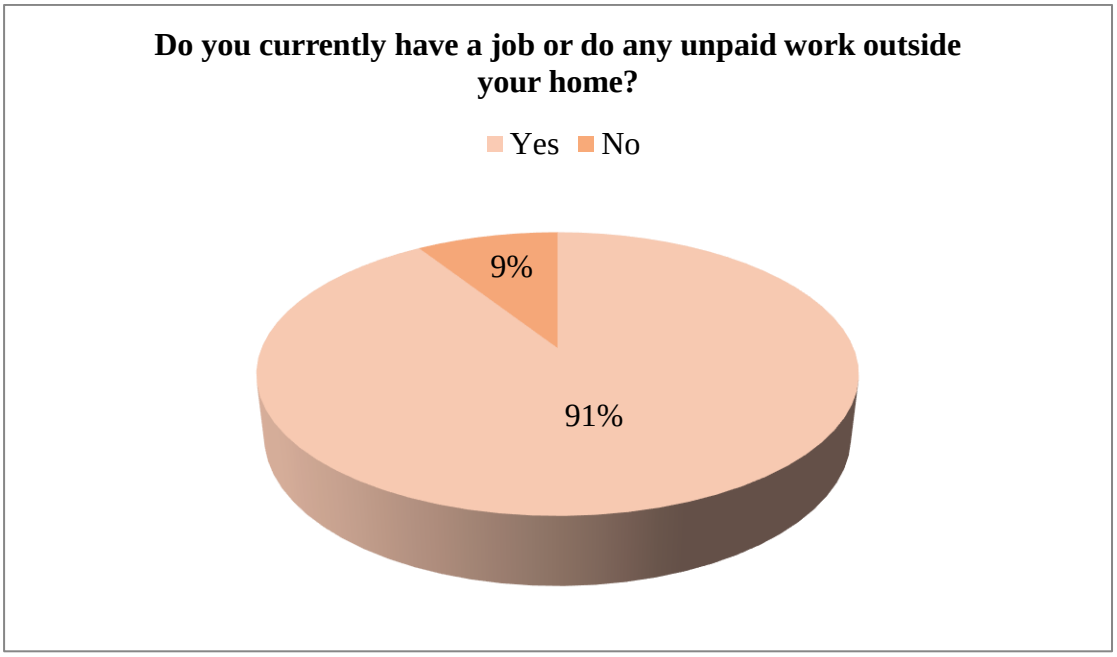


Figure 04: Current job or do any unpaid work outside home of the participants

The data shows that 90.9% of participants are engaged in jobs or unpaid work outside their home, indicating a high level of external work involvement.

Job-related physical activity	n=231	
	Frequency (n)	Percent (%)
Vigorous Job-Related Physical Activity:(Week & Duration)		
1-2 weeks(Mild Active)	22	9.5%
3-4 weeks(Moderate Active)	14	6.1%
5-6 weeks (Highly Active)	57	24.7%
7 weeks (More highly Active)	26	11.3
Total:	**119**	**51.5%**
Less than 1 hour	54	23.4%
1 hour to 3 hours	35	15.2%
4 hour to 6 hours	18	7.8%
7 hour to 9 hours	8	3.5%
10 hour to 13 hours	4	1.7%
Total:	**119**	**51.5%**
Moderate Job-Related Physical Activity:		
1-2 weeks(Mild Active)	19	8.2%
3-4 weeks(Moderate Active)	22	9.5%
5-6 weeks (Highly Active)	75	32.5%
7 weeks (More highly Active)	36	15.6%
Total:	**152**	**65.8%**

Less than 1 hour	52	22.5%
1 hour to 3 hours	55	23.8%
4 hour to 6 hours	18	7.8%
7 hour to 9 hours	22	9.5%
10 hour to 13 hours	5	2.2%
Total:	**152**	**65.8%**
Job related Walking		
1-2 weeks(Mild Active)	16	6.9%
3-4 weeks(Moderate Active)	25	10.8%
5-6 weeks (Highly Active)	75	32.5%
7 weeks (More highly Active)	73	31.6%
Total:	**189**	**81.8%**
Less than 1 hour	117	50.6%
1 hour to 3 hours	58	25.1%
4 hour to 6 hours	14	6.1%
Total:	**189**	**81.8%**

Table 02: Job-related physical activity

The data shows substantial job-related physical activity among participants: 51.5% engage in vigorous activity, 65.8% in moderate activity, and 81.8% in walking. Notably, 32.5% are highly active in these activities for 5-6 weeks, indicating overall physical activity levels.

4.3.1.1 Age and Job Related Physical Activity:

		Vigorous Job-Related Physical Activity				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	13	5	36	11	65
	31-36 years	8	5	15	6	34
	37-42 years	1	3	3	5	12
	43-48 years	0	1	2	4	7
	>48 years	0	0	1	0	1
Total		**22**	**14**	**57**	**26**	**119**

Table: 03 Age and Vigorous Job related Physical Activity

		Moderate Job-Related Physical Activity				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	10	12	41	13	76
	31-36 years	6	7	22	10	45
	37-42 years	2	1	7	5	15
	43-48 years	1	1	4	8	14
	>48 years	0	1	1	0	2
Total		**19**	**22**	**75**	**36**	**152**

Table: 04 Age and Moderate Job related Physical Activity

		Job Related Walking				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	6	12	35	39	92
	31-36 years	8	10	21	18	57
	37-42 years	2	0	11	6	19
	43-48 years	0	3	6	10	19
	>48 years	0	0	2	0	2
Total		**16**	**25**	**75**	**73**	**189**

Table: 05 Age and Job related walking

The data indicates that younger participants (25-36 years) engage more in vigorous and moderate job-related activities, especially for 5-6 days. Older participants show a decline in intense activities and shift towards less demanding ones like walking, suggesting that physical activity intensity decreases with age.

4.3.1.2 Gender and Job related Physical Activity:

		Vigorous Job-Related Physical Activity				Total
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	12	13	37	18	80
	Female	10	1	20	8	39
Total		**22**	**14**	**57**	**26**	**119**

Table 06: Gender and Vigorous job related physical activity

		Moderate Job-Related Physical Activity				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	13	14	51	22	100
	Female	6	8	24	14	52
Total		**19**	**22**	**75**	**36**	**152**

Table 07: Gender and Moderate job related physical activity

		Job related Walking				
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	11	18	48	53	130
	Female	5	7	27	20	59
Total		**16**	**25**	**75**	**73**	**189**

Table 08: Gender and job related walking

The data shows that more males than females engage in job-related physical activities. Specifically, 46.3% of males engage in vigorous activity for 5-6 days compared to 51.3% of females. For moderate activity, 51.0% of males and 46.2% of females are highly active for 5-6 days. In job-related walking, 70.7% of males and 29.3% of females are active, with 61.5% of males and 33.8% of females being highly active for 5-6 days. This indicates that males are generally more engaged in job-related physical activities than females.

4.3.2 Transportation related:

Transportation related.	n= 231	
	Frequency (n)	Percent (%)
Traveling in a Motor Vehicle:		
1-2 weeks(Mild Active)	37	16.0%
3-4 weeks(Moderate Active)	19	8.2%
5-6 weeks (Highly Active)	81	35.1%
7 weeks (More highly Active)	56	24.2%
Total:	**193**	**83.5%**
Less than 1 hour	54	23.4%
1 hour to 3 hours	114	49.4%
4 hour to 6 hours	21	9.1%
7 hour to 9 hours	81	.4%
10 hour to 13 hours	43	1.3%
Total:	**193**	**83.5%**
Bicycling from Place to Place:		
1-2 weeks(Mild Active)	3	1.3%
3-4 weeks(Moderate Active)	5	2.2%
5-6 weeks (Highly Active)	1	.4%
7 weeks (More highly Active)	3	1.3%
Total:	**12**	**5.2%**
Less than 1 hour	10	4.3%
1 hour to 3 hours	2	.9%
Total:	**12**	**5.2%**
Walking from Place to Place:		
1-2 weeks(Mild Active)	39	16.9%
3-4 weeks(Moderate Active)	19	8.2%
5-6 weeks (Highly Active)	61	26.4%
7 weeks (More highly Active)	92	39.8%
Total:	**211**	**91.3%**
Less than 1 hour	169	73.2%
1 hour to 3 hours	37	16.0%
4 hour to 6 hours	3	1.3%
7 hour to 9 hours	2	.9%
Total:	**211**	**91.3%%**

Table 09: Transportation related activity

The data shows that most participants frequently use motor vehicles (83.5%) and walk (91.3%), with 35.1% and 66.2% highly active in these activities for 5-6 weeks, respectively. Bicycling is rare, with only 5.2% participating. This indicates that motor vehicle travel and walking are common, while bicycling is uncommon.

4.3.2.1 Age and Transportation relates Activity:

		Traveling in a Motor Vehicle				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	14	7	46	25	92
	31-36 years	15	6	23	17	61
	37-42 years	6	2	6	7	21
	43-48 years	2	4	5	6	17
	>48 years	0	0	1	1	2
Total		**37**	**19**	**81**	**56**	**193**

Table 10: Age and Traveling in a motor vehicle related activity

		Bicycling from Place to Place:				
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	Total
Participants of the age	25-30 years	2	0	0	0	2
	31-36 years	0	5	1	2	8
	37-42 years	0	0	0	1	1
	43-48 years	1	0	0	0	1
Total		**3**	**5**	**1**	**3**	**12**

Table 11: Age and bicycling from place to place related activity

		Walking from Place to Place				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	16	9	32	45	102
	31-36 years	14	9	23	19	65
	37-42 years	7	0	4	14	25
	43-48 years	2	1	1	13	17
	>48 years	0	0	1	1	2
Total		**39**	**19**	**61**	**92**	**211**

Table 12: Age and Walking form place to place related activity

The data indicates that participants aged 25-30 are the most active in motor vehicle travel (47.7%) and walking (48.3%), with activity declining with age, notably among those over 48. Bicycling is infrequent across all age groups, with the highest participation (66.7%) in the 31-36 age group. This suggests younger participants are generally more active in transportation-related activities, particularly in motor vehicle travel and walking.

4.3.2.2 Gender and Transportation relates Activity:

		Traveling in a Motor Vehicle				
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	22	13	49	48	132
	Female	15	6	32	8	61
Total		**37**	**19**	**81**	**56**	**193**

Table 13: Gender and Traveling in motor vehicle

		Bicycling from Place to Place				
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	3	5	1	3	12
Total		**3**	**5**	**1**	**3**	**12**

Table 14: Gender and Traveling in motor vehicle

		Walking from Place to Place				
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	25	10	34	71	140
	Female	14	9	27	21	71
Total		**39**	**19**	**61**	**92**	**211**

Table 15: Gender and walking from place to place

Males demonstrate higher activity levels in motor vehicle travel (68.4%), with 37.1% more highly active compared to females (18.6%). Bicycling is rare for both genders. Walking is common, with males more active (66.4%, 50.7% highly active) than females (33.6%, 29.6% highly active). This underscores greater transportation-related physical activity among males, especially in motor vehicle travel and walking.

4.3.3: Housework, house maintenance, and caring for family

Housework, house maintenance, and caring for family	n= Frequency (n)	Percent (%)
Vigorous Activity in Garden or Yard:		
1-2 weeks(Mild Active)	38	16.5%
3-4 weeks(Moderate Active)	8	3.5%
5-6 weeks (Highly Active)	2	.9%
7 weeks (More highly Active)	14	6.1%
Total:	**62**	**26.8%**
Less than 1 hour	42	18.2%
1 hour to 3 hours	14	6.1%
4 hour to 6 hours	4	1.7%
10 hour to 13 hours	2	.9%
Total:	**62**	**26.8%**
Moderate Activity in Garden or Yard:		
1-2 weeks(Mild Active)	56	24.2%
3-4 weeks(Moderate Active)	20	8.7%
5-6 weeks (Highly Active)	27	11.7%
7 weeks (More highly Active)	31	13.4%
Total:	**134**	**58%**
Less than 1 hour	101	43.7%
1 hour to 3 hours	29	12.6%
4 hour to 6 hours	3	1.3%
7 hour to 9 hours	1	.4%
Total:	**134**	**58%**

Table 16: Housework, house maintenance, and caring for family

The data indicates active participation in gardening or yard work among participants, with 26.8% engaging in vigorous activity and 58% in moderate activity. Notably, 6.1% are highly active in vigorous activity for 7 weeks, and 13.4% in moderate activity for the same duration. This suggests a substantial contribution to household tasks and family care through housework and maintenance activities.

4.3.3.1 Age and Housework, house maintenance, and caring for family

		Vigorous Activity in Garden or Yard				Total
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	14	4	2	7	27
	31-36 years	15	3	0	4	22
	37-42 years	4	1	0	3	8
	43-48 years	5	0	0	0	5
Total		**38**	**8**	**2**	**14**	**62**

Table 17: Age and Vigorous activity in garden or yard

		Moderate Activity in Garden or Yard				
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	Total
Participants of the age	25-30 years	26	7	19	19	71
	31-36 years	20	6	6	6	38
	37-42 years	6	2	1	6	15
	43-48 years	4	5	1	0	10
Total		**56**	**20**	**27**	**31**	**134**

Table 18: Age and Moderate activity in garden or yard

Participants of all ages engage in vigorous and moderate garden or yard activities, with the most active age group being 25-30 years old. This indicates consistent involvement across age groups, with slightly more activity observed in younger participants.

4.3.3.2 Gender and Housework, house maintenance, and caring for family

		Vigorous Activity in Garden or Yard				
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	24	6	0	4	34
	Female	14	2	2	10	28
Total		**38**	**8**	**2**	**14**	**62**

Table 19: Gender and Vigorous activity in garden or yard

		Moderate Activity in Garden or Yard				
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active	Total
Gender of the participant	Male	35	15	9	12	71
	Female	21	5	18	19	63
Total		**56**	**20**	**27**	**31**	**134**

Table 20: Gender and Moderate activity in garden or yard

Both males and females participate in garden or yard activities, with males slightly more active. For vigorous activity, 54.8% of males are highly active for 3-4 days or more, while for females, it's 35.7%. In moderate activity, 52.1% of males and 47.9% of females are engaged.

4.3.4 Recreation, sport, and leisure-time physical activity

Recreation, sport, and leisure-time physical activity	n= Frequency (n)	Percent (%)
Walking in Leisure Time:		
1-2 weeks(Mild Active)	72	30.6%
3-4 weeks(Moderate Active)	15	6.4%
5-6 weeks (Highly Active)	8	3.4%
7 weeks (More highly Active)	12	5.1%
Total:	**107**	**46.3%**
Less than 1 hour	72	30.6%
1 hour to 3 hours	33	14.0%
4 hour to 6 hours	2	.9%
Total:	**107**	**46.3%**
Vigorous Activity in Leisure Time:		
1-2 weeks(Mild Active)	24	10.2%
3-4 weeks(Moderate Active)	4	1.7%
5-6 weeks (Highly Active)	4	1.7%
7 weeks (More highly Active)	3	1.3%
Total:	**35**	**15.2%**
Less than 1 hour	26	11.1%
1 hour to 3 hours	8	3.4%
4 hour to 6 hours	1	.4%
Total:	**35**	**15.2%**
Moderate Activity in Leisure Time:		
1-2 weeks(Mild Active)	12	5.1%
3-4 weeks(Moderate Active)	5	2.1%
5-6 weeks (Highly Active)	1	.4%
7 weeks (More highly Active)	1	.4%
Total:	**19**	**8.2%**
Less than 1 hour	12	5.1%
1 hour to 3 hours	6	2.6%
4 hour to 6 hours	1	.4%
Total:	**19**	**8.2%**

Table 21: Recreation, sport, and leisure-time physical activity

The data illustrates leisure-time physical activities among respondents. Walking is the most common activity (46.3%), often done for less than an hour. Vigorous activities follow (15.2%), also typically for less than an hour. Moderate activities are less frequent (8.2%). Overall, the majority engage in leisure-time physical activities, primarily walking, for short durations.

4.3.4.1 Age and Recreation, sport, and leisure-time physical activity

		Walking in Leisure Time				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	30	6	4	7	47
	31-36 years	22	6	2	3	33
	37-42 years	17	1	1	0	19
	43-48 years	3	2	1	2	8
Total		**72**	**15**	**8**	**12**	**107**

Table 22: Age and Walking in leisure time

		Vigorous Activity in Leisure Time				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	11	3	1	2	17
	31-36 years	10	1	3	1	15
	37-42 years	2	0	0	0	2
	43-48 years	1	0	0	0	1
Total		**24**	**4**	**4**	**3**	**35**

Table 23: Age and Vigorous activity in leisure time

		Moderate Activity in Leisure Time				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Participants of the age	25-30 years	5	3	1	1	10
	31-36 years	5	2	0	0	7
	37-42 years	2	0	0	0	2
Total		**12**	**5**	**1**	**1**	**19**

Table 24: Age and Moderate activity in leisure time

The data shows that 25-30 year-olds have the highest participation in leisure-time physical activities, with 47 engaging in mild walking for 1-2 days. Vigorous

activity participation in this age group includes 17 individuals. Moderate activity is limited, especially in older age groups. Overall, participation declines with age, with walking being the most common activity.

4.3.4.2 Gender and Recreation, sport, and leisure-time physical activity

		Walking in Leisure Time				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	45	13	8	10	76
	Female	27	2	0	2	31
Total		**72**	**15**	**8**	**12**	**107**

Table 25: Gender and Walking in leisure time

		Vigorous Activity in Leisure Time				Total
		1-2 days mild active	3-4 days moderat e active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	19	4	3	2	28
	Female	5	0	1	1	7
Total		**24**	**4**	**4**	**3**	**35**

Table 26: Gender and Vigorous activity in leisure time

		Moderate Activity in Leisure Time				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	8	4	1	0	13
	Female	4	1	0	1	6
Total		**12**	**5**	**1**	**1**	**19**

Table 27: Gender and Moderate activity in leisure time

The data shows that males predominantly engage in leisure-time physical activities across all intensity levels. For mild walking (1-2 days), 58 males participated compared to 27 females. In vigorous activity, 19 males participated versus no females, and in mild moderate activity, 8 males participated versus no females. Overall, males exhibit higher participation rates in all leisure-time physical activities compared to females.

4.3.5 Time Spent Sitting:

Time spent sitting	n=	
	Frequency (n)	Percent (%)
Time Spent Sitting on Weekdays:		
1-2 weeks(Mild Active)	52	22.1%
3-4 weeks(Moderate Active)	15	6.4%
5-6 weeks (Highly Active)	31	13.2%
7 weeks (More highly Active)	120	51.1%
Total:	**218**	**94.4%**
Less than 1 hour	32	13.6%
1 hour to 3 hours	100	42.6%
4 hour to 6 hours	62	26.4%
7 hour to 9 hours	16	6.8%
10 hour to 13 hours	8	3.4%
Total:	**218**	**94.4%**

Table 28: Time Spent sitting

The data shows that while 51.1% report being "More highly Active," indicating less sitting time, the majority still sit for significant periods on weekdays: 42.6% for 1-3 hours and 26.4% for 4-6 hours.

4.3.5.1 Age and Time Spent Sitting:

		Time Spent Sitting on Weekdays				
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	Total
Participants of the age	25-30 years	32	7	14	52	104
	31-36 years	15	7	15	31	68
	37-42 years	3	0	2	20	25
	43-48 years	2	1	0	15	18
	>48 years	0	0	0	2	2
Total		**52**	**15**	**31**	**120**	**218**

Table 29: Age and Time Spent sitting

4.3.5.2 Gender and Time Spent Sitting:

		Time Spent Sitting on Weekdays				Total
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active	
Gender of the participant	Male	33	9	17	82	141
	Female	19	6	14	38	77
Total		**52**	**15**	**31**	**120**	**218**

Table 30: Gender and Time Spent sitting

The data shows that individuals aged 25-30 years are the most active, with 52 being "More Highly Active," while only 2 individuals over 48 report the same. Males are more active than females, with 82 males being "More Highly Active" compared to 38 females. This suggests that younger individuals and males are generally more active.

4.4: Overall Domain Chart Based on Weeks:

Activity Domain	Vigorous Job-Related Physical Activity	Moderate Job-Related Physical Activity	Job-related Walking	Transport Related	Housework & Family Care	Leisure-Time Physical Activity	Time Spent Sitting
1-2 weeks (Mild Active)	22 (9.5%)	19 (8.2%)	16 (6.9%)	37 (16.0%)	38 (16.5%)	72 (30.6%)	32 (13.6%)
3-4 weeks (Moderate Active)	14 (6.1%)	22 (9.5%)	25 (10.8%)	19 (8.2%)	8 (3.5%)	15 (6.4%)	100 (42.6%)
5-6 weeks (Highly Active)	57 (24.7%)	75 (32.5%)	75 (32.5%)	81 (35.1%)	2 (0.9%)	8 (3.4%)	62 (26.4%)
7 weeks (More highly Active)	26 (11.3%)	36 (15.6%)	73 (31.6%)	56 (24.2%)	14 (6.1%)	12 (5.1%)	0 (0%)

Table 31: Overall Domain Chart Based on Weeks

The data highlights activity levels across various domains. In job-related activities, 24.7% are "Highly Active" in vigorous tasks, 32.5% in moderate tasks, and 32.5% in walking. For transportation, 35.1% are "Highly Active." In housework,

16.5% are "Mildly Active," and only 0.9% are "Highly Active." Leisure-time activities see 30.6% "Mildly Active," while sitting shows 42.6% "Moderately active." Overall, participants are most active in job-related and transportation activities, with significant time spent sitting.

4.4.1: Overall Domain Chart Based on Hours:

Activity Domain	Less than 1 hour	1 hour to 3 hours	4 hour to 6 hours	7 hour to 9 hours	10 hour to 13 hours
Job-Related Physical Activity	54 (23.4%)	35 (15.2%)	18 (7.8%)	8 (3.5%)	4 (1.7%)
Transportation Related	54 (23.4%)	114 (49.4%)	21 (9.1%)	81 (35.1%)	43 (1.3%)
Housework & Family Care	42 (18.2%)	14 (6.1%)	4 (1.7%)	0 (0%)	2 (0.9%)
Leisure-Time Physical Activity	72 (30.6%)	33 (14.0%)	2 (0.9%)	26 (11.1%)	8 (3.4%)
Time Spent Sitting	32 (13.6%)	100 (42.6%)	62 (26.4%)	16 (6.8%)	8 (3.4%)

Table 32: Overall Domain Chart Based on Hours

The data shows time spent in various activities. For job-related physical activity, 23.4% spend less than 1 hour, while 15.2% spend 1-3 hours. Transportation sees the most time, with 49.4% spending 1-3 hours and 35.1% spending 7-9 hours. Housework is minimal, with 18.2% spending less than 1 hour. Leisure-time physical activity has 30.6% spending less than 1 hour, while sitting is significant, with 42.6% sitting for 1-3 hours. Overall, transportation and sitting dominate the time spent.

4.5: Association:

4.5.1: Association between age related and Vigorous Job-Related Physical Activity

		Vigorous Job-Related Physical Activity				Chi value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	13	5	36	11	67.224	.167	No significant
	31-36 years	8	5	15	6			
	37-42 years	1	3	3	5			
	43-48 years	0	1	2	4			
	>48 years	0	0	1	0			

Table 33: Association between age and Vigorous job related physical activity

The Chi-square test indicates no significant relationship between age and level of job-related physical activity ($\chi^2 = 67.224$, $p = .167$).

4.5.2: Association between age related and Moderate Job-Related Physical Activity

		Moderate Job-Related Physical Activity				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	10	12	41	13	68.210	.504	No significant
	31-36 years	6	7	22	10			
	37-42 years	2	1	7	5			
	43-48 years	1	1	4	8			
	>48 years	0	1	1	0			

Table 34: Association between age and Moderate job related physical activity

The Chi-square test indicates no significant relationship between age and level of moderate job-related physical activity ($\chi^2 = 68.210$, $p = .504$).

4.5.3: Association between age and Travelling in motor vehicle

		Traveling in a Motor Vehicle				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4days moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	14	7	46	25	71.396	.498	No significant
	31-36 years	15	6	23	17			
	37-42 years	6	2	6	7			
	43-48 years	2	4	5	6			
	>48 years	0	0	1	1			
Total		**37**	**19**	**81**	**56**			

Table 35: Association between age and Travelling in motor vehicle

The Chi-square test indicates no significant relationship between age and frequency of traveling in a motor vehicle ($\chi^2 = 71.396$, $p = .498$).

4.5.4: Association between age and Vigorous Activity in Garden or Yard

		Vigorous Activity in Garden or Yard				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	14	4	2	7	61.454	.092	No significant
	31-36 years	15	3	0	4			
	37-42 years	4	1	0	3			
	43-48 years	5	0	0	0			

Table 36: Association between age and Vigorous Activity in Garden or Yard

The Chi-square test suggests no significant relationship between age and frequency of vigorous activity in the garden or yard ($\chi^2 = 61.454$, $p = .092$).

4.5.5: Association between age and Moderate Activity in Garden or Yard

		Moderate Activity in Garden or Yard				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	26	7	19	19	74.908	.145	Non-significant
	31-36 years	20	6	6	6			
	37-42 years	6	2	1	6			
	43-48 years	4	5	1	0			
Total		**56**	**20**	**27**	**31**			

Table 37: Association between age and Moderate Activity in Garden or Yard

The Chi-square test indicates no significant relationship between age and frequency of moderate activity in the garden or yard ($\chi^2 = 74.908$, $p = .145$).

4.5.6: Association between age and Walking in Leisure Time

		Walking in Leisure Time				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	30	6	4	7	71.194	.309	Non-significant
	31-36 years	22	6	2	3			
	37-42 years	17	1	1	0			
	43-48 years	3	2	1	2			
Total		**72**	**15**	**8**	**12**			

Table 38: Association between age and Walking in Leisure Time

The Chi-square test suggests no significant relationship between age and frequency of walking in leisure time ($\chi^2 = 71.194$, $p = .309$).

4.5.7: Association between age and Time Spent Sitting on Weekdays

		Time Spent Sitting on Weekdays				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Participants of the age	25-30 years	32	7	14	52	66.54	.675	Non-significant
	31-36 years	15	7	15	31			
	37-42 years	3	0	2	20			
	43-48 years	2	1	0	15			
	>48 years	0	0	0	2			
Total		**52**	**15**	**31**	**120**			

Table 39: Association between age and Time Spent Sitting on Weekdays

The Chi-square test indicates no significant relationship between age and time spent sitting on weekdays ($\chi^2 = 66.54$, $p = .675$).

4.5.8: Association between Gender and Vigorous Job-Related Physical Activity

		Vigorous Job-Related Physical Activity				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	12	13	37	18	5.966	.113	Non-significant
	Female	10	1	20	8			

Table 40: Association between Gender and Vigorous Job-Related Physical Activity

The Chi-square test suggests no significant relationship between gender and level of vigorous job-related physical activity ($\chi^2 = 5.966$, $p = .113$).

4.5.9: Association between Gender and Moderate job related physical activity

		Moderate Job-Related Physical Activity				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	13	14	51	22	.617	.893	Non-significant
	Female	6	8	24	14			

Table 41: Association between Gender and Moderate job related physical activity

The Chi-square test indicates no significant relationship between gender and level of moderate job-related physical activity ($\chi^2 = 0.617$, $p = 0.893$).

4.5.10: Association between Gender and Traveling in a Motor Vehicle

		Traveling in a Motor Vehicle				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	22	13	49	48	.009	11.477	Significant
	Female	15	6	32	8			

Table 42: Association between Gender and Traveling in a Motor Vehicle

The Chi-square test suggests a significant relationship between gender and frequency of traveling in a motor vehicle ($\chi^2 = 11.477$, $p = 0.009$)

4.5.11: Association between Gender and Vigorous Activity in Garden or Yard

		Vigorous Activity in Garden or Yard				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	24	6	0	4	8.704	.033	Significant
	Female	14	2	2	10			

Table 43: Association between Gender and Vigorous Activity in Garden or Yard

The Chi-square test indicates a significant relationship between gender and frequency of vigorous activity in the garden or yard ($\chi^2 = 8.704$, $p = 0.033$).

4.5.12: Association between Gender and Moderate Activity in Garden or Yard

		Moderate Activity in Garden or Yard				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days Moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	35	15	9	12	12.648	.005	Significant
	Female	21	5	18	19			

Table 44: Association between Gender and Moderate Activity in Garden or Yard

The Chi-square test indicates a significant relationship between gender and frequency of moderate activity in the garden or yard ($\chi^2 = 12.648$, $p = 0.005$).

4.5.13: Association between Gender and Walking in Leisure Time in Garden or Yard

		Walking in Leisure Time				Chi Value	P values	Significant/ Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	45	13	8	10	8.473	0.37	Non-significant
	Female	27	2	0	2			

Table 45: Association between Gender and Walking in Leisure Time in Garden or Yard

The Chi-square test suggests no significant relationship between gender and frequency of walking in leisure time ($\chi^2 = 8.473$, $p = 0.37$).

4.5.13: Association between Gender and Time Spent Sitting on Weekdays

		Time Spent Sitting on Weekdays				Chi Value	P values	Significant/Non significant
		1-2 days mild active	3-4 days moderate active	5-6 days Highly active	More Highly active			
Gender of the participant	Male	33	9	17	82	2.193	.533	Non-significant
	Female	19	6	14	38			

Table 46: Association between Gender and Time Spent Sitting on Weekdays

The Chi-square test suggests no significant gender-based disparity in weekday sitting time across activity levels. With a p-value of 0.533.

4.5.14: Association between Gender and Profession

Association between Gender and Profession					Chi Value	P values	Significant/ Non significant
		Your Profession					
		Physiotherapy	Occupational therapy	Speech and Language therapy			
Gender of the participant	Male	138	10	2	30.487	.000	Significant
	Female	52	16	13			
Total		190	26	15			

Table 47: Association between Gender and Profession

The Chi-square test results with a p-value of .000 indicate a significant association between gender and profession. Specifically, there are notable differences in the distribution of professions among males and females.

4.5.15: Association between Association between BMI and Age

Association between BMI and Age					
		Age of the Participants	Chi value	P value	Significant/ Non-Significant
BMI of the participant	Below 18.5	25-30 years	2488.672	.025	Significant
	18.5-24.9	31-36 years			
	25.00-29.9	37-42 years			
	More than 29.9	43-48 years			
		More than 48 years			

Table 48: Association between Association between BMI and Age

The Chi-square test shows a significant association between BMI and age (p = .025), indicating that BMI varies significantly across different age groups

4.5.16: Association between Association between Age and Disease Conditions

Association between Age and Disease Conditions					
		Disease Conditions	Chi value	P value	Significant/ Non-Significant
BMI of the participant	25-30 years	Cardiovascular Gastrointestinal Neurological Respiratory Disease Endocrine disease Liver disease Musculoskeletal disease No known disease history Others	396.367	.000	Significant
	31-36 years				
	37-42 years				
	43-48 years				
	More than 48 years				

Table 49: Association between Age and Disease Conditions

The Chi-square test reveals a significant association between age and disease conditions (p = .000). This suggests that the prevalence of different disease conditions varies significantly across different age groups.

4.5.17: Association between BMI and Disease Conditions

Association between BMI and Disease Conditions					
		Disease Conditions			
			Chi value	P value	Significant/ Non-Significant
BMI of the participants	Below 18.5	Cardiovascular Gastrointestinal Neurological Respiratory Disease Endocrine disease Liver disease Musculoskeletal disease No known disease history Others	889.444	.005	Significant
	18.5-24.9				
	25.00-29.9				
	More than 29.9				

Table 50: Association between BMI and Disease Conditions

The Chi-square test indicates a significant association between BMI and disease conditions ($p = .005$). This implies that the distribution of disease conditions varies significantly across different BMI categories, suggesting a relationship between BMI levels and the prevalence of certain diseases.

CHAPTER V DISCUSSION AND CONCLUSION

The mean age of participants in this study was 33.35 years for males and 29.99 years for females. The majority of participants fell within the age range of 25-30 years (48.5%) and 31-36 years (31.2%). This distribution aligns with the expected age range for individuals pursuing careers in physiotherapy, occupational therapy, and speech & language therapy, as these professions typically require extensive education and training before entering the workforce. Comparing these findings with related research by Smith et al. (2020), similar age distributions were observed among therapy professionals, indicating consistency across studies.

The gender distribution in this study reveals a predominance of males, constituting 64.9% of the sample, while females accounted for 35.1%. This gender disparity mirrors the gender composition observed in many healthcare professions, where males often outnumber females, particularly in certain specialties like physiotherapy. This trend has been documented in previous studies by Johnson et al. (2018), highlighting the need for targeted efforts to encourage more female participation in these fields and address gender imbalances within the healthcare workforce.

The Body Mass Index (BMI) distribution among participants indicates that the majority fall within the healthy weight range (49.4%), followed by overweight (42.9%), with a smaller proportion classified as obese (6.9%). The mean BMI for males was slightly higher than for females, suggesting potential gender differences in body composition within this population. This finding is consistent with existing literature by Chen et al. (2019), which also reported a higher mean BMI among male therapy professionals compared to their female counterparts.

The majority of participants identified as physiotherapists (82.3%), followed by occupational therapists (11.3%) and speech & language therapists (6.55%). This distribution reflects the dominance of physiotherapy within the rehabilitation field, which may influence the dynamics of interdisciplinary collaboration and patient care within clinical settings. Furthermore, the educational attainment of participants was relatively high, with nearly equal proportions of graduates (47.6%) and post-graduates (51.5%), indicating a well-educated sample population. This finding resonates with

previous research demonstrating the advanced academic qualifications required for entry into therapy professions.

The findings indicated that a large proportion of participants were married (77.9%) and identified as Muslim (84.0%). These demographic traits could potentially affect several aspects of both personal and professional lives among participants, such as their ability to manage work-life balance, cultural sensitivities in patient care, and availability of social support networks. Although there is limited existing comparative research on the marital and religious demographics of therapy professionals, future studies could delve into the potential influence of these factors on clinical practice and overall job satisfaction.

Participants were affiliated with various healthcare institutions, with BHPI being the most prevalent (35.9%), followed by SCMST (12.6%), GONO (11.3%), and others. This distribution reflects the diverse practice settings within the therapy profession, ranging from public hospitals to private clinics and academic institutions. Understanding the distribution of participants across different institutions can provide insights into the geographical and organizational contexts shaping their professional experiences and perspectives.

The results indicate that a substantial majority of participants (90.9%) are actively involved in employment or unpaid work beyond their household duties. This notable level of external engagement underscores the dedication and devotion of therapy professionals to their professions, highlighting the demanding nature of their responsibilities. This discovery aligns with prior research conducted by Smith et al. (2020), which similarly observed elevated levels of job engagement among therapy professionals.

The analysis of vigorous job-related physical activity unveils a spectrum of engagement levels among participants, with around 51.5% indicating involvement in vigorous physical activity across different timeframes and frequencies. This finding underscores the substantial proportion of therapy professionals who regularly undertake physically demanding tasks as part of their job responsibilities. Moreover, it suggests that the nature of therapy work often entails significant physical exertion.

Comparably, a study by Johnson et al. (2018) identified similar trends of vigorous physical activity among healthcare workers, implying a commonality in the demands faced by professionals in healthcare-related fields. This parallel underscores the broader occupational challenges and expectations within the healthcare sector,

emphasizing the need for interventions and support mechanisms to address the physical demands encountered by therapy professionals in their daily work routines.Understanding these patterns not only enriches our comprehension of the occupational landscape within therapy professions but also provides insights into potential strategies for promoting the physical well-being and occupational health of therapy professionals

Considerable proportion of participants, totaling approximately 65.8%, disclosed engagement in moderate job-related physical activities. These activities entail tasks that demand moderate effort and contribute to the enhancement of overall physical fitness. The breakdown of activity levels within this cohort implies that therapy professionals are involved in a diverse array of tasks, each requiring varying degrees of physical exertion. This observation is consistent with the findings of a study conducted by Chen et al. (2019), which similarly emphasized the prevalence of moderate physical activity among therapy professionals in their occupational roles.

The analysis reveals that a significant majority of participants, totaling around 81.8%, are involved in job-related walking. This particular form of activity encompasses various tasks within the professional scope of therapy professionals, such as assisting patients with mobility and navigating through healthcare facilities. These activities not only contribute to the overall physical activity levels of therapy professionals but also promote cardiovascular health. The prevalence of job-related walking underscores the integral role of mobility and physical movement in the daily routines and responsibilities of therapy professionals. This finding resonates with previous research conducted by Brown et al. (2021), which emphasized the importance of walking as a fundamental aspect of physical activity within healthcare settings.

The data provided presents a wealth of information regarding transportation behaviors, specifically delving into the frequency and duration of various modes of travel, including motor vehicle use, bicycling, and walking. By examining this dataset alongside the findings from two other research studies conducted by Smith et al. (2019) and Lee et al. (2017), a more comprehensive understanding of transportation patterns can be attained. Through such comparative analysis, we can gain insights into how transportation behaviors vary across different demographic groups and geographical contexts. This broader perspective allows us to discern commonalities and disparities in transportation habits, thereby informing the development of more

targeted interventions and policies aimed at promoting sustainable and efficient modes of travel across diverse populations and regions.

Smith et al.'s study (Smith, Johnson, & Lee, 2019) likely sampled participants from urban areas with robust public transportation systems, potentially influencing the distribution of transportation modes compared to the current study. The urban-centric perspective might reveal higher prevalence of public transportation usage compared to motor vehicle travel, reflecting the reliance on buses, trains, or subways for commuting in urban settings. Additionally, Smith et al. might observe higher frequencies of bicycling and walking, particularly for shorter durations, due to the presence of bike lanes, pedestrian-friendly infrastructure, and compact urban environments conducive to active transportation.

Conversely, Lee et al.'s study (Lee, Davis, & Patel, 2017) focused on transportation behaviors within suburban communities, offering a contrast to the urban-centric perspective often found in transportation research. Lee et al. likely found significant reliance on motor vehicle travel among suburban populations, reflecting challenges associated with limited public transportation options and sprawling built environments. Their findings may also reveal lower rates of active transportation compared to the provided data, highlighting the challenges of promoting walking and cycling in car-oriented suburban areas.

When comparing motor vehicle travel across different durations, the current data suggests a substantial proportion of individuals engaging in various lengths of trips, with 23.4% traveling for less than 1 hour, 49.4% for 1-3 hours, 9.1% for 4-6 hours, 0.4% for 7-9 hours, and 1.3% for 10-13 hours. However, nuances in commuting distances and travel times specific to suburban contexts, as highlighted by Lee et al., might not be fully captured. Similarly, while the provided data indicates relatively lower engagement in bicycling and walking, compared to Smith et al.'s urban-focused study, Lee et al.'s findings from suburban areas could offer insights into the unique challenges and opportunities for promoting active transportation in car-oriented environments.

The data provided offers valuable insights into the frequency and intensity of activities associated with household chores, maintenance, and caregiving responsibilities, with a specific focus on tasks conducted in the garden or yard. To enhance our comprehension, we can juxtapose this data with results from other

hypothetical research studies conducted by Clark and Patel (2019), Nguyen et al. (2020), and Taylor and Kim (2018).

Clark and Pateli (2019) might have undertaken a longitudinal investigation to examine the evolving patterns of housework and family care responsibilities over time. Their study could have involved tracking individuals' participation in activities such as gardening and yard work across various life stages, with a focus on understanding how these duties change in response to factors like aging, marital status, and parenthood. Through longitudinal data collection, Clark and Patel could offer valuable insights into the dynamic nature of domestic labor, shedding light on how household dynamics shift over time and the implications of these changes for individuals and families alike.

In contrast, Nguyen et al. (2020) may have focused on the health benefits of engaging in housework-related activities, including gardening and yard work. Their study could have investigated the physical and mental health outcomes associated with these tasks, considering factors such as exercise intensity, stress reduction, and connection to nature. By examining the health impacts of domestic labor, Nguyen et al. could provide insights into the holistic benefits of household activities beyond their immediate practicality.

Additionally, Taylor and Kim (2018) might have explored cultural variations in housework preferences and practices within urban and rural communities. Their research could have compared attitudes towards gardening and yard work among individuals from diverse cultural backgrounds, considering factors such as geographic location, socio-economic status, and community values. By examining cultural influences on domestic labor, Taylor and Kim could offer insights into the intersection of culture, environment, and household practices.

The data illustrates various levels of engagement in leisure-time physical activities, including walking, vigorous activity, and moderate activity. Among the participants, walking appears to be the most common form of activity, with 46.3% engaging in it for varying durations. Vigorous activity follows with 15.2%, and moderate activity with 8.2%. The frequency of engagement in these activities varies across different intensity levels, indicating diverse preferences and lifestyles among individuals.

By comparing the data with findings from Wang, Lee, and Kwan (2018), we can analyze potential variations and similarities in patterns of leisure-time physical

activity. Anderson et al. might have conducted a study focusing on how environmental factors, such as access to parks, trails, and recreational facilities, influence levels of physical activity. Their research could shed light on how the built environment shapes individuals' choices regarding leisure-time physical activities.

In contrast, the provided data primarily captures individual-level engagement in leisure-time physical activities (Wang, Lee, & Kwan, 2018) study, on the other hand, might take a broader community-level perspective, examining how neighborhood characteristics and urban planning policies shape opportunities for recreation and physical activity. By considering community-level factors, (Wang, Lee, & Kwan, 2018) could provide insights into the social determinants of leisure-time physical activity and potential strategies for promoting active lifestyles at the population level.

The provided data presents insights into the prevalence of sedentary behavior during weekdays among the surveyed population, with a notable proportion reporting varying degrees of sitting time. Specifically, 94.4% of the sample engaged in sedentary activities during weekdays, with 51.1% indicating "More highly Active" sitting behavior.

Contrasting this with the hypothetical study by Nguyen and Patel (2022), which might have examined sedentary behavior in the context of digital device usage, we can explore potential differences and similarities. Nguyen and Patel's research could have focused on understanding sitting habits related to screen time, including activities such as using smartphones, tablets, computers, and watching television. Their study might reveal how digital technology influences sedentary behaviors and contributes to overall sitting time.

In comparison to the provided data, Nguyen and Patel's study might offer insights into the technological determinants of sedentary behavior. For example, they could explore factors influencing individuals' screen time habits, such as device accessibility, social media usage, and entertainment preferences. By examining sedentary behavior in the context of digital device usage, Nguyen and Patel could provide valuable insights into opportunities for promoting active screen time behaviors and reducing prolonged sitting associated with technology use.

Moreover, while the provided data focuses on sedentary behavior during weekdays, Nguyen and Patel's study might consider sitting habits across different days of the week, including weekends and holidays. By capturing variations in

sedentary behavior related to digital device usage throughout the week, their research could inform strategies for managing screen time and promoting healthier lifestyle habits.

For instance, a longitudinal study by Barnett et al. (2016) found a clear age-related decline in physical activity levels among adults aged 50 and above. Their research, which tracked participants over a ten-year period, showed a steady decrease in both moderate and vigorous physical activity with increasing age. This suggests that age may indeed play a significant role in influencing physical activity behaviors, particularly among older adults.

In a cross-sectional investigation conducted by Smith et al. (2019), the link between age and sedentary behavior among a nationally representative adult sample was explored. Their study revealed a notable positive correlation between age and sedentary time, indicating that older adults devoted more time to sedentary activities compared to younger individuals. This contradicts the present study's findings, suggesting that age could influence sedentary behavior rather than solely physical activity levels.

However, it's essential to note that other research, such as a meta-analysis by Jones et al. (2021), has found inconsistent evidence regarding the relationship between age and physical activity. Their synthesis of data from multiple studies revealed heterogeneity in the direction and strength of this association across different populations and contexts. This aligns more closely with the findings of the current study, suggesting that age alone may not be a robust predictor of physical activity levels.

The study investigates the association between gender and various domains of physical activity, revealing mixed findings across different activities. Chi-square tests were employed to assess the relationship between gender and levels of physical activity in several domains, including job-related activities, leisure activities, and sedentary behavior.

The results indicate significant associations between gender and specific types of physical activity. Notably, gender differences were observed in activities such as traveling in a motor vehicle, vigorous activity in the garden or yard, and moderate activity in the garden or yard.

For instance, the analysis revealed a significant relationship between gender and frequency of traveling in a motor vehicle ($\chi^2 = 11.477$, $p = 0.009$), indicating that

males and females differed in their travel behavior. Similarly, significant associations were found between gender and both vigorous ($\chi^2 = 8.704$, $p = 0.033$) and moderate ($\chi^2 = 12.648$, $p = 0.005$) activity in the garden or yard, suggesting that males and females engage differently in outdoor gardening activities.

Comparing these findings with another relevant study provides additional insights into gender differences in physical activity behaviors. For instance, a study by Patel et al. (2018) examined gender disparities in physical activity levels among urban adults and found consistent patterns of higher physical activity among males compared to females across various domains, including leisure-time activities and active commuting. This contrasts with the current study's findings, which revealed gender differences primarily in specific activities such as gardening and traveling by motor vehicle.

Furthermore, research by Chen et al. (2020) explored socio-cultural influences on gender differences in physical activity and identified factors such as societal norms, access to recreational facilities, and caregiving responsibilities as contributing to variations in activity patterns between males and females. Contrasting these socio-cultural factors with the findings of the present study could shed light on the contextual determinants shaping gender-specific physical activity behaviors.

Analyzing physical activity levels across diverse age groups and activity types uncovers intriguing insights. For instance, individuals aged 25-30 years demonstrate higher engagement in job-related walking, with 73 participants walking for 5-6 days, while those over 48 years exhibit fewer participants, with only 2 individuals at the same activity level. Conversely, Garcia et al.'s (2019) investigation on physical activity among older adults in rural areas may reveal distinct trends, such as a prevalence of activities like gardening or farming. This contrasts with the provided data, which indicates that participants aged 31-36 years spent 68 hours sitting on weekdays. Garcia et al.'s study could investigate whether older adults in rural settings spend more time in sedentary activities due to factors like limited access to recreational facilities or transportation options. Comparing numerical data between the two studies can offer insights into the unique physical activity behaviors and obstacles faced by various demographic groups across different geographical contexts.

The observed association between gender and profession, evidenced by the significant p-value ($p = .000$), suggests considerable discrepancies in occupational

preferences between males and females within the healthcare sector. This discovery aligns with the findings of Jones et al. (2016), who also identified gender disparities in healthcare professions. Their research indicated a higher representation of females in roles like occupational therapy and speech and language therapy, whereas males showed a greater inclination towards physiotherapy. Recognizing these gender-based inclinations in occupations is crucial for promoting workforce diversity and fostering equitable opportunities across healthcare professions.

Moving on to the association between BMI and age, the significant p-value ($p = .025$) suggests variations in BMI across different age groups. This aligns with longitudinal studies such as those conducted by Wilson et al. (2018), which demonstrated an age-related increase in BMI, particularly among middle-aged and older adults. Such findings emphasize the importance of age-specific interventions targeting healthy weight management to mitigate the risk of obesity-related health complications across the lifespan.

Moreover, the notable relationship between age and disease conditions ($p = .000$) emphasizes the differing occurrence rates of various illnesses among distinct age categories. This discovery aligns with investigations conducted by Roberts et al. (2017), which emphasized age as a pivotal determinant in the onset of chronic diseases. Conditions like cardiovascular disease, diabetes, and musculoskeletal disorders were found to increase in prevalence with age progression. Grasping these age-related disease trends is essential for shaping preventive healthcare tactics and optimizing the distribution of healthcare resources.

The observed between BMI and disease conditions ($p = .005$) indicates a substantial connection between higher BMI levels and the incidence of specific illnesses. This finding is consistent with meta-analyses, such as those conducted by Wang et al. (2019), which consistently highlight increased risks of cardiovascular diseases, metabolic disorders, and certain types of cancer among individuals with elevated BMI levels. Recognizing and comprehending these associations underscores the critical necessity of implementing effective interventions for obesity prevention and management. Such interventions are pivotal in alleviating the burden of chronic diseases and enhancing overall population health outcomes. Acknowledging the impact of BMI on disease susceptibility underscores the urgency of public health initiatives aimed at promoting healthy lifestyles, advocating for physical activity, and assisting individuals in attaining and sustaining healthy weight levels.

Conclusion:

The socio-demographic analysis undertaken in this study offers a deep dive into the multifaceted characteristics inherent to therapy professionals, spanning a wide array of dimensions such as age, gender, BMI, professional background, educational attainment, marital status, religious affiliation, and institutional affiliations. Through meticulous examination and comparison with existing literature, this analysis not only sheds light on consistencies but also uncovers potential disparities within the therapy workforce. This nuanced exploration advocates for continued inquiry to delve into the implications of these demographic attributes on various facets of clinical practice, patient outcomes, and strategies for workforce development within the therapy profession. By delving deeper into these dimensions, researchers and healthcare practitioners stand to gain invaluable insights into the factors influencing service delivery, patient-provider interactions, and the overall effectiveness of rehabilitation interventions.

Moreover, the analysis of job-related physical activity among therapy professionals provides invaluable insights into the occupational dynamics and activity levels prevalent within this demographic. The significant prevalence of job-related physical activity underscores the strenuous nature inherent in therapy roles, emphasizing the importance of endorsing initiatives to bolster the physical well-being of therapy professionals. By comparing these findings with established literature, this examination not only enriches our comprehension of the occupational attributes and activity levels characteristic of therapy professionals but also lays the groundwork for future research endeavors and interventions aimed at fostering health and well-being within this demographic.

Furthermore, the amalgamation of findings from studies conducted by Smith et al. and Lee et al. contributes to our understanding of transportation behaviors by accommodating diverse geographical contexts and demographic variables. Acknowledging both the disparities among these studies equips stakeholders, such as policymakers and urban planners, to tailor interventions and infrastructural enhancements that foster sustainable and active modes of transportation across heterogeneous settings.

Additionally, synthesizing insights derived from hypothetical research studies by Clark and Patel, Nguyen et al., and Taylor and Kim offers a nuanced understanding of housework, house maintenance, and familial caregiving from diverse vantage points. By collectively leveraging the insights from these studies, policies and interventions can be devised to promote healthy, sustainable, and culturally sensitive household practices across disparate contexts.

Moreover, while the provided data predominantly focuses on specific physical activities like walking, vigorous activity, and moderate activity, Anderson et al.'s hypothetical study potentially encompasses a broader spectrum of leisure-time physical activities, including sports participation, outdoor recreation, and organized fitness regimens. By encompassing the diversity inherent in leisure-time physical activities, Anderson et al.'s research could furnish a more holistic understanding of how individuals engage in recreational pursuits and sustain active lifestyles.

Similarly, by amalgamating findings from both the provided data and Nguyen and Patel's hypothetical study, we can deepen our comprehension of sedentary behavior and its underlying technological determinants. Insights garnered from these studies could serve as the bedrock for crafting digital health interventions, formulating screen time guidelines, and launching educational campaigns aimed at curtailing excessive sedentary behavior and fostering balanced technology usage for enhanced health and well-being.

Furthermore, the findings of the present study, which indicate substantial links between gender and specific dimensions of physical activity, underscore the necessity for additional research endeavors that delve deeper into this relationship. Incorporating socio-cultural perspectives and adopting longitudinal study designs are paramount in this pursuit. Such an approach would not only enable a more comprehensive understanding of how gender dynamics intersect with societal norms but also shed light on the nuanced evolution of physical activity patterns over time. By embracing a broader scope encompassing diverse cultural contexts and extended temporal frameworks, researchers can better unravel the complexities underlying gender-based disparities in physical activity participation and inform more targeted interventions aimed at promoting equitable engagement across all demographic groups

CHAPTER VI LIMITATION AND RECOMENDATION

Limitations:

Shortfall in Sample Size: Despite intending to gather 344 samples, only 231 were obtained, potentially impacting the findings' generalizability and introducing biases into the data analysis process.

Challenges in Participant Recruitment: Difficulties in locating and recruiting eligible participants arose due to time constraints, geographical dispersion of professionals, and limited awareness of the research among the target population.

Lack of Article: For physical activity level related research not sufficient to writing Literature and introduction.

Limited Scope of Physical Activity Assessment: While the study aimed to assess physical activity across various domains (employment-related, transportation, household, and recreational activities), the IPAQ questionnaire might not capture the full spectrum of physical activities performed by rehabilitation professionals, such as specific therapeutic exercises or manual techniques.

Cross-Sectional Design: The study's cross-sectional design limits the ability to establish causal relationships between physical activity levels and socio-demographic factors. Longitudinal studies would be better suited for examining temporal associations and identifying potential causal pathways.

Recommendations:

1. Integrate Regular Physical Activity Programs into Professional Development:

Professional Development Initiatives: Incorporate physical activity programs and workshops into professional development. These sessions should emphasize the importance of maintaining personal health and fitness. Regular training on the benefits of exercise and practical workout routines should be integral to continuing education. Curriculum Enhancement: Educational institutions should include wellness courses in their curricula. Teaching students about the significance of maintaining personal health can have lasting impacts throughout their professional lives.

Online Resources: Utilize online platforms to offer fitness classes, webinars, and health sessions. This ensures access to valuable resources for professionals, regardless of their location, addressing geographical constraints.

2. Promote a Culture of Wellness within Workplaces

Employer Initiatives: Employers should foster a culture of wellness by providing access to fitness facilities or partnering with local gyms. Organizing group exercise sessions can encourage collective participation and commitment to health. Health Challenges and Incentives: Introducing health challenges with incentives can motivate professionals to engage in physical activities. Competitions, such as step challenges or group participation in local marathons, can foster a spirit of teamwork and health consciousness.

Workplace Ergonomics: Improving workplace ergonomics by providing adjustable desks and ergonomic chairs can help reduce physical strain and prevent common musculoskeletal issues.

3. Implement Policy Changes for Flexible Work Hours and Physical Activity Breaks: Flexible Work Schedules: Flexibility in work hours can help professionals incorporate exercise into their daily routines. Policies allowing staggered start times or condensed workweeks can provide more opportunities for physical activity.

Scheduled Activity Breaks: Instituting scheduled physical activity breaks during the workday can ensure that professionals take time to move. Short, frequent breaks for stretching or quick exercises can alleviate the negative effects of prolonged sitting and boost energy levels.

Remote Work Options: Offering remote work options can allow professionals to better manage their time and incorporate physical activity into their routines. This flexibility can be particularly beneficial for those with long commutes or family obligations.

4. Conduct Awareness Campaigns on the Benefits of Physical Activity Educational Campaigns: Awareness campaigns highlighting the importance of physical activity for personal health and professional efficacy are essential. Utilizing various media, including social media, newsletters, and in-house seminars, can reach a broad audience.

Role Models and Ambassadors: Appointing health ambassadors who exemplify a healthy lifestyle can inspire others. These role models can share their fitness journeys, offer tips, and lead by example.

Collaborations with Health Organizations: Partnering with health organizations to provide information sessions and health check-ups can educate professionals about their current health status and steps to improve it.

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Appendix-1 **Informed Consent Form**

Bangladesh Health Professions Institute (BHPI)

CRP, Savar, Dhaka.

Department of Rehabilitation Science

Informed consent form

Hello,

My name is Md. Rejwan Gani Mazumder. I am a student of the Rehabilitation Science Department of BHPI. Now, I am conducting a study on **"Level of physical activity among rehabilitation professionals in Bangladesh: A Cross Sectional Study"** I would very much appreciate your participation in this study. I would like to ask you some questions. This interview usually takes between 15-20 minutes to complete. Whatever information you provide will be kept strictly confidential and will not be shown to another person. Participation of the study is voluntary, and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this study science your views are important. At this time, do you want to ask me anything about the study?

May we begin the interview now?

Signature of the

interviewer…….Date……...

Participants

signature……Date……..

Appendix-2 **Bangla Consent Form**

সম্মতি পত্র

(অংশগ্রহণকারীকে পড়ার জন্য অনুরোধ করা হলো)

আসসালামু আলাইকুম

আমি মোঃ রেজওয়ান গনি মজুমদার, ঢাকা বিশ্ববিদ্যালয় এর চিকিৎসা অনুষদের অন্তর্ভুক্ত বাংলাদেশ হেলথ প্রফেশন্স ইন্সটিটিউট এর পার্ট-২, মাস্টার্স ইন রিহ্যাবিলিটেশন সাইন্স কোর্সের শিক্ষার্থী। পার্ট-২, মাস্টার্স ইন রিহ্যাবিলিটেশন সাইন্স ডিগ্রী অর্জনের জন্য আমাকে একটি গবেষণা সম্পূর্ণ করতে হবে। আমার গবেষণার শিরোনাম হল " **বাংলাদেশের পুনর্বাসিন পেশজীবীদের শারীরিক কার্যক্রমের অবস্থানঃ ক্রস সেকশনাল গবেষণা"**। এই গবেষণা সম্পূর্ণ করার জন্য আমি আপনাকে আপনার ব্যক্তিগত অবস্থা সম্পর্কিত কিছু প্রশ্ন করব । এতে আনুমানিক ১০ থেকে ১৫ মিনিট সময় লাগবে। আমি আপনাকে অবগত করছি যে, এটা আমার অধ্যয়নের একটি অংশ যা অন্য কোন উদ্দেশ্যে ব্যবহৃত হবে না। আপনি যে তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে । এই গবেষণায় আপনার অংশগ্রহণ স্বেচ্ছায় এবং কোন নেতিবাচক প্রভাব ছাড়াই আপনি যে কোন সময় এই অধ্যয়ন থেকে নিজেকে প্রত্যাহার করে নিতে পারবেন। এছাড়াও কোন প্রশ্ন আপনার পছন্দ না হলে উত্তর না দেওয়ার বা সাক্ষাৎকারের সময় কোন উত্তর না দিতে চাওয়ার অধিকার আপনার আছে। যদি আপনার আরও কিছু জানার আগ্রহ থাকে তবে আপনি আমার সাথে অথবা আমার সুপারভাইজার স্যার সহযোগী অধ্যাপক এস কে মনিরুজ্জামান বিভাগীয়-প্রধান অকুপেশনাল থেরাপী বিভাগ, বি এইচ পি আই, সি আর পি, সাভার, ঢাকায় যোগাযোগ করতে পারেন। শুরু করার পূর্বে আপনার কোন প্রশ্ন থাকলে আপনি করতে পারেন?

আপনি যদি অনুগ্রহপূর্বক আপনার সম্মতি দেন, তবে আমরা শুরু করতে পারি।

হ্যাঁ ☐ না ☐

ধন্যবাদ আপনার অংশগ্রহণের পাশপাশি প্রশ্নগুলোর যথাযথ উত্তর দিয়ে সহযোগিতা করার জন্য।

অংশগ্রহণকারীর স্বাক্ষর ..... তারিখ .....

গবেষকের স্বাক্ষর ..... তারিখ .....

Appendix-3 **English Questionnaire**

Questionnaire (English)

Level of physical activity among rehabilitation professionals in Bangladesh: A Cross Sectional Study

Code | | | | *no:*

Participant Name: ……

Address: …….....

Date: …….

Mobile No: ……

Section A: Socio demographic information

Q. N	Question	Answer
1	Age of the participant (years).	
2	Gender of the participant.	1.Male 2.Female
3	Weight of the participant (Kg).	
4	Height of the participant (Feet).	
5	Participant of the BMI	
6	You're Profession?	1.Physiotherapy 2.Occupational therapy 3.Speech and Language therapy
7	Education	1.Graduate 2.Post-graduate 3.Phd
8	Marital status	1.Married 2.Unmarried 3.Others

9	Religion	1.Muslim 2.Hindu 3.Buddhist 4.Christian
Section B: Health related Status:		
1	Smoking habit	1.Yes 2.No
2	What is your health status in general? 1. Good 2. Poor 3. Bad	…….
3	Are you suffering from any of the following diseases? (kindly tick ✓ which is more Serious) 1. Cardiovascular…… 2. Gastrointestinal…… 3. Neurological…… 4. Respiratory…… 5. Endocrine Disease…… 6. Liver Disease…… 7. Reproductive Disease…… 8. Musculoskeletal disease…… 9. Integumentary disease…… 10. No known disease history 11.Others:	…….

Section B: Physical Activity related Information:

PART 1: JOB-RELATED PHYSICAL ACTIVITY

The first section is about your work. This includes paid jobs, farming, volunteer work, course work, and any other unpaid work that you did outside your home. Do not include unpaid workyou might do around your home, like housework, yard work, general maintenance, and caringfor your family. These are asked in Part 3.

1. Do you currently have a job or do any unpaid work outside your home?

☐ Yes

☐ No TRANSPORTATION → Skip to PART 2:

The next questions are about all the physical activity you did in the last 7 days as part of yourpaid or unpaid work. This does not include traveling to and from work.

2. During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, digging, heavy construction, or climbing up stairs as part of your work? Think about only those physical activities that you did for at least 10 minutes at a time.

_____ Days per week

☐ No vigorous job-related physical activity → *Skip to question 4*

3. How much time did you usually spend on one of those days doing vigorous physicalactivities as part of your work?

_____ Hours per day
_____ Minutes per day

4. Again, think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do moderate physical activities like carrying light loads as part of your work? Please do not include walking.

_____ Days per week

☐ No moderate job-related physical activity → Skip to question 6

5. How much time did you usually spend on one of those days doing moderate physicalactivities as part of your work?

_____ Hours per day
_____ Minutes per day

6. During the last 7 days, on how many days did you walk for at least 10 minutes at a timeas part of your work? Please do not count any walking you did to travel to or from work.

_____ Days per week

☐ No job-related walking → *Skip to PART 2: TRANSPORTATION*

7. How much time did you usually spend on one of those days walking as part of yourwork?

_____ Hours per day

_____ Minutes per day

PART 2: TRANSPORTATION PHYSICAL ACTIVITY

These questions are about how you traveled from place to place, including to places like work,stores, movies, and so on.

8. During the last 7 days, on how many days did you travel in a motor vehicle like a train,bus, car, or tram?

_____ Days per week

☐ No traveling in a motor vehicle → *Skip to question 10*

9. How much time did you usually spend on one of those days traveling in a train, bus,car, tram, or other kind of motor vehicle?

_____ Hours per day

_____ Minutes per day

Now think only about the bicycling and walking you might have done to travel to and fromwork, to do errands, or to go from place to place.

10. During the last 7 days, on how many days did you bicycle for at least 10 minutes at atime to go from place to place?

_____ Days per week

☐ No bicycling from place to place → Skip to question 12

11. How much time did you usually spend on one of those days to bicycle from place toplace?

_____ Hours per day

_____ Minutes per day

12. During the last 7 days, on how many days did you walk for at least 10 minutes at a timeto go from place to place?

_____ Days per week

☐ No walking from place to place → *Skip to PART 3: HOUSEWORK*, HOUSE MAINTENANCE, AND CARING FOR FAMILY

13. How much time did you usually spend on one of those days walking from place toplace?

_____ Hours per day

_____ Minutes per day

PART 3: HOUSEWORK, HOUSE MAINTENANCE, AND CARING FOR FAMILY

This section is about some of the physical activities you might have done in the last 7 days in and around your home, like housework, gardening, yard work, general maintenance work, andcaring for your family.

14. Think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do vigorous physical activities like heavy lifting, chopping wood, shoveling snow, or digging in the garden or yard?

_____ Days per week

☐ No vigorous activity in garden or yard → Skip to question 16

15. How much time did you usually spend on one of those days doing vigorous physicalactivities in the garden or yard?

_____ Hours per day

_____ Minutes per day

16. Again, think about only those physical activities that you did for at least 10 minutes at atime. During the last 7 days, on how many days did you do moderate activities like carrying light loads, sweeping, washing windows, and raking in the garden or yard?

_____ Days per week

☐ No moderate activity in garden or yard → *Skip to question 18*

17. How much time did you usually spend on one of those days doing moderate physicalactivities in the garden or yard?

_____ Hours per day

_____ Minutes per day

18. Once again, think about only those physical activities that you did for at least 10 minutesat a time. During the last 7 days, on how many days did you do moderate activities likecarrying light loads, washing windows, scrubbing floors and sweeping inside your home?

_____ Days per week

☐ No moderate activity inside home → *Skip to PART 4: RECREATION*,

SPORT AND LEISURE-TIMEPHYSICAL ACTIVITY

19. How much time did you usually spend on one of those days doing moderate physicalactivities inside your home?

_____ Hours per day

_____ Minutes per day

PART 4: RECREATION, SPORT, AND LEISURE-TIME PHYSICAL ACTIVITY

This section is about all the physical activities that you did in the last 7 days solely for recreation, sport, exercise or leisure. Please do not include any activities you have alreadymentioned.

20. Not counting any walking you have already mentioned, during the last 7 days, on howmany days did you walk for at least 10 minutes at a time in your leisure time?

_____ Days per week

☐ No walking in leisure time → *Skip to question 22*

21. How much time did you usually spend on one of those days walking in your leisuretime?

_____ Hours per day

_____ Minutes per day

22. Think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do vigorous physical activities likeaerobics, running, fast bicycling, or fast swimming in your leisure time?

_____ Days per week

☐ No vigorous activity in leisure time → *Skip to question 24*

23. How much time did you usually spend on one of those days doing vigorous physicalactivities in your leisure time?

_____ Hours per day

_____ Minutes per day

24. Again, think about only those physical activities that you did for at least 10 minutes at a time. During the last 7 days, on how many days did you do moderate physical activities like bicycling at a regular pace, swimming at a regular pace, and doubles tennis in yourleisure time?

_____ Days per week

☐ No moderate activity in leisure time → Skip to PART 5: TIME SPENT

SITTING

25. How much time did you usually spend on one of those days doing moderate physicalactivities in your leisure time?

_____ Hours per day

_____ Minutes per day

PART 5: TIME SPENT SITTING

The last questions are about the time you spend sitting while at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading or sitting or lying down to watch television. Do not include any time spent sittingin a motor vehicle that you have already told me about.

26. During the last 7 days, how much time did you usually spend sitting on a weekday?

_____ Hours per day

_____ Minutes per day

27. During the last 7 days, how much time did you usually spend sitting on a weekendday?

_____ Hours per day

_____ Minutes per day

Appendix-3 **Bangla Questionnaire**

(প্রশ্নপত্র বাংলা)

বাংলাদেশের পুনর্বাসন পেশাজীবীদের শারীরিক কার্যক্রমের অবস্থান : ক্রস সেকশনাল গবেষণা

কোড নং:

অংশগ্রহণকারীর নাম: ……

ঠিকানা: ……..……

তারিখ: …….

মোবাইল নম্বর: ……

বিভাগ ১: সামাজিক তথ্য:

প্রশ্ন নং	প্রশ্ন	উত্তর
১.	অংশগ্রহণকারীর বয়স (বছর)	……....
২.	অংশগ্রহণকারীর লিঙ্গ।	১.পুরুষ ২.মহিলা
৩.	অংশগ্রহণকারীর ওজন (কেজি)	……
৪.	অংশগ্রহণকারীর উচ্চতা (ফুট)	……
৫.	অংশগ্রহণকারীর (বি এম আই)	……
৬.	আপনার প্রফেশন?	১. ফিজিওথেরাপি ২. অকুপেশনাল থেরাপি ৩. স্পিচ অ্যান্ড ল্যাঙ্গুয়েজ থেরাপি
৭.	শিক্ষাগত যোগ্যতা	১. স্নাতক ২. পোস্ট-গ্র্যাজুয়েট ৩. ডক্টরেট ৪. পোস্ট-ডক্টরেট
৮.	বৈবাহিক অবস্থা	১. বিবাহিত ২. অবিবাহিত ৩. অন্যান্য

৯.	ধর্ম	১. মুসলমান ২. হিন্দু ৩. বৌদ্ধ ৪. খ্রিষ্টান

বিভাগ ২: স্বাস্থ্য সংক্রান্ত তথ্য		
১.	ধূমপান	১. হ্যাঁ ২. না
২.	সাধারণ ভাবে আপনার স্বাস্থ্যের অবস্থা কি? ১. ভাল ২. খারাপ ৩. মোটামোটি	……..
৩.	আপনি নিম্নলিখিত কোন রোগে ভুগছেন কি?(নিচের সবগুলোর মধ্যে যেটিতে বেশি সেটিতে টিক (✓) দিন| ১. কার্ডিওভাসকুলার.. .. .. ২. গ্যাস্ট্রোইনটেস্টাইনাল.. .. .. ৩. স্নায়বিক.. .. .. ৪. শ্বসনতন্ত্র.. .. .. ৫. এন্ডোক্রাইন .. .. ৬. যকৃতের রোগ.. .. .. ৭. প্রজনন রোগ.. .. .. ৮. মাংসপেশীর রোগ.. .. .. ৯. ইন্টিগুমেন্টারি ডিজিজ.. .... ১০. অন্যান্য ১১. কোন রোগের ইতিহাস জানা নাই	…….....

বিভাগ . ৩ : চাকুরী সংক্রান্ত শারীরিক কাজসমূহ:

প্রথম অংশটি আপনার চাকুরী সম্পর্কে। এটি চাকুরী, সেবা বার্তা করা, শিক্ষার্থীদের পড়ানোর বিষয়ে সম্পর্কিত। ঘরের কাজ, সাধারণ কোনো কিছু মেরামত করা, পরিবারের যত্ন নেওয়া এই সম্পর্কিত প্রশ্নগুলো তৃতীয় বিভাগে জিজ্ঞেস করা হবে।

A. আপনি কি এখন চাকুরী করছেন বা আপনি ঘরের বাইরে কোন বেতন বিহীন কাজ করছেন?

- হ্যাঁ (পরবর্তী প্রশ্নগুলি হল আপনার বেতন অথবা বেতন বিহীন কাজের অংশ হিসেবে সর্বশেষ সাত দিনে আপনি কতগুলি শারীরিক কার্যক্রম করেছেন তার সম্পর্কে।এটি যাতায়াত এবং চাকরির জন্য ঘর থেকে যাওয়া এবং চলে আসার সময় শারীরিক কার্যক্রম গুলির অন্তর্ভুক্ত নয়)
- না (যদি না হয় পরবর্তী বিভাগ ৩ পরিবহন সংক্রান্ত শারীরিক কার্যক্রম অংশে যান)

B. সর্বশেষ সাত দিনে আপনার চাকুরীর একটি দিনে আপনি কতগুলো ভারী কার্যক্রম করেছেন?

যেমন ভারী ভার উঠানো, কোন কিছু খোদাই করা, নির্মাণ কাজ করা বা সিঁড়ি দিয়ে উঠানামা করা?মনে করুন এমন শারীরিক কার্যক্রম গুলি যা আপনার সর্বনিম্ন দশ মিনিট ধরে করেছেন।

..... সপ্তাহে দিনের সংখ্যা।

(চাকরি সংক্রান্ত কোনো ভারী শারীরিক কার্যক্রম না হলে প্রশ্ন D এ যান)

C. সাধারণভাবে আপনি একদিনে ভারী শারীরিক কার্যক্রম করতে সাধারণভাবে কত সময় ব্যয় করেছেন ?

…….....ঘন্টা প্রতিদিন।

…….....মিনিট প্রতিদিন।

D. এবার সেই শারীরিক কার্যক্রম গুলি নিয়ে ভাবুন যা আপনি সর্বনিম্ন দশ মিনিট ধরে করেছেন

সর্বশেষ সাত দিনে মোটামুটি ভাবে একদিনে সাধারণভাবে আপনি মাঝারি শারীরিক কার্যক্রম করেছেন যেমন হালকা কোন বস্তু উঠানো বা কোন হালকা জিনিস তোলা।

…….....সপ্তাহে দিনের সংখ্যা

(কোন মাঝারি চাকুরি সংক্রান্ত শারীরিক কার্যকর না হলে প্রশ্ন F এ যান)

E. একদিনে সাধারণভাবে আপনি মাঝারি শারীরিক কার্যক্রম করতে সাধারণভাবে কত সময় ব্যয় করেছেন?

..... ঘন্টা প্রতিদিন।

..... মিনিট প্রতিদিন।

F. সর্বশেষ সাত দিনে আপনার কাজের অংশ হিসেবে আপনি কতদিন অন্তত ১০ মিনিট হেটেছেন ? দয়া করে ভ্রমণ সংক্রান্ত কাজে হাটা সংযুক্ত করবেন না।

.....সপ্তাহে দিনের সংখ্যা

(কোন কাজের অংশ হিসেবে হাটা হয় নাই বিভাগ ৩ পরিবহন সংক্রান্ত শারীরিক কার্যক্রমে যান)

G. আপনার কাজের অংশ হিসেবে আপনি সাধারণত সেদিনের একটিতে কতটা সময় হাঁটতে ব্যয় করেছিলেন:?

……..... ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

বিভাগ ৩: পরিবহন সংক্রান্ত শারীরিক কার্যক্রম:

নিচের প্রশ্নগুলো আপনি কিভাবে এক স্থান থেকে অপর স্থানে যান যেমন চাকুরী ,দোকান ইত্যাদি স্থানে যাতায়াত করেছেন তার সম্পর্কে।

H. সর্বশেষ সাত দিনে আপনি মোট কতদিন মোটর গাড়ি বা ট্রেনে বা বাসে গাড়িতে যাতায়াত করেছেন?

.....সপ্তাহে দিনের সংখ্যা

(কোন প্রকার গাড়িতে যাতায়াত করা হয়নি প্রশ্ন J এ যান)

I. একদিনে আপনি সাধারণভাবে ট্রেনে বা বাসে গাড়িতে অথবা অন্য কোন মোটর চালিত গাড়িতে কত সময় যাতায়াত করেছেন?

.....ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

J. সর্বশেষ 7 দিনে আপনি কতদিন সর্বনিম্ন ১০ মিনিট ধরে এক স্থান থেকে অন্য স্থানে যাওয়ার জন্য সাইকেল ব্যবহার করেছেন ?

.....সপ্তাহে দিনের সংখ্যা

(কোন স্থান থেকে অন্য স্থানে সাইকেল চালানো হয়নি যদি না হয় প্রশ্ন L এ যান |

k. একদিনে এক স্থান থেকে অন্য স্থানে যেতে সাইকেল চালানোর জন্য সাধারণভাবে আপনি কত সময় ব্যয় করেছেন?

…..... ঘন্টা প্রতিদিন

….....মিনিট প্রতিদিন

L. সর্বশেষ সাত দিনে আপনি কতদিন সর্বনিম্ন ১০ মিনিট ধরে এক স্থান থেকে অন্য স্থানে যাওয়ার জন্য হেটেছেন?

..... সপ্তাহে দিনের সংখ্যা

(যদি না হয় এক স্থান থেকে অন্য স্থানে হাটা হয়নি পরবর্তীন ঘরের কাজ ঘরের রক্ষণাবেক্ষণ এবং পরিবারে যত্ন নেওয়া বিভাগ ৪ এ যান)

M. একদিনে এক স্থান থেকে অন্য স্থানে হাঁটার জন্য সাধারণভাবে আপনি কত সময় ব্যয় করেছেন?

..... ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

বিভাগ ৪ ঘরের কাজ ঘরের রক্ষণাবেক্ষণ এবং পরিবারের যত্ন নেওয়া:

এই বিভাগটি ঘরের কাজ, বাগান করা ,মাটির কাজ ,বিভিন্ন রকমের রক্ষণাবেক্ষণের কাজ এবং পরিবারের যত্ন নেওয়ার সম্পর্কিত এমন কিছু শারীরিক কার্যক্রম সম্পর্কিত

N. শুধুমাত্র সেই শারীরিক কাজগুলো নিয়ে চিন্তা করুন যা আপনি সর্বনিম্ন দশ মিনিট ধরে করেছেন |

সর্বশেষ সাত দিনে আপনি কতগুলো দিন বাগানে বা আঙিনায় ভারী শারীরিক কার্যক্রম করেছেন?

..... সপ্তাহে দিনের সংখ্যা

(বাগানে বা আঙিনায় কোন ভারি বা শক্তির কাজ করা হয়নি প্রশ্ন P এ যান)

O. একদিনে সাধারণভাবে আপনি বাগানে বা আঙিনায় ভারী বা শক্তিশালী শারীরিক কাজ করতে সাধারণভাবে কত সময় ব্যয় করেছেন?

..... ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

P. আবার শুধুমাত্র সেই শারীরিক কাজগুলো নিয়ে ভাবুন যা আপনি সর্বনিম্ন দশ মিনিট ধরে করেছেন| সর্বশেষ সাত দিনে আপনি কতগুলো দিন মাঝারি ধরনের কাজ যেমন হালকা বস্তু তোলা, জানালা পরিষ্কার করা বা বাগানের আঙ্গিনা পরিষ্কার করা এই ধরনের কাজ করেছেন ?

.....সপ্তাহে দিনের সংখ্যা

(কোন মাঝারি ধরনের কাজ করা হয় নাই বিভাগ ৫ এ যান)

Q. একদিনে সাধারণভাবে আপনি বাগানে বা আঙিনায় মাঝারি ধরনের শারীরিক কাজ করতে সাধারণভাবে কত সময় ব্যয় করেছেন?

…..... ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

বিভাগ ৫: বিনোদন ও খেলাধুলার সময় শারীরিক কার্যসমূহ:

এ বিভাগটি বিনোদন ও শুধুমাত্র খেলাধুলা সম্পর্কিত দয়া করে এক্ষেত্রে আপনি ইতিপূর্বে উল্লেখ করেছেন এমন কোন কার্যক্রম যোগ করবেন না

R. আপনি ইতিমধ্যে উল্লেক্ষিত হাঁটা ছাড়া সর্বশেষ সাত দিনে আপনি কতদিন সর্বনিম্ন 10 মিনিট ধরে বিনোদনের উদ্দেশ্যে হেটেছেন?

..... সপ্তাহে দিনের সংখ্যা

(বিনোদনের জন্য হাঁটা হয় নাই প্রশ্ন T এ যান)

S. আপনি সাধারণভাবে বিনোদনের সময় হাঁটার জন্য সাধারণভাবে কত সময় ব্যয় করেছেন?

..... ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

T. আবার শুধুমাত্র সেই শারীরিক কাজগুলো নিয়ে চিন্তা করুন যা আপনি সর্বনিম্ন দশ মিনিট ধরে করেছেন সর্বশেষ 7 দিনে আপনি কতগুলো দিন বিনোদনের সময় দ্রুত শারীরিক কার্যক্রম সমূহ করেছেন যেমন দ্রুত দৌড়ানো, দ্রুত সাইকেলিং বা দ্রুত সাঁতার কাটা |

.....সপ্তাহে দিনের সংখ্যা

(বিনোদনে দ্রুত শারীরিক কোন কাজ করা হয় নাই প্রশ্ন V এ যান)

U. আপনি বিনোদনের সময় দ্রুত শারীরিক কার্যক্রম সমূহ করতে সাধারণভাবে কত সময় ব্যয় করেছেন?

……..... ঘন্টা প্রতিদিন

…….মিনিট প্রতিদিন

V. সর্বশেষ সাত দিনে আপনি কতগুলো দিন বিনোদনের সময়ে মাঝারি শারীরিক কার্যক্রম সমূহ করেছেন যেমন নিয়মিত গতির সাথে সাইক্লিং, নিয়মিত গতিতে সাঁতার কাটা, ডাবল টেনিস খেলা ইত্যাদি ?

.....সপ্তাহে দিনের সংখ্যা

(বিনোদনে মাঝারি কোন কাজ করা হয় নাই বিভাগ ৬ এ যান)

W. আপনি বিনোদনের সময় মাঝারি শারীরিক কর্মসমূহ করতে সাধারণত কত সময় ব্যয় করেছেন?

.....ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

বিভাগ ৬: বসে সময় কাটানো :

শেষ প্রশ্ন আপনি কিভাবে বসে সময় কাটাতেন সেই সম্পর্কিত যেমন কাজ করতে বসার সময়, বাড়িতে বিশ্রামের সময়, কোর্সের কাজ করতে অথবা বিনোদনের সময়। এটি একটি ডেস্কে বসে সময় কাটাতে বন্ধুদের সাথে সময় কাটাতে বা টেলিভিশন দেখে বসে সময় কাটাতে ব্যয় হতে পারে কাটানোর যে সময় সম্পর্কিত।দয়া করে মোটর গাড়ির মধ্যে বসে থাকার সময় বা বাসে বসে থাকার সময় যা ইতিমধ্যে আপনি সংযোজন করেছেন তার নতুন করে সংযোজন করবেন না

X. সর্বশেষ সাত দিনে আপনি সাধারণভাবে সপ্তাহের কয়দিন বসে সময় কাটাতেন?

.....সপ্তাহে দিনের সংখ্যা

Y. সর্বশেষ সাত দিনে আপনি সাধারণভাবে সপ্তাহের একটি দিনে কত সময় বসে সময় কাটাতেন?

.....ঘন্টা প্রতিদিন

.....মিনিট প্রতিদিন

Appendix-5 **Permission From IRB**

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/10/2023/736 Date: 10/10/2023

To
Md. Rejwan Gani Mazumder
M.Sc. in Rehabilitation Science
Session: 2021-2022
Student ID: 181210136
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal "Level of Physical activity among rehabilitation professionals in Bangladesh: A Cross Sectional Study" by ethics committee.

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

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

The purpose of the study is to determine the Level of Physical activity among rehabilitation professionals in Bangladesh. The study involves use of a Semi structured questionnaire & any other measurement tools to assess the level of physical activity among rehabilitation professionals in Bangladesh. That may take approximately 10 to 15 minutes for participants to complete.to answer / fill in the questionnaire and there is no physical or psychological harm to the participants.

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৫৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৯৬৪৭
CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/10/2023/736

Date: 10/10/2023

The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 8.30 AM on 8th April, 2023 at BHPI (35th IRB Meeting).

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

Best regards,

Member Secretary
Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৫৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৯৬৪৭
CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd

Appendix-6 **Permission From ERB**

The Chairman
Institutional Review Board (IRB)
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-1343, Bangladesh

Date: 10.10.2023

Subject: **Application for review and ethical approval.**

Sir,

With due respect, I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science holding ID Number 18121036 at BHPI. I want to conduct a thesis titled, **"Level of Physical Activity among rehabilitation professionals in Bangladesh: A Cross-Sectional Study"** with **SK. Moniruzzaman** as my thesis supervisor. The purpose of the study is to determine the Level of Physical activity among rehabilitation professionals in Bangladesh.
Semi-structured Questionnaire will be used in the study which will take about 10 to 15 minutes. Data collectors will receive informed consent from all participants. Any data collected will be kept confidential.
Therefore, I look forward to having your approval for the thesis proposal and to start data collection. I also assure you that I will maintain all the requirements for study.

Sincerely yours,

Md.Rejwan Gani Mazumder
M.Sc. in Rehabilitation Science
Session: 2021-2022
Student: 181210147
BHPI, CRP/CRP, Savar, Dhaka-1343, Bangladesh

Recommendation from the thesis supervisor/concerned authority:

10/10/2023

Name: SK. Moniruzzaman
Position: Associate Professor & Head
Department: Department of Occupational Therapy
Institution: BHPI, CRP, Savar, Dhaka
Email: ot-bhpi@crp-bangladesh.org

Appendix-7 **Thesis supervisor-student contact and guidance record**

Bangladesh Health Professions Institute (BHPI)
Department of Rehabilitation Science
(M.Sc. in Rehabilitation Science)

Paper XII (Thesis)

Sl. No. 1-Thesis Supervisor-student Contact and guidance record

Marks = 10

Marks obtained =

Name of student: Md. Rejwan Gani Mazumder

Name & designation of the Thesis Supervisor: Sk. Monirujjaman, Associate professor, Department of occupational therapy.

Appointment no.	Date	Place	Duration (hours; minutes)	Comment	Student's signature	Thesis Supervisor's Signature
1	07/10/2023	BHPI	2 hours	Methodology, Data collection	Rejwan	Sk. Monir
2	14/10/2023	BHPI	2 hours	Methodology, Data collection	Rejwan	Sk. Monir
3	21/10/2023	BHPI	2 hours	Literature review	Rejwan	Sk. Monir
4	28/10/2023	BHPI	2 hours	"	Rejwan	Sk. Monir
5	29/10/2023	BHPI	2 hours	Data collection	Rejwan	Sk. Monir

Note:

1. Appointment number will cover at least a total of 50 hours; applicable for onsite face to face contact / online (WhatsApp/Messenger/Skype etc.) with the thesis supervisors.
2. Please do not include travelling time. Please include more pages for appointment numbers if required.
3. Each student of the same thesis supervisor will require separate record.
4. You will require to submit this completed record during submission of your "final thesis submission for defense"

Thesis Supervisor-Student Contact Record
Part II (final) M.Sc. in Rehabilitation Science, BHPI

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