

# **Burnout and Work-related Stress of Occupational Therapists in Bangladesh- Cross-sectional Study**



**By**

**Aporna Paul**

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Bachelor of Science in occupational Therapy

**Bangladesh Health Professions Institute (BHPI)**

**Faculty of Medicine**

**University of Dhaka**

**Thesis completed by**

**Aporna Paul**

4<sup>th</sup> year B.Sc. in Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of Paralyzed

Chapain, Savar, Dhaka

.....

Signature

**Supervisor's name, designation and signature**

**Arifa Jahan Ema**

Lecturer and Course Coordinator of MSc in

Occupational Therapy

Department of Occupational Therapy

Bangladesh health Professions Institute (BHPI)

Centre for the Rehabilitation of Paralyzed (CRP)

Chapain, Savar, Dhaka

.....

Signature

**Head of the department's name designation and signature**

**Sk. Moniruzzaman**

Associate Professor & Head

Department of Occupational Therapy

Bangladesh health Professions Institute (BHPI)

Centre for the Rehabilitation of Paralyzed (CRP)

Chapain, Savar, Dhaka

.....

Signature

**BOARD OF EXAMINERS**

<b>STATEMENT OF AUTHORSHIP</b>
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This is to certify that the thesis work entitled “Burnout and Work-related Stress of Occupational Therapists in Bangladesh- A Cross-sectional Study” has been carried out by (Aporna Paul, Roll No. 508) in the Department of B.Sc. in Occupational Therapy, Bangladesh Health Professions Institute, Savar Dhaka, Bangladesh. The above thesis work has not been submitted anywhere for the award of any degree. The ethical issue of this study has been strictly considered and protected. The research supervisor will be quite concerned if the findings of this project are disseminated for future publication, and it will be properly acknowledged as an undergraduate thesis.

Aporna Paul

4<sup>th</sup> year B.Sc. in Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of Paralyzed (CRP)

Chapain, Savar, Dhaka 1343

.....

**Signature**

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## **LIST OF ABBREVIATION**

BHPI Bangladesh Health Professions Institute

CB Client-related Burnout

CBI Copenhagen Burnout Inventory

CRP Centre for the Rehabilitation of Paralysed

INGO International Non-Government Organisation

IRB International Review Board

NGO Non-Government Organisation

OT Occupational Therapy

PB Personal Burnout

WB Work-related Burnout

WHO World Health Organisation

WSS Workplace Stress Scale

## ABSTRACT

**Background:** Work-related stress occurs when a person cannot fulfil the expectation or inability to take responsibility for work. Eventually, chronic workplace stress can cause burnout. Evidence suggests that occupational therapists are susceptible to burnout as they face high cognitive demands in their job, the complexity of the practice environment and the impact of the sociodemographic status. However, as evidence is scarce, the prevalence and severity of burnout among occupational therapists in Bangladesh still need to be discovered.

**Aim:** The aim of this study was to find out the degree of burnout and level of work-related stress.

**Methods:** The study followed a cross-sectional quantitative study design. Data were collected through a face-to-face survey among 146 participants through Copenhagen Burnout Inventory and Workplace Stress Scale. SPSS 26 version was used to conduct the descriptive analysis. The chi-square test was done to find out the association and Pearson and Spearman's correlation test was done to find out the correlation between burnout, work-related stress and sociodemographic status.

**Result:** The findings showed that the female (63.7%) response rate was higher than the male (36.3%). 36.3% of participants reported personal burnout, 47.9% of participants reported work-related burnout and 45.2% of participants reported client-related burnout. 55% of participants reported work-related stress. Participants who were young (24-29y) reported mostly burnout. Females were more burnout and stressed than males. On the other

hand, participants who were single were more personally burnout than married occupational therapists. Participants who work in the rehabilitation centre and special school were found more burnout than the others. A relationship was observed between burnout and workplace-related stress.

**Conclusion:** This study finds out the prevalence of burnout and the level of stress of occupational therapists working in Bangladesh. The study also contributes to a gross understanding of the status of sociodemographic and occupational therapists. This study's findings on burnout and stress underline the importance of having a strategy to cope with it and developing awareness among occupational therapists in Bangladesh.

**Keywords:** Burnout, Work-related stress, Occupational therapy, Personal burnout, Work-related burnout, Client-related burnout.

## CHAPTER I: INTRODUCTION

### 1.1 Background

Burnout is a syndrome characterised by feelings of exhaustion, greater mental distance or cynicism toward work, and a decrease in professional efficacy, which resulted from chronic work-related stress that has not been managed properly (World Health Organisation, 2019). According to Zhou et al., (2020), workplace issues such as a hostile work environment, unreasonable workload expectations, and a lack of work-life balance are strongly linked to burnout. Workplace stress is widely acknowledged as presenting a significant risk to employees' health and the capability of their organisations. People may experience work-related stress as a response to pressure and demands that are not compatible with their skills and knowledge and that challenge their capacity for adjustment (Gross, 2017). Additionally, Occupational Therapy is also seen as a burnout-causing job because of the high demand for knowledge and cognitive abilities like creativity and problem-solving in order to assist, encourage, or enhance their client's functionality in day-to-day activities (Katsiana et al., 2021). Also, burnout among occupational therapists has frequently been linked to increasing workloads and unreasonable demands from supervisors, clients, and families (Gupta et al., 2012).

Around the whole world, studies on occupational therapists' burnout and work-related stress have been conducted in Spain, Portugal, Malaysia, Italy, Greece, Sweden and Australia (d'Ettorre & Greco, 2015; Escudero-Escudero et al., 2020; Katsiana et al., 2021; Lloyd & King, 2004; Poot & Lingok, 2022; Reis et al., 2018). As of the current moment, there is no evidence that such a study has been carried out in Bangladesh. Due to the

complexity of the field and the cognitively demanding nature of job responsibilities, occupational therapists in Bangladesh, like other occupational therapists throughout the world, face the possibility of experiencing burnout and work-related stress.

Therefore, the aim of this study was to find out the degree of burnout and level of work-related stress and identify the association between sociodemographic criteria and burnout and work-related stress. Bangladesh have developed a mental health policy through the support of World Health Organisation (WHO) to prevent the stress and burnout (World Health Organisation, 2022). As this study provides an overview of burnout and work-related stress, the study findings address the importance of this issue for both professionals and employers or other relevant stakeholders. The study findings can also be a starting point for raising awareness about burnout among occupational therapists in Bangladesh.

## **1.2 Justification of the Study**

This is the first study to identify the degree of burnout and level of work-related stress of occupational therapists in Bangladesh. This study provides a realistic state on mental health condition among occupational therapists working in Bangladesh. As the WHO suggests, high levels of stress can have a physical impact on a person, such as headaches, a lack of appetite, pain in the neck and shoulders, a lump in the throat, back pain, a heavy chest, an upset stomach, tight muscles, and unpleasant feelings. A person who is stressed cannot concentrate on their task, loses their temper easily, feels depressed, uncomfortable, or nervous (World Health Organisation, 2022). A health practitioner can treat patients better if they are in good mental and physical condition. Therefore, this research will improve an understanding of burn-out and work-related stress and their relation or association to their work. Thus, the findings will lead the employers to emphasise on workplace mental health.



So, the employers can create a good work environment for occupational therapy professionals in Bangladesh. It will also be an evidence about occupational therapists who are working in Bangladesh regarding the topic.

### **1.3 Operational Definition**

#### **1.3.1 Burnout**

Burn-out is a syndrome conceptualised as resulting from chronic workplace stress that has not been successfully managed. It is characterised by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy. Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life (WHO, 2019).

#### **1.3.2 Work-related Stress**

Work-related stress is the response people may have when presented with work demands and pressure that are not matched to their knowledge and abilities and which challenge their ability to cope (Gross, 2017).

#### **1.3.3 Occupational Therapy**

Occupational therapy is a client-centred health profession concerned with promoting health and well-being through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by working with people and communities to enhance their ability to engage in the occupations they want to, need to, or are expected to do, or by modifying the occupation or the environment to better support their occupational engagement (WFOT, 2012).

## **1.4 Study Question, Aim and Objective**

### **1.4.1 Study Questions**

- a) What is the level of burnout and work-related stress of occupational therapists working in Bangladesh?
- b) What are the associative factors between sociodemographic information and burnout and work-related stress?

### **1.4.2 Aim**

The aim of the study is to measure the degree of burnout and level of work-related stress of occupational therapists working in Bangladesh.

### **1.4.3 Objectives**

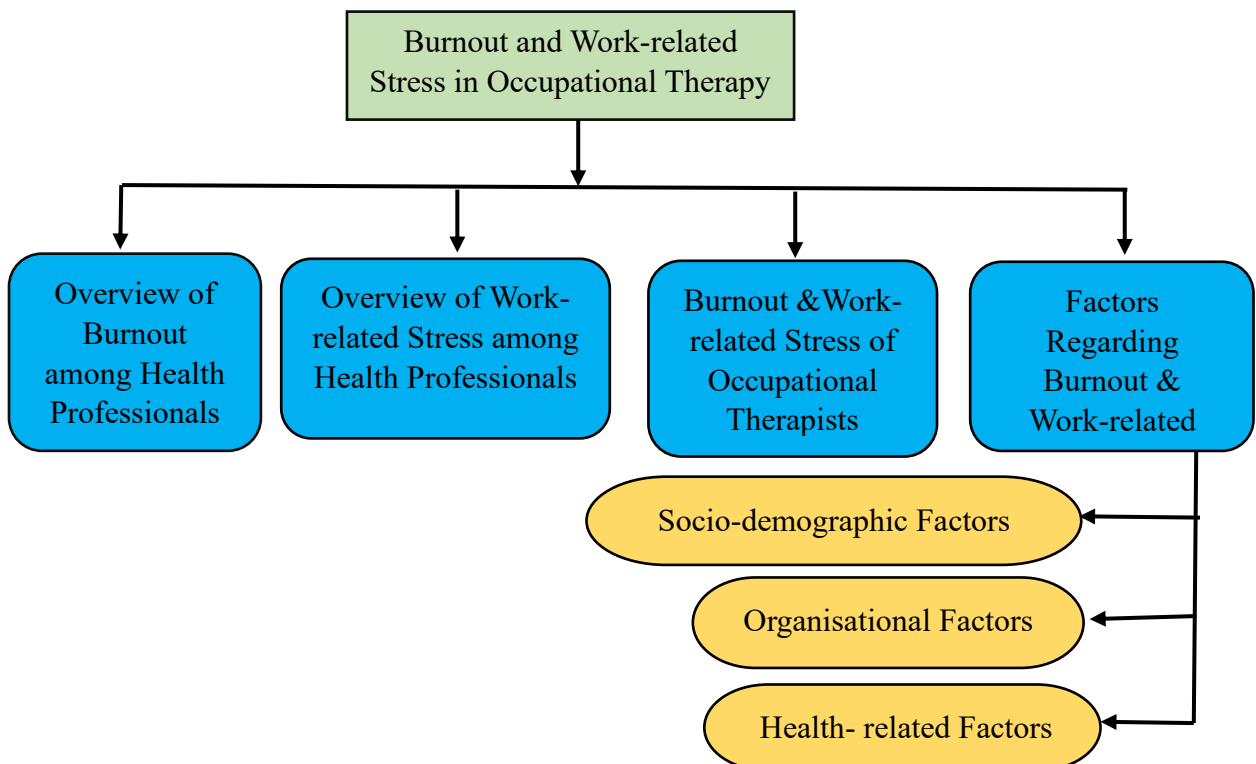
- To find out the degree of burnout of occupational therapists working in Bangladesh.
- To find out the levels of work-related stress.
- To identify the association between the socio-demographic information and burnout and work-related stress.

## CHAPTER II: LITERATURE REVIEW

The chapter covers the review of existing literature regarding burnout and work-related stress among all health professionals especially, occupational therapists. Work-related burnout of occupational therapists which was previously described in some literature is also portrayed. There are some factors regarding burnout and work-related stress. These factors can play significant roles, and these are, demographic factors, organisational factors, and physical health-related factors. In this chapter, a brief discussion is done on these factors from previous body of literature.

**Figure 2.1**

*Overview of literature review findings*



## **2.1 Overview of Burnout among Health Professionals**

Evidence shows health professionals frequently experience burnout. The health professionals include physicians, nurses, physiotherapists, occupational therapists, speech and language therapists, and other healthcare workers in numerous nations from countries like the United States, Poland, Sweden, Italy, South Korea, sub-Saharan Africa, and the Middle East (Bruschini et al., 2018; Chemali et al., 2019; Dubale et al., 2019; Jaworek et al., 2010; Kim et al., 2020; Peterson et al., 2008; Pustulka-Piwnik et al., 2014; Tawfik et al., 2018). Work-related burnout is a syndrome driven by ongoing work-related stress that has not been effectively controlled. Physicians and their patients are increasingly known to be affected negatively by burnout, a self-reported job-related syndrome (World Health Organisation, 2018). A systematic review based on almost 182 studies from Asia and Europe region and they stated that, an accurate estimate of the prevalence of burnout among physicians would have important health policy implications, but the prevalence is still unknown on that region (Rotenstein et al., 2018).

A cross-sectional study was conducted with Italian rehabilitation professionals including physiotherapists, occupational therapists, and speech and language therapists, and compared burnout and work-related stress among them (Bruschini et al., 2018). The total participants were 391 professionals with 210 physiotherapists, 101 speech and language therapists, and 80 occupational therapists. The participants were recruited from various hospitals and private healthcare clinics in Lazio, a region of Italy. Maslach Burnout Inventory (MBI) was used to find out the degree of burnout among three professionals. These three professional groups under investigation showed no statistically significant variations in the level of burnout. They concluded that 14% of therapists were at high risk

of becoming burned out. The possible explanation for the high risk of burnout as these three professionals provided service for long working hours to the person who had experienced disability and was first aware of their emotional and cognitive changes during the intervention. Another research was conducted in the same field in South Korea. The total participants were 325 professionals with 131 men and 194 women. Participants from five hospitals with 100 beds and 4 hospitals with less than 100 beds participated in this survey between March to May 2019. But this study shows a different result. This study found that hospital size, age, and gender were the main factors for a high level of burnout and work-related stress. Female therapists in their 20 years working in a different-sized hospital (small or medium) were at significant risk of occupational stress and burnout, according to an analysis of the factors that influence these conditions in this study (Kim et al., 2020). The same finding was reported by another cross-sectional study conducted in the same geographical area and with the same number of participants but with different variables. They found out a significant difference between the degree of burnout and the age and gender of the therapists. The result showed that 20-29 years-of-aged female therapists were at higher risk of burnout than male therapists and showed a positive correlation between burnout and job stress of male and female therapists of all ages, especially 30 years and above (Lee et al., 2021). Another cross-sectional study was conducted in Sweden with 3719 responded healthcare workers from Swedish County Council. The purpose of the study described determining the relationship between burnout and various lifestyle, sleep, memory, and physical and mental health indicators that participants reported. They were finding out in four burnout groups, different patterns of health indicators and lifestyle factors using linear discriminant analysis. The findings

demonstrated clearly that burnout was linked to lower self-rated health, higher levels of depression and anxiety, higher levels of sleep disturbance, and memory impairment. This report highlighted how crucial it is to develop effective ways of preventing and combating stress and burnout. Also, they claimed that alcohol use and self-reported physical activity had just a small impact on burnout (Peterson et al., 2008). During the COVID-19 pandemic, higher stress levels were observed among women, Black and Latinx people, inpatient employees, nursing assistants, medical assistants, and social workers in a study of 20,947 US healthcare workers (Prasad et al., 2021).

## **2.2 Overview of Work-related Stress among Health Professionals**

Work-related stress happens when there is an imbalance between the resources and abilities of the individual worker to meet those expectations and the demands of the job. Among the most stressful professions include nursing, education, administrators in government and related organisations, and the healthcare industry and medical practitioners (Blaug et al., 2007). A cross-sectional study was conducted in Japan with participants from 20 hospitals including physicians, nursing staff, and administrative workers. The study aimed to clarify the job stress of healthcare workers and, compared Brief Job Stress Questionnaire (BJSQ) (Shimomitsu, 2000) scores. The result shows that the physicians and nursing staff had the same level of stress in quantitative and qualitative job overload. But nursing staff had no support from supervisors and co-workers and showed a high response to stress response than a physician (Ito et al., 2014). The same findings were reported by another pilot study conducted in northern Jordan with 101 physician specialists, 126 dentists, 52 general practitioners, and 123 pharmacists. They reported that physicians were relatively less stressed than dentists, pharmacists, and general practitioners. They added that females and

having long working hours were associated factors of high stress (Boran et al., 2012). Another retrospective observational study was conducted in Brindisi, Italy with the aim, to detect and analyse in different work settings the level of work-related stress resulting from organisational changes implemented by hospital healthcare departments and care services of health districts in a sample of their employees. The results of our analysis showed that hospital healthcare workers (HCWs) have a higher risk of work-related stress than HCWs who work for care services provided by health districts (d'Ettorre & Greco, 2015). Burnout, job satisfaction, and general health factor significantly associated with work-related stress of nurses reported in another follow-up study in South Africa. They showed that there is an interconnection between job demand, job satisfaction, burnout, and the well-being of employees (Khamisa et al., 2016).

### **2.3 Work-related Burnout of Occupational Therapists**

Boop et al., (2020) reports Occupational Therapy is a highly demanding profession in the mental, physical and cognitive fields. An occupational therapist provides service to help a person to engage in work to improve their health, well-being, and capacity for involvement in society. For their working process occupational therapists facilitate interaction among their clients to achieve the desired outcome. Professional burnout among occupational therapists might be a result of working with clients with physical, mental, and intellectual disabilities (Janus et al., 2018).

A cross-sectional survey with 247 respondents was conducted among occupational therapists in Greece and Cyprus. The study aimed to examine the musculoskeletal injuries, mental health problems, and burnout of occupational therapists. The maximum respondent's age range was 20-40 years old. The result of this study showed that relatively

young partitioners were experiencing work-related musculoskeletal disorders (WMSDs), mental health issues, and work-related burnout, especially female occupational therapists (Anyfantis et al., 2020). A pilot study was conducted in Portugal with 374 Occupational therapists (OTs) from the registered member of the Portuguese Association of Occupational Therapists (PAOT). The purpose of the study was to assess the prevalence of burnout among occupational therapists and to correlate degrees of burnout with practitioner age, gender, client age, years of professional activity, and field of practice. The study used the Copenhagen Burnout Inventory scale and showed that Portugal occupational therapists had a high degree of burnout, especially in the domain of personal burnout and work-related burnout. The prevalence of burnout is higher among practitioners who work with children with developmental delay/ disability (Reis et al., 2018). On the other hand, a mixed-method study revealed, Filipino occupational therapists had a moderate level of emotional exhaustion and depersonalisation and reduced personal accomplishment. Factors that contribute to burnout might be the age range, i.e., 24-29y, a longer period of working hours, i.e., 8-11 hours per day, being unmarried, and starting practice at an early age (Delos Reyes, 2018). Limited resources and staff conflict were associated with high levels of burnout among mental health occupational therapists who work in medium-secured hospitals (Oddie & Ousley, 2007). High level of burnout concerning emotional exhaustion among Australian mental health occupational therapists and social workers (Lloyd & King, 2004). 26% of Turkish occupational therapists already had burnout syndrome, and 38% were at high risk and worked in the public sector. This study found a negative relationship between burnout and working condition, health, and services (Abaoğlu et al., 2021). A cross-sectional study was conducted among Swedish



occupational therapists in Sweden. The aim of this study was to occupational balance, issues associated with mental health at work, and risk factors in the social and organisational work environment would be discussed about the occupational health. In this study, they claimed that as the workload of occupational therapists was highly rated, it led to an increase in their job stress, sick leaves, and intention of job turnover (Lexén et al., 2020).

## **2.4 Factors regarding Burnout and Work-related Stress**

Evidence suggests some factors related to burnout and work-related stress, such as socio-demographic, organisational, and physical health-related factors.

### **2.4.1 Socio-demographic Factors**

A statistic showed that work-related stress became common among the 25-34 years of female aged group and 35-44 years of male age group. Though they did not mention any specific profession who are highly stressed in their workplace but according to them, nursing, education, administrators in government and allied organisations, and healthcare are among the most demanding profession.(Blaug et al., 2007). Previously mentioned studies had explored association with ethnicity, age, gender, education, marital status, work experience, duration of work and position in the organisation, and burnout and work-related stress among healthcare professionals such as occupational therapists, physiotherapists, speech therapists, nurses, nursing assistant, physician, and pharmacists (Anyfantis et al., 2020; Delos Reyes, 2018; Jaworek et al., 2010; Kim et al., 2020; Lee et al., 2021; Lexén et al., 2020; Oddie & Ousley, 2007; Peterson et al., 2008; Prasad et al., 2021; Reis et al., 2018). Maximum studies claimed that female occupational therapists and physiotherapists and nursing staff experienced a high level of burnout than males.

However, the female group had the most enthusiastic respondents (Kim et al., 2020; Lee et al., 2021; Oddie & Ousley, 2007). The association between the burnout subscales, such as emotional exhaustion, depersonalisation, and personal accomplishment according to age and gender was analysed among physiotherapists and occupational therapists and claimed that personal experience of gender discrimination and job stress was related to female burnout at the age of 20-29 years (Lee et al., 2021). But a mixed-method study among Filipino occupational therapists showed a different result. They alleged that there was little divergence in burnout levels between male and female therapists, nevertheless, it was raised that females deal with the problem emotionally more than practically. In this matter, some female participants also made a point in the qualitative section of the study mentioning their hormone cycle as often making them more sensitive to stimulation (Delos Reyes, 2018). Higher levels of burnout were observed among occupational therapists with aged range 20-40 years old (Delos Reyes, 2018; Escudero-Escudero et al., 2020; Reis et al., 2018).

#### **2.4.2 Organisational Factors**

In this section, the principal findings of organisational factors are work environment, job satisfaction, job turnover, limited resource, staff conflict, and work-stress policy (Oddie & Ousley, 2007; O'Donnell et al., 2015; Scanlan et al., 2013). According to a UK study, the workload was one of the most common causes connected to work-related stress, along with other factors like bullying, shift work, sexual or racial harassment, staff complement reductions, and organisational changes. Job satisfaction is measured by the satisfaction level in their job (Devery et al., 2018; O'Donnell et al., 2015; Scanlan et al., 2013). Several studies in Sydney, Queensland, Australia reflected different results but in different settings.

Occupational therapists who provided eating disorder service and mental health services reported that they were more or less satisfied with their job (Devery et al., 2018; Scanlan et al., 2013; Scanlan & Still, 2013). Turnover intention is measured by the number of thoughts about leaving the job (Scanlan et al., 2013). Previously mentioned studies also reported that job satisfaction indicated the likelihood of a job turnover. Thus, the turnover of Australian occupational therapists in mental health services has increased at the same time as job satisfaction is low (Scanlan et al., 2013; Scanlan & Still, 2013).

### **2.4.3 Health Related Factors**

Work-related discomfort is common among physio and occupational therapists. Although most therapists continue to work through this pain, it affects their ability to do their jobs and changes the way they function. The therapists claimed that they had experienced moderate to severe pain in several body parts, mostly regarding the neck, lower back, and shoulder (Anyfantis et al., 2020) including specific diagnoses like, bursitis, thoracic outlet syndrome, degeneration, sciatica, herniated disks, torn menisci, and migraine headaches (Campo & Darragh, 2010). A positive relationship showed between burnout and musculoskeletal disorder (MSDs) among males and females in Norway, especially among female physicians (Langballe et al., 2009). Additionally, a cross-sectional study conducted in Southern Poland among 237 nurses from various hospitals shows a complicated result about the relation between burnout and musculoskeletal disorder. Work demands and musculoskeletal complaints were both positively correlated with burnout syndrome, while higher work demands were linked to lower levels of burnout but higher levels of musculoskeletal complaints. On the other hand, burnout was also strongly correlated with musculoskeletal complaints (Jaworek et al., 2010). Most occurrences of work-related

mental illness affect people between the ages of 35y to 44y, and 45y to 54y (Blaug et al., 2007). 85.9% of occupational therapists in South Korea complains of work-related musculoskeletal Disorder (WMSDs) at least in one body part. This study also reported that 30-39 aged female occupational therapists who worked eight hours a day with 1-5 years of experience were more likely to suffer from WMSDs (Park & Park, 2017).

## **2.5 Key Gaps of the Study**

- None of the studies, except one conducted in Spain, clearly reported the prevalence of burnout or work-related stress.
- Majority of the study was conducted on the hospital. There was no evidence among those occupational therapists who work in the rehabilitation centre or special needs school.
- All the data was collected by the online survey method.
- In Bangladesh no study has not been conducted regarding burnout and work-related stress among occupational therapists.

## CHAPTER III: METHODS

### 3.1 Study Design

The study followed the cross-sectional study design of quantitative research. Student researcher selected a population of graduate occupational therapists who completed their occupational therapy course from Bangladesh Health Professions Institute (BHPI). Cross-sectional study was suitable for this study as the student researcher chose a specific group of population and collected data in a single period of time and find out the prevalence of burnout and work-related stress of occupational therapists in Bangladesh (Wang & Cheng, 2020). Therefore, the cross-sectional study was a perfect fit for this study.

### 3.2 Study Setting and Period

#### 3.2.1 Study Settings

The student researcher conducted survey at general and specialised hospitals, rehabilitation centres, Occupational Therapy academic institution, special schools in Dhaka, non-governmental organisations (NGOs) and international non-governmental organisations (INGOs) in Dhaka and outside of Dhaka.

#### 3.2.2 Study Period

The study period was between April 2022 to February 2023 and the data collection period was between 1 November, 2022 to 30 November, 2022.

### 3.3 Study Participants

#### 3.3.1 Study Population

The population of the study is the occupational therapists who graduated from BHPI.

### 3.3.2 Sampling Techniques

To conduct the study, participant was selected through purposive sampling process based on some inclusion and exclusion criteria. The student researcher selected this type of sampling because the study had some inclusion and exclusion criteria(Liamputtong, 2013). Therefore, the most suitable method of selecting study participants was purposive sampling.

### 3.3.3 Inclusion Criteria

- Professionals who had graduated with a BSc in Occupational Therapy degree from the Bangladesh Health Professions Institute (BHPI), the academic institute of CRP.
- Professionals who are practicing as occupational therapists in clinical, non-clinical, academia and community settings in Bangladesh.

### 3.3.4 Exclusion Criteria

- Occupational therapists who have passed with occupational therapy bachelor degree but not in practice.
- Occupational therapists who have retired now.
- Occupational therapists who are in their maternity leave or in vacation during data collection period.
- Occupational therapists who graduated from the BHPI and moved to overseas.
- Occupational therapists who are working as manager only and intern.

### 3.3.5 Sample Size

The total number of graduate OT, N= 363

$$n = \frac{Z^2 \times pq}{d^2}$$

Here,

$n$  = sample size

$z$  = the standard normal deviate usually set at 1.96

$p$  = 0.694

Though the prevalence of burnout of occupational therapists was unknown, so the prevalence burnout among the occupational therapists from Spain was considered, which was reportedly 69.4% (Escudero-Escudero et al., 2020).

$q$  =  $(1-p) = 0.306$ ; proportion in the target population not having the characteristics.

$d$  = 0.05; degree of accuracy required (level of significance/ margin of error).

According to this equation, the sample should be 327 participants. But after applying inclusion and exclusion criteria, the number of OT graduates stood at 244.

So,

$$n_c = \frac{n}{1 + \frac{n}{N}}$$

Now the sample size should be 172. The student researcher could collect 146 data from the participants in this study.

### **3.4 Ethical Consideration**

#### **3.4.1 Ethical Approval from IRB**

The ethical issues were sought from the Institutional Review Board (IRB) with the explanation of aim, objective, and purpose of the study through the Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI). The IRB number

CRP/BHPI/IRB/09/22/649. Permission from Head of the Occupational Therapy department, BHPI had been also taken for collecting data from BHPI, and Centre for the Rehabilitation of the Paralyzed (CRP)-Savar (head office) and all branches of CRP (Mirpur, Ganakbari, Manikganj, Mymensingh, Sylhet, Moulvibazar, Gobindopur, Chattagram, Barisal, Rajshahi, Nawabganj). The ethical processes were followed according to (World Medical Association, 2014).

### **3.4.2 Informed Consent**

The student researcher explained the aim, objective, and purpose of the study to the participants through an information sheet. The participants, who felt willingly interested to participate in the study, their data was collected. Written consent was obtained from the participants during the face-to-face survey.

### **3.4.3 Right to Refusal to Participate or Withdraw**

Participants had complete freedom to choose whether to participate or not in this study. The withdrawal form was attached with the consent form, so that the participants could withdraw their participation from the study within two (02) weeks from the time of collecting data.

### **3.4.4 Confidentiality**

The student researcher was highly concerned about the confidentiality of the participants' information. The student researcher did not include any personal information such as name or address with questionnaire about their identity. Their information was not disclosed with anyone except for the supervisor which was clearly stated in the information sheet. Besides, any identical information of participants' will not be revealed for future uses, such as report



writing, publication, conference, media or any written or verbal discussion. The participants were clearly informed about confidentiality by information sheet.

#### **3.4.4 Unequal Relationship**

Student researcher have collected data following a standardised questionnaire and the participants filled it up by themselves, there was no scope to bias the respondents. Therefore, the power relationship has been strictly prevented.

#### **3.4.5 Risk and Beneficence**

The participation in this study did not involve risk and beneficence in participating in this study. There was no monetary or any other benefit involved in this study.

### 3.5 Data Collection Process

#### 3.5.1 Participants Recruitment Process

**Figure 3.5.1**

*Overview of participants recruitment process*

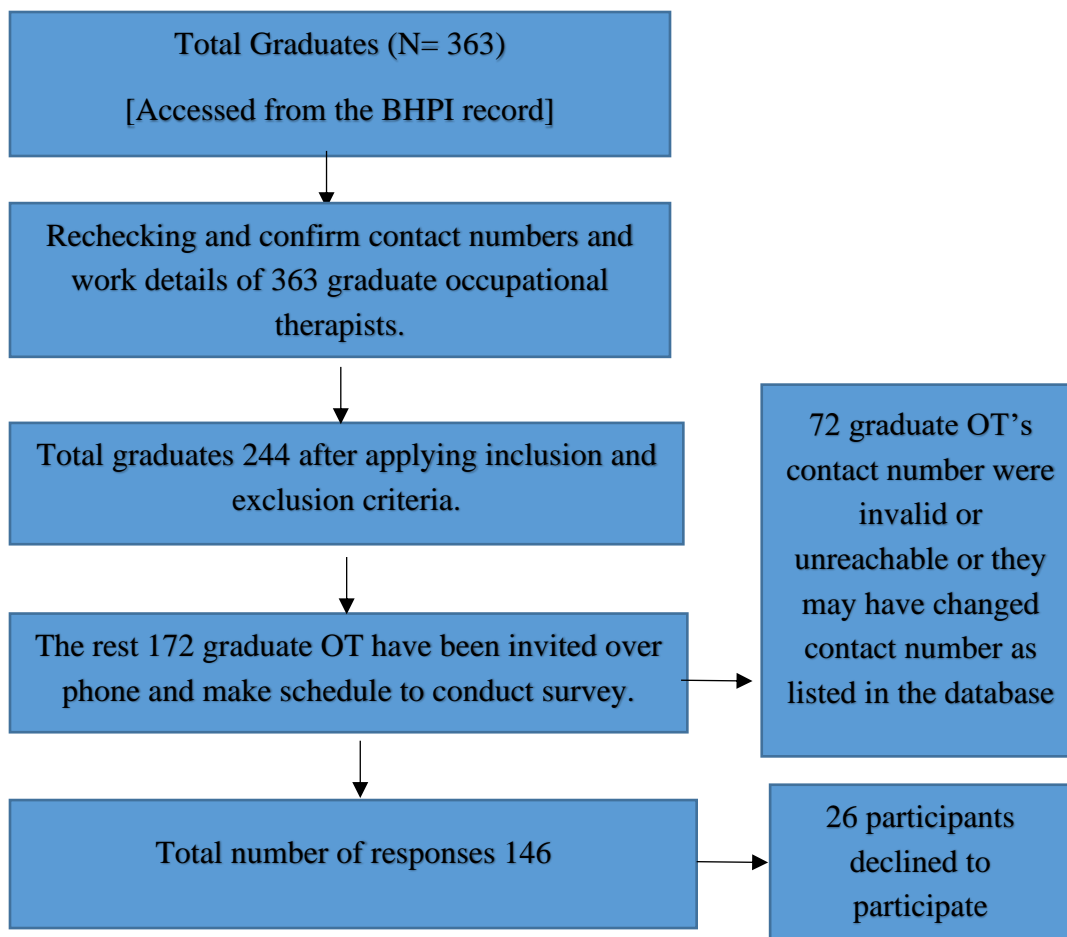


Figure 3.5.1 above explains the participants recruitment process. The student researcher had collected 137 data by face-to-face by the student researcher and 9 data had collected by the help of two senior occupational therapists. Considering time, cost and safety issues, student researcher conducted survey by the aid of two senior occupational therapists from who are working that region. Student researcher clearly explain the inclusion and exclusion

criteria and trained them about the administration of the scale. They had collected nine data from remote area of Bangladesh.

### **3.5.2 Data Collection Method**

The data was collected by face-to-face survey through a socio-demographic questionnaire, the Copenhagen Burnout Inventory scale and the Workplace Stress Scale (See section 3.6.2 for the details of survey tools). The student researcher was physically present to ask the survey questions and to help the respondent if they had faced any kind of problem to understand the question with their responses in a face-to-face survey. Face-to-face survey maintained the quality of data and decreased the potential biasness (Doyle, 2005).

### **3.5.3 Data Collection Instrument**

#### ***Copenhagen Burnout Inventory***

The Copenhagen Burnout Inventory scale was developed by Kristensen, Borritz, Villadsen, and Christensen. This tool used in this study to find out the degree of burnout of occupational therapists. CBI is a standardised questionnaire with three sub-dimensions: personal burnout, work-related burnout and client-related burnout (Kristensen et al., 2005). So, the Copenhagen Burnout Inventory can assess a person's degree of physical and mental fatigue and exhaustion, related to their personal life, work and clients. The scale included Likert-type responses such as always, frequently, sometimes, rarely, and never. Personal burnout and client-related burnout contain six questions and the respondent is counted as non-respondent if less the three questions have been answered. If less than four items are answered for work-related burnout, the responder is considered a non-respondent. The possible range of all scale is zero to hundred. If the score of CBI is 50 to 74, it considered

‘moderate’, 75 to 99 are high, and a score of 100 is considered severe burnout (Zh et al., 2021) (See appendix B for the full Questionnaire).

### ***The Work-place Stress Scale***

The Work-place Stress Scale was developed by Marlin Company, North Haven, CT, USA, and American Institute of Stress (ASI), Yonkers, NY, USA (Alabady, 2017). The Work-place Stress Scale was used to measure the stress level of occupational therapist. There are eight questionnaires in this scale and the responses follows Likert type scale (never, rarely, sometimes, often, and very often). The number is reversed for last three questionnaire. If the total score is 15 or lower, it means chilled out and relatively calm. Total score 16 to 20 indicate fairly low. Total score 21 to 25, means moderate stress, some aspects of a job are probably going to be quite stressful. Total score 26 to 30 indicates severe stress. Total score 31 to 40, means stress level is potentially dangerous. reliability coefficient of Cronbach’s alpha was 0.80 for the entire scale of the Workplace Stress Scale (Soltan et al., 2020a) (See appendix B for the full Questionnaire).

### **3.5.4 Field Test**

The student researcher translated the questionnaire into Bengali, the native language of Bangladesh, with the supervisor's help and an author with expertise in formal Bengali writing. The student researcher conducted the field test with two senior occupational therapists. Through this field test, some changes were fixed later, which helped maintain the question's quality.

### **3.6 Data Management and Analysis**

All data management and statistical analysis carried out by using Statistical Package for Social Science (SPSS) v26. The descriptive analysis was carried out to find out the

prevalence burnout and work-related stress among occupational therapists working in Bangladesh. Correlation analysis was tested by using Pearson test and Spearman's test. Spearman's test was done to find the correlation between burnout and work-related stress and sociodemographic data which is not normally distributed like age and work experience of the participants. Pearson's test was done to find out the correlation between burnout and work-related stress and sociodemographic data which is normally distributed like work-related stress and duration of work. Chi square test was done to find out the association between burnout, work-related stress and sociodemographic status like sex, marital status, educational qualification, work sector, job type, work settings, owner of the organisation and extra responsibilities.

### **3.7 Quality Control and Quality Assurance**

The five stages of data life cycle management were followed properly to ensure data quality and safety in this study. 146 professional occupational therapists participated. The question was given to them in paper document format with the spaces for answers. All the documents were photocopied for further safety. Then, their data was translated into formal English and entered into the system. The data collection from participants and the data entry process was non-biased. All the data was initially stored in the SPSS for analysis. These were also stored in the Google Drive storage system. The cloud system is well protected by strong password on Google securities. The proper use of the data was ensured. Any unauthorised access never occurred. All data was used as it is. Student researcher was conscious of every data use and their analysis. Neither data modification nor data exploitation was done. All the data in Google Drive is archived. The student researcher and the supervisor believe in data archiving for future research works. The student researcher

and the responsible supervisor agreed upon the data destruction after five years. These data may not be relevant after this period. For proper data safety and valuation, all the data used in this research will be destroyed (*The 5 Stages of Data LifeCycle Management - Data Integrity*, n.d.).

## CHAPTER IV: RESULTS

This chapter presents the findings of the study. The study's findings are presented in tables and figures in this chapter, with an emphasis on the sociodemographic information, degree of personal burnout, work-related burnout and client-related burnout and level of workplace stress of Bangladeshi occupational therapists.

### 4.1 Socio-demographic Characteristics

#### Table 4.1

*Distribution of participant's responses regarding burnout and work-related stressor*

<b>Variable</b>	<b>Category</b>	<b>n= 146</b>	<b>Percentage</b>
<b>Sex</b>	Male	53	36.3%
	Female	93	63.7%
<b>Age</b>	Age in years	Median age 28.00 years, SD ( $\pm 4.62$ )	
	Minimum age	24	
	Maximum age	43	
<b>Marital status</b>	Married	104	71.2%
	Unmarried	42	28.8%
<b>Educational qualification</b>	Graduation only	105	71.9%
	Post-graduation	41	63.7%
<b>Children</b>	No children	75	51.4%
	Number of children	Median number of children 1.00, SD ( $\pm .551$ )	
<b>Area of workplace</b>	Rural	4	2.7%
	Urban	142	97.3%
<b>Working hour</b>	Working hours	Mean working hour 9.56, $\pm 1.90$	
	Minimum working hours	5	
	Maximum working hours	14	
<b>Type of work</b>	Full time	145	99.3%
	Part time	1	.7%
<b>Work experience</b>	Work experience (in years)	Mean work experience in year 5.85, $\pm 4.79$	
	Minimum work experience	.10	
	Maximum work experience	20	
<b>Work sector</b>	General and specialised hospital	5	3.4%
	Special school	60	41.1%
	OT academic institution	8	5.5%
	NGOs and INGO	11	7.5%
	Rehabilitation centre	62	42.5%
<b>Work-settings</b>	Paediatric	84	57.5%
	Adult Neurology	28	19.2%
	Hand therapy unit	2	1.4%
	Community	5	3.4%
	Mental health settings	4	2.7%
	Academic	8	5.5%
	Combined	15	10.3%
<b>Job type</b>	OT Academic	8	5.5%
	Clinicians	133	91.1%
	Community OT	5	3.4%
<b>Owner of organisation</b>		11	7.5%
<b>Extra responsibility</b>		32	21.9%



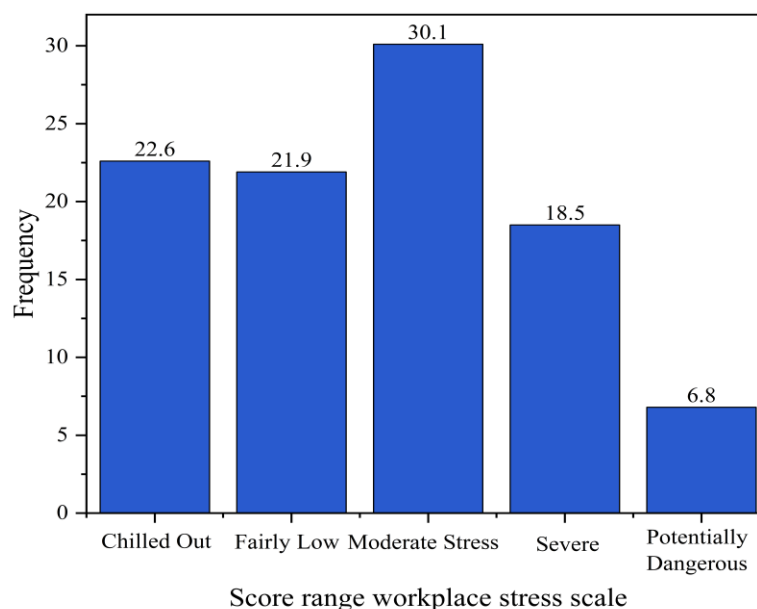
Table 1 shows an overview of the socio-demographic status of occupational therapists who work in Bangladesh. This socio-demographic status includes the participant's age, sex, marital status, number of children, and current work status. Of the 146 participating occupational therapists, 53 (36.3%) were male and 93 (63.7%) were female and the median age of the participants was  $28.00 \pm 4.62$  years. The findings also suggested that half of the respondents were young professionals aged between 25 and 27 years old. Most of the therapists (71.2%,  $n= 104$ ) were married. In terms of educational qualification, 63.7% ( $n=41$ ) of occupational therapists had done their postgraduation in different subjects. The mean work experience of the participants was  $5.85, \pm 4.97$  years. Additionally, 97.3% ( $n=142$ ) of occupational therapists worked in the urban area.

Regarding the daily workload, occupational therapists in Bangladesh work every day more than 10 hours ( $9.56 \pm 1.90$ ). Most of the participants work as clinicians ( $n=133, 91,1\%$ ), with more working in rehabilitation centres ( $n=62, 42.5\%$ ) and then in special needs schools ( $n=60, 41,1\%$ ). The highest percentage ( $n=84, 57.5\%$ ) of participants work in paediatric settings in different special needs schools and rehabilitation centres. A little percentage of occupational therapists 7.5% ( $n= 11$ ) own their organisation in the forms of special need school. 21.9% ( $n= 32$ ) of occupational therapist carries out some other responsibilities like administrative work or managerial work in addition to their specific work. However, no specific information has been gathered about this. Because this study only measured how much occupational therapists are burnout in their workplace and extra responsibility may and may not be one associative factor.

## 4.2 Overview of Work-related Stress

**Figure 4.2**

*Scores of Workplace Stress Scale*



WSS has five categories including chilled out, fairly low, moderate stress severe and potentially dangerous. The participants had responded in every category of WSS. The mean value of workplace stress was  $21.22 \pm 4.61$ . The result shows that, 22.6% of occupational therapists were chilled out and stress is not an issue for them. 21.9% of occupational therapist responded as fairly low stress in their workplace. The highest level of occupational therapists, 31.1% (n= 44) had moderate level of stress which means the occupational therapists may facing some stressful situations. Additionally, 18.5% (n= 27) occupational therapists reported severely stressed and 6.8% (n=10) reported to be potentially in danger.

### 4.3 Overview of Burnout in Occupational Therapists

**Table 4.3**

*Overview of burnout following the Copenhagen Burnout Inventory scale*

<b>Variable</b>	<b>Category</b>	<b>N= 146</b>	<b>Percent</b>	<b>Mean</b>
<b>Personal burnout</b>	Below moderate level	93	63.7%	43.38 ± 15.69 (with 95% CI
	Moderate burnout	48	32.9%	40.81-
	High burnout	5	3.4%	45.95)
	Severe burnout	0	0	
	Maximum	91.67		
	Minimum	4.17		
<b>Work-related burnout</b>	Below moderate level	76	52.1%	47.30 ± 17.71 (with 95% CI
	Moderate burnout	60	41.1%	44.40-
	High burnout	10	6.8%	50.20)
	Severe burnout	0	0	
	Maximum	96.42		
	Minimum	3.57		
<b>Client-related burnout</b>	Below moderate level	80	54.8%	45.20 ± 17.36 (with 95% CI
	Moderate burnout	59	40.4%	42.36-
	High burnout	7	4.8%	48.04)
	Severe burnout	0	0	
	Maximum	95.83		
	Minimum	4.17		

Table 3 illustrates the degree of burnout among Bangladeshi occupational therapists. It shows the degree of burnout in three domains: Personal burnout (PB), Work-related burnout (WB) and Client-related burnout (CB).

PB mean score was 43.38 and the score lies between 40.81 and 45.94 with 95% confidence interval (CI),  $SD \pm 15.68$ . According to CBI instruction, the score of moderate level burnout was in between 50 to 74. The majority 63.7% (n= 93) of occupational therapists

reported below moderate level for personal burnout and 32.9% (n=48) occupational therapists reported moderate burnout. Only 3.4% (n=5) of participants reported high burnout and no one reported severe burnout. So, the table shows that more than half of the participants reported no burnout in the domain of personal burnout. The mean score of WB was  $47.30 \text{ SD} \pm 17.71$ , with the 95% confidence interval, the score lies between 44.40 and 50.20. 41.1% (n= 60) of occupational therapists reported moderate burnout but 52.1% (n= 76) occupational therapists reported below moderate level of burnout level. A little portion of respondents 6.8% (n=10) reported they were highly burnout.

The mean score of CB was  $45.20 \text{ SD} \pm 17.36$ . The maximum score of client-related burnout was 95.83 and the minimum score was 4.17. A moderate burnout was reported by 40.4% (n=59) participants and 4.8% (n= 7) reported high burnout in the domain of client-related burnout.

In summary of burnout, occupational therapists showed an increased level of work-related burnout rather than rest of the two domains such as personal and client-related burnout.

#### 4.4 Associations between Sociodemographic Status and Burnout and Work-related Stress

**Table 4.4**

*Spearman's correlation test score for burnout, age of the participants and work experience*

	Age of the participants n=145 (r value)		Participant work experience n=146 (p value)	
	Correlation coefficient	Significance	Correlation coefficient	Significance
<b>Personal burnout</b>	-.229**	0.006	-.236**	0.004
<b>Work- related burnout</b>	-.178*	0.032	-.168*	0.043
<b>Client related burnout</b>	-.229**	0.006	-.226**	0.006

Table 3 shows spearman's correlation between personal, work-related, and client-related burnout and age. The result indicates that there is a weak but negative correlation between PB ( $r = -0.229$ ,  $p < 0.006$ ), WB ( $r = -0.178$ ,  $p < 0.032$ ), and CB ( $r = -0.229$ ,  $p < 0.006$ ) and age. It means the younger aged group becomes more burnout than the elder group in their work place. In this case, 24-29 years of aged group are more burnout in their work place in the domain of personal, work-related and client related burnout. Besides, there is no significant correlation between workplace stress ( $p > 0.05$ ) and age. Spearman's correlation test between personal, work-related, client-related burnout and participant's work experience. In case of participant's work experience, the result shows a weak but negative correlation

between PB ( $r = -0.236$ ,  $p < 0.004$ ), WB ( $r = -0.168$ ,  $p < 0.043$ ), CB ( $r = -0.226$ ,  $p < 0.006$ ) and age. This means, those who have less work experience are comparatively more burnout than those who have more work experience. But there is no significant correlation between workplace stress and the participants work experience.

The Pearson correlation test shows a significant correlation between burnout and workplace stress scale. A fair and positive significant correlation shown between PB ( $r = 0.466$ ,  $p < 0.000$ ) and CB ( $r = 0.466$ ,  $p < 0.000$ ) with WSS. Additionally, a moderate strong correlation has shown between WB ( $r = 0.593$ ,  $p < 0.000$ ) and WSS. Pearson correlation test did not show any significant correlation between the domains of burnout and stress scale and duration of time.

Chi square test was carried out to find out the association between burnout, stress and some socio-demographic status. Chi square test showed a significant association between personal and work-related burnout and gender. Chi-square test showed the value of personal burnout is 6.714 and  $p = 0.01$ . The odd of personal burnout is 2.6 times higher among female compared to male with level of significance  $p = 0.01$  and 95% CI (1.257-5.775). In the domain of work-related burnout, the value of chi-square is 8.396 and p-value is 0.004. The odd of work-related burnout is 2.806 times higher among female compared to male with level of significance  $p = 0.04$  and 95% CI (1.382-5.695). The females reported more significantly higher burnout than males in personal and work-related burn-out domains. But there is no association with client related burnout, workplace stress and the participant's gender. In terms of marital status, chi-square test result showed a significant association between personal burnout and the marital status of occupational therapists. The value of chi-square is 4.785 and p-value is 0.029. The odd of personal burnout is 2.25 times

higher among single participants compared to married participants with level of significance  $p=0.029$  and 95% CI (1.080 – 4.689). So, the interpretation of this result is single participants become more personal burnout than married participants. But there is no association between work and client-related burnout with the marital status of the participants. In terms of job type, there is a significant association between personal burnout (5.051,  $p < 0.025$ ) and client-related burnout (6.062,  $p < 0.014$ ) and occupational therapy clinician. It can, therefore, be concluded that the prevalence of burnout among clinician is significantly higher in the domain of personal and client-related burnout than the occupational therapist who work in the academia and community, which is statistically significant at 95% confidence level ( $p=0.014$ ).

The work sector in this study refers to the sector in which a person works such as the rehabilitation sector, special need school, NGOs and INGOs, academic sector, general and specialised hospital. Chi square showed a significant association between burnout and the participants who works in the special need schools and rehabilitation centres. For special need school the chi-square value is 4.089 and the p- value is 0.043. Since the p-value is  $< 0.05$ , there is an association between personal burnout and the participants who works in the special needs schools. On the other hand, there is an association between work-related burnout and the occupational therapists who work in the special needs schools. In the chi-square test the chi-square value is 5.192 and the p-value is 0.023 which is less than 0.05. As a result, it can be stated that the prevalence of burnout among the therapists who work in special needs schools is much higher in the domain of personal and work-related burnout than occupational therapists working in the other sectors. At the same time, there is a significant association between personal burnout and the occupational therapists who work

in the rehab sectors. The chi-square test result shows the value of chi-square is 8.745 and p-value 0.003. Also, a significant association between work-related burnout and occupational therapists working at rehab centres. The value of chi-square is 7.690 and the p-value is 0.006. From this result, it is possible to conclude that the prevalence of burnout among the therapists who work in the rehab centres is much higher in the of personal and work-related burnout than occupational therapists working in the other sectors. But in chi-square test there is no associations between client-related burnout. This result also suggested the percentages of level of burnout and stress according to the workplace type. Level of burnout (PB=48.4%, WB= 52.3%, CB= 48.4%) and stress (40.3%) are high among those participants who work in the rehabilitation centres. Some participants who start their own their organisations, are mostly burnout in the domain of work-related burnout and client-related burnout according to the result of the Chi-square test. Here the value of the chi-square for work-related burnout is 10.957 and the p-value is 0.001. Also, the chi-square value for client-related stress is 6.264 and the p-value is 0.012. There is no significant association between personal burnout and the owner of the organisation. The Chi-square result also suggested that there was no significant association between educational qualification, and job location.



## CHAPTER V: DISCUSSION

The study set out to find out the degree of burnout and work-related stress and identified the association between sociodemographic status and burnout and work-related stress among occupational therapists working in Bangladesh. It was a face-to-face survey, and the response rate was 84.4% which is an acceptable response for a cross-sectional study (Fincham, 2008). Although it was a challenge to reach this percentage because some participants denied participating in the study as they did not want to share their information listed in the questionnaire.

Most of the previous studies have been conducted on occupational therapists who work in hospitals (Campo & Darragh, 2010; Delos Reyes, 2018; Edwards & Durette, 2010; Gupta et al., 2012; Janus et al., 2018; Langballe et al., 2009; Lexén et al., 2020; Poot & Lingok, 2022; Poulsen et al., 2014). However, the unique findings of this study were involving many other work sectors (See Chapter IV, Table 1 to know the types of workplaces).

In terms of the degree of burnout, results from this study showed that Bangladeshi occupational therapists are more likely to have burnout, especially concerning WB (47.30,  $SD \pm 17.71$ ) and CB (45.20,  $SD \pm 17.36$ ). However, Portugal and the UK reported less burn out than us, such as 44% and 32.54% respectively (Poulsen et al., 2014; Reis et al., 2018). Nevertheless, occupational therapists in Malaysia were highly burnout in the domain of personal burnout (65.7%) and work-related burnout (62.0%) (Poot & Lingok, 2022). Although, previously mentioned literature review shows high level of burnout among occupational therapists in Spain, Turkey, Greece, and Cyprus, the result cannot be

compared because they used a different measurement tool which measure the different domain of burnout (Abaoğlu et al., 2021; Escudero-Escudero et al., 2020). As (Bruschini et al., 2018) stated, to help patients reach their highest functional potential after a disease or injury that interferes with daily living skills, occupational therapists have used creativity and problem-solving in the clinical reasoning process. The burnout of occupational therapists has a connection between problem-solving and creativity (Derakhshanrad et al., 2019).

Concerning workplace stress, 55.4% participants of this study are stressed in their workplace. Among them 30% are moderately stressed, 18% severe stressed and 6.8% are potentially in danger, which cannot be understated. The result cannot be compared with other studies. Because the Workplace Stress Scale have used in two articles, one of these in on the oncologists in Egypt (Soltan et al., 2020b) and another one is in this study on occupational therapists. Some of other standard questionnaire had used previous studies to investigate the level of stress of health professionals, like job stress scale, work-related stressor, The Psychiatric Nurses Occupational Stress Scale (PNOSS) (Boran et al., 2012; De Cieri et al., 2019; Peter, Hahn, et al., 2020; Peter, Schols, et al., 2020). One interesting finding of this study was that there is significant correlation between workplace-related stress and burnout among Bangladeshi occupational therapists. However, as this study did not descriptively identify the factors related to these, the student investigator cannot conclude the reason behind this finding. Gupta et al., (2012) found that if there is mismatch between the person and the value of the organisation, conflict, lack of respect and rewards, and dissatisfaction with the job, it can increase the level of stress of occupational therapists in the workplace. Therefore, it is suggested to continue further study in the topic area.

According to the result of the investigation on sociodemographic information, 36.3% were male and 63.7% were female. So, the female response rate was two times higher than the male. Concerning gender, the result obtained from the other studies that suggested the female group are more burnout and stressed rather than the male group whereas this study showed the same result as Bangladeshi Occupational therapists (Kim et al., 2020; Lee et al., 2021; Oddie & Ousley, 2007). Most of the female participants (47.3%) were burned out in the domain of personal and work-related burnout in this study. Wagman et al., (2017) stated the reason for burnout that, particularly among women, difficulties maintaining work-life imbalance and occupational balance are the risk factors for developing mental health problems such as burnout syndrome. Another reason of female burnout is the association of gender discrimination. Regarding the association between the level of burnout, and marital status, a significant difference was observed concerning personal burnout. The result from this study indicated that, personal burnout is higher among the single participants compare to the married participants. The previous study supports this result (Escudero-Escudero et al., 2020). As they stated, being single was associated with higher degrees of burnout, compared to married people. As agreed with what was reported in previous study (Poot & Lingok, 2022), higher rates of burnout were not significantly associated with the number of children that the therapist had. But another study opposed this finding and stated that, the levels of burnout decreased as the number of children increased (Escudero-Escudero et al., 2020).

The median age of participants was 28.00,  $SD \pm 4.62$ . This study found that young aged OTs are more likely to burnout then the older professionals. Especially occupational therapists between 24 to 29 are more likely but in several studies contradict this result and

stated, being older was linked to a higher prevalence of burnout while being younger caused that prevalence to decline (Escudero-Escudero et al., 2020; Poot & Lingok, 2022; Reis et al., 2018). Apart from age, the occupational therapists, those with less work experience are more likely to face the job burnout in Bangladesh. This finding also contrary to previous study (Anyfantis et al., 2020; Bruschini et al., 2018; Reis et al., 2018) and suggested that years of work experience are viewed as a key indicator of professional burnout, which is defined by an elevated level of stress, more unfavorable feelings toward work, and a decreased impression of achievement in relation to work (Duli, 2016). Additional research is needed to better understand about the reason of burnout in a young aged group.

This study reports no correlation between working hours and burnout and work-related stress. It was a highlighting point that occupational therapists working in Bangladesh spend almost nine to 11 hours in their workplace which means occupational therapists work per week for 54-66 hours. While evidence suggests that this number of working hours is a huge risk of burnout for a person to work in first contact with a client who is a person with a disability (Bruschini et al., 2018) , this study result contradicted with it (Escudero-Escudero et al., 2020). According to International Labore Organisation (ILO) a person should work for 8 hours per day or for 48 hours per hours (Servais, 2022).

The findings show most of the occupational therapists work in special needs schools and the rehabilitation centers. Between rehabilitation centre and special need school, who works in the rehabilitation center are more likely highly burnout rather than special need school in the domain of personal and work-related burnout. As most of the study have been conducted among the occupational therapists who work in the hospitals or clinics,

(d'Ettorre & Greco, 2015; Gupta et al., 2012; Kim et al., 2020; Lee et al., 2021; Oddie & Ousley, 2007) this result cannot be compared.

Though there were no significant association between burnout and stress and owner of the organisation but the student researcher finds some clinician who are at the same time an entrepreneur of their organisation. Therefore, they have to do some managerial role which is relevant to their clinical work. So, further research should be conducted to identify if there is any effect in their clinical role due to their managerial role.

## CHAPTER VI: CONCLUSION

### 6.1 Strength and Limitations

#### 6.1.1 Strength

- To ensure the quality of data, five stages of data life cycle management had been followed. The data collection from participants and data entry process was non-biased.
- Data was collected in face-to-face survey method and stored in the cloud system with strong password protected Google security.
- There was no unauthorised access without the student researcher and the responsible supervisor. All data was used as it is. No modifications or exploitation was done.
- For data safety and validation, all the data used in this study will be destroyed.
- As seen in previous study, the occupational therapists were mostly work based on the hospital based, this study findings strengthen the body of evidence by including other work setting too, such as general and specialised hospital, OT academic institute, NGO and INGO, rehabilitation centers and special needs schools.

#### 6.1.2 Limitation

- As it is a sensitive topic, some of occupational therapist did not want to share their information about their mental condition. Therefore, the sample size could not reach.
- There were multiple invalid phone numbers in the data base which restricted to reach the overall population.
- One participant did not report age.

## **6.2 Practice Implication**

- Burnout and work-related stress are a part of the mental health concern. As this study findings showed that burnout and work-related stress had relation with the sociodemographic status and the work element so, it is a concerning issue among occupational therapy professionals. Therefore, it is important to raise awareness among the occupational therapist himself and his employers and stakeholders. As occupational therapy professionals can facilitate the coping strategies or mindfulness activity by himself but the organisation authority should recruit workplace mental health professionals, psychiatric and psychologists for the employers to share their problems. As the impact of this steps, the occupational therapists feel fit mentally and physically and can give a better implementation to their clients. Also, Recently Bangladesh updated the mental health policy in the workplace. So, this study was time effective as this creates an opportunity for the employers of occupational therapists working in Bangladesh to emphasise on their workplace mental health.

### **6.2.1 Research Recommendation**

Some research recommendations are follows:

- Copenhagen Burnout Inventory and Workplace Stress Scale are having a structured question. But during data collection, the participants shared some another reasons of burnout apart from this questionnaire. This quantitative study finds out the prevalence of burnout and work-related stress among occupational therapists working in Bangladesh. A qualitative study should be conducted on this topic to find out the reason of burnout, some associated factors and the effect of burnout in the family life.

- Another study can be conducted to identify the relation between job satisfaction, job turnover and work-related burnout and stress.
- A study can be conducted with an aim to identify the relation between work-related burnout and physical and mental health among healthcare providers.
- A study can be carried out to determine the influence of mindfulness and coping skills in preventing work-related stress and burnout.

### **6.3 Conclusion**

The purpose of the study was to find out the degree of burnout and the level of stress of occupational therapists working in Bangladesh. This is the first research on mental health status among this population in Bangladesh. The study also contributes to our understandings of sociodemographic status and status of occupational therapists currently working in the country. A major number of occupational therapists experienced moderate level of burnout in the domain of work-related burnout and client related stress. It is highly possible for an occupational therapist as they have first-hand work experience with people with disability which is a vulnerable or marginalised group of people in the context of Bangladesh. So, the professionals could face client's mental burden during the intervention. Additionally, a long working hour was reported by occupational therapists in Bangladesh. More studies are needed with occupational therapists working with various settings to gain a gross understanding about the factors related to burnout and work-related stress. Furthermore, to protect the mental health of occupational therapists in Bangladesh a permanent conceptual plan should be adopted by the employer organisations.



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## Appendix

### Appendix A: Approval Letter and Permission Letter

#### IRB Approval Letter



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

Ref:

Date:

CRP/BHPI/IRB/09/22/649

28<sup>th</sup> September, 2022

Aporna Paul  
 4<sup>th</sup> Year B.Sc. in Occupational Therapy  
 Session: 2017-18, Student ID: 122170297  
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

**Subject: Approval of the thesis proposal “Work-related Stress and Burnout of Occupational Therapy in Bangladesh” by ethics committee.**

Dear Aporna Paul,  
 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 Arifa Jahan Ema as thesis supervisor. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire
3	Information sheet & consent form.

The purpose of the study is to measure the degree of burnout and level of work-related stress of occupational therapists working in Bangladesh. The study involves use of Maslach Burnout Inventory (MBI) and The Workplace Stress Scale (WSS) questionnaire that may take 30 to 45 minutes to answer questions and there is no likelihood of any harm to the participants and no economic benefits for the participants. 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 27<sup>th</sup> August, 2022. at BHPI (32<sup>nd</sup> 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,

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

## Permission Letter

Date: 19.10.2022

The Head of the Department  
Dept. of Occupational Therapy  
Bangladesh Health Professions Institute (BHPI)  
CRP, Savar, Dhaka

Subject: Request for seeking permission to collect data from occupational therapist

Sir,

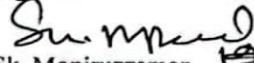
I beg most respectfully to state that, I am a student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI) which is an academic institute of Centre for the Rehabilitation of the Paralyzed (CRP), affiliated to Faculty of Medicine, University of Dhaka. I am interested to conduct a quantitative study on occupational therapist. My research title is "Burnout and Work-related Stress of Occupational Therapist in Bangladesh". The purpose of this study is to measure the degree of burnout and level of work-related stress of occupational therapists working in Bangladesh. To measure the degree of burnout and level of work-related stress, I am using The Copenhagen Burnout Inventory and The Workplace Related Stress Scale. Now, I am looking for your kind approval to start my data collection from Bangladesh Health Professions Institute (BHPI), Centre for the Rehabilitation of the Paralyzed (CRP)-Savar (head office) and all branches of CRP (Mirpur, Ganakbari, Manikganj, Mymensingh, Sylhet, Moulvibazar, Gobindopur, Chattagram, Barisal, Rajshahi, Nawabganj).

So, I therefore pray and hope that you would be kind enough to grant me the permission for collecting the data and oblige thereby.

Sincerely,

Aporna Paul  
4<sup>th</sup> year, B.Sc. in Occupational Therapy,  
Session- 2016-17  
Department of Occupational Therapy.

Signature and comments of head of the department

  
Sk. Moniruzzaman 31/10/2022  
The Head of the Department  
Dept. of Occupational Therapy  
Bangladesh Health Professions Institute (BHPI)  
CRP, Savar, Dhaka



**Appendix B: Information Sheet, Consent and Withdrawal consent form  
(English Version)**

**Bangladesh Health Professions Institute (BHPI)**

**Occupational Therapy Unit**

**CRP, Chapain, Savar, Dhaka-1343**

**Information sheet**

**Research Title:** Burnout and Work-related Stress in Occupational therapists in Bangladesh- A Cross-sectional study.

Name of researcher: Aporna Paul, 4th year, Occupational Therapy, Unit, Roll:39

**Supervisor:** Arifa Jahan Ima, Lecturer, Occupational Therapy Department, Course Co-ordinator, M.Sc. in Occupational Therapy, Bangladesh Health Professions Institute (BHPI), Savar, Dhaka.

I Aporna Paul, want to invite you to take part in research. Before you take the decision, you have to know why this research is being done and how you are related to it. Please take time to read the given information. If you face any problem after reading or you need to know more information, you can question me.

**Background and Aim of This Research**

I am Aporna Paul, studying B.Sc. in occupational therapy in Bangladesh Health Professions Institute (BHPI) which is under the Medicine faculty of Dhaka University, an academic institute of Centre for the rehabilitation of Paralysed. As a part of B.S.C course curriculum I am going to conduct a research activity under the lecturer of occupational therapy Arifa Jahan Ema. The topic of the research Pressure about Burnout of Bangladesh Occupational Therapist and work. Aim of this study is to find out the degree of burnout and level of work-related stress.

**What to do to participate in the study?**

As I will measure the level of burnout and the pressure related to the work, I will use two scales for the pressure of work and level of burnout of occupational therapist. Here socio-

economical information will be included. All the questions included in the scale of participants should be answered. Time will be taken for 10-15 minute.

**Why you are invited to participate?**

As the topic for my research topic is Burnout and Work-related Stress of Occupational Therapist in Bangladesh, so I invite all the occupational therapist of Bangladesh who have completed B.Sc. in occupational therapy from Bangladesh Health Professions Institute (BHPI) and working in Bangladesh as an occupational therapist (clinical/non-clinical/community) and worked as teacher. But those who are retired occupational therapist and intern/manager or not working in Bangladesh are not included in the research.

**Will you have to participate?**

Participation in the research is completely voluntary. Before participation consent should be taken from participants. After the participants participated, they will be accounted to answer all the questions. Participants will be given with consent withdrawal paper so that they can cancel their participation according to their wish within two weeks after conducting survey.

**What are the possible risks and opportunities of participation?**

There is no direct opportunity for this participation that means participants will not get any financial opportunity. Apart from this, there is no negative question in the two scale. Therefore, there is no physical or mental risk of participants. If any problem is seen after participation, then a doctor or psychiatrist will advise. Furthermore, by your participation in this study it will be known among Bangladesh occupational therapist who suffer most from the burnout and pressure of work and the problem is detected severe which will increase the awareness about mental health among the occupational therapist.

**Will the participation be confidential?**

Researcher will strictly maintain the secrecy of the research. Name of the participants will be cited only in the consent paper. To maintain the secrecy of the participants code will be maintained in the question paper of participants. Only the related researcher and supervisor will be able to know about it directly. Information paper will be locked in a drawer and

preservation of electronics will be in occultation therapist unit of BHPI and personal laptop of the researcher.

### **What will be the result of research?**

By this research we can detect the pressure of work of occupational therapist and level of burnout which will help the employer to create a sound environment for work. If the result is shown, level of burnout and pressure of work is very much then we will count it as a serious issue. To ensure a good mental health in workplace, higher authority can take necessary steps. This research can make an ideal proof which can provide concept to other researchers. They can use this proof for their study.

### **Promotional result**

Result of this research will be published and presented through print media, electronic/social media, conferences and criticism.

### **If you have any question you can contact through the given address**

#### **Researcher: Aporna Paul**

Bangladesh Health Professions Institute (BHPI)

B.Sc. in occupational therapy

Session:2017-2017, Roll:39

Savar, Dhaka

Email:apornalpaul39@gmail.com

Contact number:01764070561

#### **Supervisor: Arifa Jahan Ema**

Lecturer and Course Co-ordinator of M.Sc. in occupational therapy.

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

Savar, Dhaka

Email: [arifajemaotbhpi@gmail.com](mailto:arifajemaotbhpi@gmail.com)

Contact number:0175397904

## Consent Form

I am Aporna Paul, studying B.Sc. in occupational therapy in Bangladesh Health Professions Institute (BHPI) which is under the Medicine faculty of Dhaka University, an academic institute of Centre for the rehabilitation of Paralyse. As a part of B.Sc. course curriculum, I am going to conduct a research activity under the lecturer of occupational therapy Arifa Jahan Ema. The topic of the research Pressure about Burnout of Bangladesh Occupational Therapist and work. Aim of this study is to find out the degree of burnout and level of work-related stress.

Please read the following statements and put tik (✓) on yes or no to say that you understand the content of the information sheet, your involvement, and that you agree to take part in the abovenamed study.

I confirm that I have read and understood the participant information sheet for the study or that it has been explained to me and I have had the opportunity to ask questions. -----  
-----Yes / No

I have satisfactory answers to my questions regarding with this study. -----  
-----Yes / No

I understand that participation in the study is voluntary and that I am free to end my involvement till October, or request that the data collected in the study be destroyed without giving a reason. -----  
--Yes / No

However, all personal details will be treated as highly confidential. I have permitted the investigator and supervisor to access my recorded information. -----  
-----Yes / No

I have sufficient time to come to my decision about participation-----Yes / No

I agree to take part in the above study-----Yes / No

Participant's signature \_\_\_\_\_ Date \_\_\_\_\_

### Withdrawal Form

**Research Title:** Burnout and Work-related Stress in Occupational therapists in Bangladesh.

**Name of Researcher:** Aporna Paul, 4th year, Occupational Therapy, Roll:39

I, .....(Participant), wish to withdraw my consent to the use of data arising from my participation.

Name of the participant..... Date .....

Signature of the Participant.....Date.....

Name of the Researcher.....Date.....

## Appendix B: Information Sheet, Consent and Withdrawal consent form

(Bangla Version)

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)

অকুপেশনাল থেরাপি বিভাগ

সিআরপি, চাপাইন, সাভার, ঢাকা- ১৩৪৩

### তথ্যপত্র

শিরোনাম: বাংলাদেশে অকুপেশনাল থেরাপিস্টের বার্নআউট এবং কাজ সম্পর্কিত চাপ

গবেষকের নামঃ অপর্ণা পাল, ৪র্থ বর্ষ, অকুপেশনাল থেরাপি বিভাগ, রোল- ৩৯

তত্ত্বাবধায়কঃ আরিফা জাহান ইমা, প্রভাষক, অকুপেশনাল থেরাপি বিভাগ, কোর্স কোর্ডিনেটর, এমএসসি ইন অকুপেশনাল থেরাপি, বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটে (বিএইচপিআই), সাভার, ঢাকা।

আমি অপর্ণা পাল, আপনাকে একটি গবেষণায় অংশ নিতে আমন্ত্রণ জানাতে চাই। আপনি সিদ্ধান্ত নেওয়ার আগে আপনাকে বুঝতে হবে কেন গবেষণাটি করা হচ্ছে এবং এটি আপনার সাথে কীভাবে জড়িত। নিম্নলিখিত তথ্য পড়ার জন্য দয়া করে সময় নিন। আপনার পড়ার পর বুঝতে কোনো প্রকার সমস্যা হলে বা আপনি আরও তথ্য চাইলে প্রশ্ন করতে পারেন।

### আমার পরিচয় এবং এই গবেষণার উদ্দেশ্য

আমি অপর্ণা পাল, বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটে (বিএইচপিআই) বি.এস.সি ইন অকুপেশনাল থেরাপিতে অধ্যয়নরত যা ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের সাথে অধিভুক্ত, পক্ষাঘাতগ্রস্তদের পুনর্বাসন কেন্দ্রের (সিআরপি) এর একটি একাডেমিক ইনস্টিটিউট। আমি বর্তমানে অকুপেশনাল থেরাপির উপর আমার স্নাতক অধ্যয়ন করছি। বি.এস.সি কোর্স কারিকুলামের একটি অংশ হিসেবে আমি অকুপেশনাল থেরাপি বিভাগের প্রভাষক আরিফা জাহান ইমা এর তত্ত্বাবধানে একটি গবেষণা কার্যক্রম পরিচালনা করতে যাচ্ছি। গবেষণার বিষয়- বাংলাদেশে অকুপেশনাল থেরাপিস্টের বার্নআউট এবং কাজ সম্পর্কিত চাপ। এই অধ্যয়নের লক্ষ্য হল অকুপেশনাল থেরাপিস্টদের বার্নআউটের মাত্রা এবং কাজের-সম্পর্কিত চাপের লেভেল পরিমাপ করা।

গবেষণায় অংশগ্রহণ করতে হলে কী কী করতে হবে?

যেহেতু আমি বার্নআউটের মাত্রা এবং কাজ-সংক্রান্ত চাপের মাত্রা পরিমাপ করব, অকুপেশনাল থেরাপিস্টদের কাজ-সম্পর্কিত চাপ এবং অকুপেশনাল থেরাপিস্টের বার্নআউট পরিমাপের জন্য দুটি স্কেল ব্যবহার করব। এখানে আর্থ-সামাজিক সম্পর্কিত তথ্যও অন্তর্ভুক্ত থাকবে। অংশগ্রহণকারীদের স্কেলে অন্তর্ভুক্ত সকল প্রশ্নের উত্তর দিতে হবে। প্রশ্নের উত্তর দিতে 10-15 মিনিট সময় লাগবে।

### **কেন আপনাকে অংশ নিতে আমন্ত্রণ জানানো হয়েছে?**

যেহেতু আমার গবেষণার বিষয় হল বাংলাদেশের অকুপেশনাল থেরাপিস্টের বার্নআউট এবং কাজ সংক্রান্ত চাপ তাই আমি এখানে বাংলাদেশের সকল অকুপেশনাল থেরাপিস্ট যারা বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) থেকে বিএসসি ইন অকুপেশনাল থেরাপিতে স্নাতক শেষ করেছেন এবং বাংলাদেশে একজন অকুপেশনাল থেরাপিস্ট- ক্লিনিকাল / নন ক্লিনিকাল/ কমিউনিটি এবং শিক্ষক হিসেবে কাজ করছেন, তাদের আমন্ত্রণ জানাচ্ছি। কিন্তু যারা অকুপেশনাল থেরাপিস্ট হিসেবে অবসর প্রাপ্ত অথবা ইন্টার্ন/ ম্যানেজার বা বাংলাদেশে কাজ করছেন না, তারা এই গবেষণার আওতাভুক্ত হবেন না।

### **আপনাকে কি অংশগ্রহণ করতে হবে?**

গবেষণায় অংশগ্রহণ সম্পূর্ণ স্বৈচ্ছাধর্মী। অংশগ্রহণের আগে অংশগ্রহণকারীর কাছ থেকে সম্মতি নেওয়া হবে। অংশগ্রহণকারীর অংশগ্রহণের পর প্রশ্নপত্রের সকল প্রশ্নের উত্তর দিতে বাধ্য থাকবেন। অংশগ্রহণকারীদের সম্মতি প্রত্যাহার ফর্ম দেওয়া হবে যাতে অংশগ্রহণকারী ইচ্ছানুযায়ী নভেম্বর মাসের মধ্যে অংশগ্রহণ বাতিল করতে পারেন।

### **অংশগ্রহণের সম্ভাব্য ঝুঁকি এবং সুবিধাগুলি কী কী?**

এই গবেষণায় অংশগ্রহণের জন্য সরাসরি কোনো সুবিধা নেই অর্থাৎ অংশগ্রহণকারী কোনো আর্থিক সুবিধা পাবেন না। এছাড়াও, দুটি স্কেলে নেতিবাচক কোন প্রশ্ন নেই। সুতরাং, অংশগ্রহণকারীদের কোন শারীরিক বা মানসিক ঝুঁকি নেই। অংশগ্রহণের জন্য কোন সমস্যা দেখা দিলে, গবেষক একজন ডাক্তার বা মনোরোগ বিশেষজ্ঞের পরামর্শ দেবেন। অধিকন্তু, এই অধ্যয়নে আপনার অংশগ্রহণের মাধ্যমে, এটা জানা যাবে বাংলাদেশের অকুপেশনাল থেরাপিস্টদের মধ্যে কারা বেশি কাজ-সম্পর্কিত স্ট্রেস এবং বার্নআউটে ভুগছেন এবং এই সমস্যাটি গুরুত্বপূর্ণ বিষয় বলে বিবেচিত হবে, যা অকুপেশনাল থেরাপিস্টদের মধ্যে মানসিক স্বাস্থ্য সম্পর্কে সচেতনতা বাড়াতে সাহায্য করবে।

### অংশগ্রহণ কি গোপনীয় হবে?

গবেষক কঠোরভাবে সমস্ত তথ্যের গোপনীয়তা বজায় রাখবেন। অংশগ্রহণকারীদের নাম শুধু মাত্র সম্মতি পত্রে উল্লেখ্য করা থাকবে। অংশগ্রহণকারীদের গোপনীয়তা বজায় রাখতে প্রশ্নাবলীতে সমস্ত অংশগ্রহণকারীদের জন্য কোড নম্বর ব্যবহার করা হবে। শুধু মাত্র সংশ্লিষ্ট গবেষক এবং সুপারভাইজার সরাসরি এই তথ্য জানতে সক্ষম হবেন। তথ্য পত্র একটি লক করা ড্রয়ারে রাখা হবে এবং তথ্যের ইলেক্ট্রনিকস সংরক্ষণ বিএইচপিআই এর অকুপেশনাল থেরাপি বিভাগী এবং গবেষকের ব্যক্তিগত ল্যাপটপে সংগ্রহ করা হবে।

### গবেষণার ফলে কি হবে?

এই গবেষণার মাধ্যমে আমরা অকুপেশনাল থেরাপিস্টদের কাজের চাপ এবং বার্নআউটের মাত্রা চিহ্নিত করতে পারি যার মাধ্যমে একটি ভাল কাজের পরিবেশ তৈরি করতে নিয়োগকর্তাদের সহায়তা করবে। যদি ফলাফল দেখায় যে, কাজের সাথে সম্পর্কিত চাপ এবং বার্নআউটের মাত্রা অত্যন্ত বেশি, আমরা এটিকে একটি গুরুতর সমস্যা হিসাবে বিবেচনা করতে পারব। কর্মক্ষেত্রে উন্নত মানসিক স্বাস্থ্য নিশ্চিত করার জন্য উর্ধ্বতন কর্তৃপক্ষ ব্যবস্থা নিতে পারে বা পদক্ষেপ নিতে পারে। এই গবেষণাটি একটি আদর্শ প্রমাণ তৈরি করতে পারে বা কিছু ফাঁক খুঁজে পেতে পারে যা গবেষণা গোষ্ঠীকে আরও ধারণা দিতে পারে। গবেষণা গোষ্ঠীগুলি তাদের আরও অধ্যয়নের জন্য এই প্রমাণ বা ফাঁকগুলি ব্যবহার করতে পারে।

### প্রচারমূলক ফলাফল

এই গবেষণা প্রকল্পের ফলাফলগুলো প্রিন্ট মিডিয়া, ইলেকট্রিক/সামাজিক যোগাযোগ মাধ্যম, সম্মেলন, আলোচনা ও সমালোচনার মাধ্যমে জার্নাল এর মতো ফোরামে প্রকাশিত এবং উপস্থাপন করা হবে।



আপনার যদি কোন প্রশ্ন থাকে তাহলে আপনি নিম্নলিখিত ঠিকানায় যোগাযোগ করতে পারেনঃ

গবেষকঃ

অপর্ণা পাল

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)

বিএসসি ইন অকুপেশনাল থেরাপি

সেশনঃ ২০১৭-১৮, রোল-৩৯

সাভার, ঢাকা

ইমেইলঃ [apornapaul@gmail.com](mailto:apornapaul@gmail.com)

যোগাযোগের নম্বরঃ ০১৭৬৪০৭০৫৬১

তত্ত্বাবধায়কঃ

আরিফা জাহান ইমা,

প্রভাষক, অকুপেশনাল থেরাপি বিভাগ,

কোর্স কোর্ডিনেটর, এমএসসি ইন অকুপেশনাল থেরাপি,

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউটে (বিএইচপিআই)

সাভার, ঢাকা।

ইমেইলঃ [arifajemaotbhpi@gmail.com](mailto:arifajemaotbhpi@gmail.com)

যোগাযোগের নম্বরঃ ০১৭৫৩৯৭৯০৪১

সম্মতি পত্র

(অংশগ্রহণকারীর কপি)

আমি অপর্ণা পাল, ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের অন্তর্ভুক্ত পক্ষাঘাতগ্রস্তদের পুনরবাসনকেন্দ্র (সিআরপি), সাভার, ঢাকা, এর একাডেমিক ইনস্টিটিউট বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) এ অধ্যয়নরত ৪র্থ বর্ষের ছাত্রী। বি.এস.সি ইন অকুপেশনাল থেরাপি কোর্স কারিকুলামের একটি অংশ হিসেবে আমি একটি গবেষণা পরিচালনা করতে যাচ্ছি। গবেষণার বিষয়- বাংলাদেশের অকুপেশনাল থেরাপিস্টদের বার্নআউট এবং কাজ সম্পর্কিত চাপ। গবেষণার উদ্দেশ্য হলো বাংলাদেশের অকুপেশনাল থেরাপিস্টদের বার্নআউট এর মাত্রা পরিমাপ করা এবং কাজ সংশ্লিষ্ট চাপের লেভেল বের করা।

অনুগ্রহ করে নিম্নলিখিত বিবৃতিগুলো পড়ুন এবং হ্যাঁ বা না-তে টিক দিন যাতে আপনি তথ্য পত্রের বিষয়বস্তু, আপনার সম্পৃক্ততা বুঝতে পারেন এবং আপনি উপরোক্ত গবেষণায় অংশ নিতে সম্মত হন।

১। আমি নিশ্চিত করছি যে, আমি গবেষণায় অংশগ্রহণকারীদের তথ্য পত্রটি পড়েছি এবং এর লক্ষ্য ও উদ্দেশ্য সম্পর্কে স্পষ্টভাবে অবগত। এটি আমাকে ব্যাখ্যা করা হয়েছে এবং আমি প্রশ্ন করার সুযোগ পেয়েছি।

-----হ্যাঁ/না।

২। এই গবেষণার সাথে সম্পর্কিত প্রশ্নের আমার সন্তোষজনক উত্তর আছে।

-----হ্যাঁ/না।

৩। আমি বুঝতে পেরেছি যে, গবেষণায় অংশগ্রহণ সম্পূর্ণ স্বেচ্ছাকৃত এবং আমি নভেষর পর্যন্ত আমার সম্পৃক্ততা বাতিল করতে পারব, অথবা অনুরোধ করছি যে অধ্যয়নে সংগৃহীত ডেটা কোনো কারণ না জানিয়ে বাতিল করা যাবে।

-----হ্যাঁ/না।

৪। তবে, সমস্ত ব্যক্তিগত বিবরণ অত্যন্ত গোপনীয় হিসাবে বিবেচিত হবে। আমি গবেষক এবং সুপারভাইজারকে আমার তথ্য ব্যবহার করার অনুমতি দিচ্ছি।

-----হ্যাঁ/না।

৫। অংশগ্রহণের বিষয়ে আমার সিদ্ধান্তে আসার জন্য যথেষ্ট সময় পেয়েছি

-----হ্যাঁ/না।

৬। আমি উপরোক্ত গবেষণায় অংশ নিতে সম্মত -----  
- হ্যাঁ/না।

অংশগ্রহণকারীর নামঃ .....

অংশগ্রহণকারীর স্বাক্ষর----- তারিখ-----

গবেষকের স্বাক্ষর----- তারিখ-----

প্রত্যাহার পত্র

(শুধুমাত্র স্বেচ্ছায় প্রত্যাহারের জন্য প্রযোজ্য)

গবেষনার শিরনামঃ বাংলাদেশের অকুপেশনাল থেরাপিস্টদের বার্নআউট এবং কাজ সংক্রান্ত চাপ

গবেষকঃ অপর্ণা পাল, ৪র্থ বর্ষ, অকুপেশনাল থেরাপি বিভাগ

আমি .....(অংশগ্রহণকারী), আমার অংশগ্রহণ থেকে উদ্ভূত ডেটা ব্যবহারের জন্য আমার সম্মতি প্রত্যাহার করতে চা।

প্রত্যাহারের কারণ .....

অংশগ্রহণকারীর নাম.....

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

গবেষকের স্বাক্ষর..... তারিখ.....

**Appendix: 3 Questionnaire**

**Sociodemographic Information**

**The table of socio-demographic characteristics: (English Version)**

Age: .....

Gender (Male/Female/Others):.....

Education: Undergraduate/Post-graduate.....

Marital Status: Yes/No

Children: Yes/No, if yes number:.....

Work Location: Urban/Rural.....

Current Position/ Designation:.....

Duration of Working

Time:.....

Types of Work: Part time/ Full

time.....

How long have you been working

here:.....

Work

Settings:.....

Do you have any other responsibility in this organisation? Yes or No. If yes, please write the name

.....

**আর্থ-সামাজিক অবস্থা ( Bangla version)**

1. আপনার বয়সঃ .....
2. লিঙ্গ (পুরুষ/মহিলা/অন্যান্য)ঃ .....
3. শিক্ষাগত যোগ্যতাঃ স্নাতক / স্নাতকোত্তর.....
4. বৈবাহিক অবস্থাঃ হ্যাঁ / না .....
5. সন্তানসন্ততিঃ হ্যাঁ/ না, যদি থাকে তাহলে কয়টি:.....
6. কর্মক্ষেত্রঃ শহর / গ্রাম .....
7. প্রতিষ্ঠানের নামঃ .....
8. কর্মক্ষেত্রে পদবীঃ.....
9. কর্মক্ষেত্রের প্রকারঃ (টিক দিন)  
(সাধারণ ও বিশেষায়িত হাসপাতাল / শিক্ষা প্রতিষ্ঠান / মানসিক হাসপাতাল / অটিজমসহ প্রতিবন্ধী শিশুদের বিশেষ শিক্ষাপ্রতিষ্ঠান / প্রতিবন্ধী ব্যক্তিদের পুনরবাসনকেন্দ্র/ এনজিও / সিবিআর / মাদকাসক্তি পুনর্বাসনকেন্দ্র / প্রবেশগম্যতা / আর্গোনোমিক্স / অকুপেশনাল হেলথ এন্ড সেফটি)
10. দিনের কত সময় আপনি কর্মক্ষেত্রে ব্যয় করেন.....
11. আপনার কাজের ধরনঃ পার্ট টাইম/ ফুল টাইম.....
12. আপনার কাজের অভিজ্ঞতা কতদিনের .....
13. কোন ইউনিটে কর্মরত  
আছেন?.....
14. একজন থেরাপিস্ট হিসেবে কাজ করা ছাড়া আপনি এই প্রতিষ্ঠানের আর কোনো পদে দায়িত্বরত আছেন কি? হ্যাঁ / না ,হ্যাঁ হলে পদের নামটি উল্লেখ করুন.....।

**The Workplace Stress Scale (English Version)**  
**Workplace Stress Scale™**  
 Copyright © The Marlin Company, North Haven, CT, and the  
 American Institute of Stress, Yonkers, NY

*Directions: Thinking about your current job, how often does each of the following statements describe how you feel?*

	Never	Rarely	Sometimes	Often	Very
Often					
A. Conditions at work are unpleasant or sometimes even unsafe.	1	2	3	4	5
B. I feel that my job is negatively affecting my physical or emotional well-being.	1	2	3	4	5
C. I have too much work to do and/or too many unreasonable deadlines.	1	2	3	4	5
D. I find it difficult to express my opinions or feelings about my job conditions to my superiors.	1	2	3	4	5
E. I feel that job pressures interfere with my family or personal life.	1	2	3	4	5
F. I have adequate control or input over my work duties.	5	4	3	2	1
G. I receive appropriate recognition or rewards for good performance.	5	4	3	2	1
H. I am able to utilize my skills and talents to the fullest extent at work.	5	4	3	2	1

*To get your score, add the numbers you answered to all of the eight questions and see how you compare.*

### **Interpreting Workplace Stress Scale™ scores**

**Total score of 15 or lower (33% of us are in this category):** Chilled out and relatively calm. Stress isn't much of an issue.

**Total score 16 to 20 (35%):** Fairly low. Coping should be a breeze, but you probably have a tough day now and then. Still, count your blessings.

**Total score 21-25 (21%):** Moderate stress. Some things about your job are likely to be pretty stressful, but probably not much more than most people experience and are able to cope with. Concentrate on seeing what can be done to reduce items with the worst scores.

**Total score 26-30 (9%):** Severe. You may still be able to cope, but life at work can sometimes be miserable. Several of your scores are probably extreme. You could be in the wrong job, or even in the right job but at the wrong time, and might benefit from counselling.

**Total score 31- 40 (2%):** Stress level is potentially dangerous – the more so the higher your score. You should seek professional assistance, especially if you feel your health is affected, or you might need to consider a job change.

## দ্যা ওয়ার্কপ্লেস স্ট্রেস স্কেল

দিকনির্দেশনা: আপনার বর্তমান চাকরির কথা চিন্তা করে, নিচের প্রতিটি বিবৃতি আপনার সাথে কতখানি সঙ্গতিপূর্ণ?

১= কখনোই না

২= কদাচিৎ

৩= মাঝে মাঝে

৪= প্রায়

৫= সবসময়

1. কর্মক্ষেত্রের পরিবেশ অপ্ৰীতিকর এবং কখনো কখনো অনিরাপদ।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

2. আমি মনে করি আমার কাজ আমার শারীরিক এবং মানসিক স্বাস্থ্যে নেতিবাচক প্রভাব ফেলছে।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

3. আমায় মাত্রাতিরিক্ত কাজ করতে হয় এবং/অথবা আমায় অনেক বেশি অযৌক্তিক ডেডলাইন পূরণ করতে হয়।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

4. আমি সহজে আমার উর্দ্ধতন কর্মকর্তার কাছে আমার মতামত অথবা আমার কাজের প্রতি আমার অনুভূতি প্রকাশ করতে পারি না।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়



5. আমি মনে করি কাজের চাপ আমার ব্যক্তিগত এবং পারিবারিক জীবনে প্রভাব ফেলছে।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

6. আমি মনে করি আমার কর্মক্ষেত্রের কাজের উপর আমার যথেষ্ট নিয়ন্ত্রণ আছে।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

7. আমি কর্মক্ষেত্রে ভালো কাজ করার জন্য যথাযথ স্বীকৃতি পাই অথবা পুরস্কৃত হই।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

8. আমি কর্মক্ষেত্রে আমার দক্ষতা এবং প্রতিভা সর্বোচ্চ পরিসরে ব্যবহার করতে পারি।

১. কখনোই না    ২. কদাচিৎ    ৩. মাঝে মাঝে    ৪. প্রায়    ৫. সবসময়

## **Copenhagen Burnout Inventory (English version) used in the PUMA study**

NB: The questions of the CBI are not being printed in the questionnaire in the same order as shown here. In fact, the questions are mixed with questions on other topics. This is recommended in order to avoid stereotyped response patterns.

### **Part one: Personal burnout**

Definition: Personal burnout is a state of prolonged physical and psychological exhaustion.

Questions:

1. How often do you feel tired?
2. How often are you physically exhausted?
3. How often are you emotionally exhausted?
4. How often do you think: "I can't take it anymore"?
5. How often do you feel worn out?
6. How often do you feel weak and susceptible to illness?

Response categories: Always, Often, Sometimes, Seldom, Never/almost never.

Scoring: Always: 100. Often: 75. Sometimes: 50. Seldom: 25. Never/almost never: 0.

Total score on the scale is the average of the scores on the items.

If less than three questions have been answered, the respondent is classified as non-responder.

### **Part two: Work-related burnout**

Definition: Work-related burnout is a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work.

**Questions:**

1. Is your work emotionally exhausting?
2. Do you feel burnt out because of your work?
3. Does your work frustrate you?
4. Do you feel worn out at the end of the working day?
5. Are you exhausted in the morning at the thought of another day at work?
6. Do you feel that every working hour is tiring for you?
7. Do you have enough energy for family and friends during leisure time?

**Response categories:**

Three first questions: To a very high degree, To a high degree, Somewhat, To a low degree, To

a very low degree.

Last four questions: Always, Often, Sometimes, Seldom, Never/almost never. Reversed score

for last question.

Scoring as for the first scale. If less than four questions have been answered, the respondent is

classified as non-responder.

**Part three: Client-related burnout**

Definition: Client-related burnout is a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work with clients\*.

\*Clients, student, patients, social service recipients, elderly citizens, or inmates.

**Questions:**

1. Do you find it hard to work with clients?
2. Do you find it frustrating to work with clients?
3. Does it drain your energy to work with clients?
4. Do you feel that you give more than you get back when you work with clients?
5. Are you tired of working with clients?
6. Do you sometimes wonder how long you will be able to continue working with clients?

**Response categories:**

The four first questions: To a very high degree, To a high degree, Somewhat, To a low degree,

To a very low degree.

The two last questions: Always, Often, Sometimes, Seldom, Never/almost never.

Scoring as for the first two scales. If less than three questions have been answered, the respondent is classified as non-responder

## কোপেনহেগেন বার্নআউট ইনভেন্টরি

### ব্যক্তিগত বার্নআউট

1. কতক্ষন পর পর আপনি ক্লান্ত বোধ করেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
  
2. কতক্ষন পর পর আপনি শারীরিকভাবে পরিশ্রান্ত হয়ে পেরেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
  
3. কতক্ষন পর পর আপনি মানসিকভাবে পরিশ্রান্ত হয়ে পেরেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
  
4. কতক্ষন পর পর আপনার মনে হয় "আমি আর নিতে পারছি না"?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
  
5. কতক্ষন পর পর আপনি নিজেকে শ্রান্ত বোধ করেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না

6. কতক্ষণ পর পর আপনার নিজেকে দুর্বল এবং অসুস্থ হয়ে যাবেন বলে মনে হয়?
- সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না

### কাজ-সম্পর্কিত বার্নআউট

1. আপনার কাজটি মানসিকভাবে কতটা ক্লান্তিকর?
  - খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
2. আপনি আপনার কাজের কারণে কেমন বার্ন আউট বোধ করেন?
  - খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
3. আপনার কাজ আপনাকে কতটা হতাশ করছে?
  - খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
4. একটি কর্মদিবসের শেষে আপনি কেমন শ্রান্তবোধ করেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না

5. রোজ সকালে ঘুম ভাঙ্গার পর পরবর্তী দিনের কাজের কথা ভেবেই আপনি কেমন পরিশ্রান্ত বোধ করেন?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
6. কখন কখন কাজের প্রতিটা ঘন্টাকেই আপনার ক্লান্তিকর মনে হয়?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
7. আপনার অবসর সময়ে পরিবার এবং বন্ধুদের সাথে কাটানোর মতো যথেষ্ট শক্তি থাকে?
  - সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না

### **ক্লাইন্ট-সম্পর্কিত বার্নআউট**

1. আপনি আপনার শিক্ষার্থীদের সাথে কাজ করাটা কেমন কষ্টসাধ্য বলে মনে করেন?
  - খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
2. আপনি শিক্ষার্থীদের সাথে কাজ করার সময় কতটা হতাশগ্রস্ত হোন?
  - খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
3. শিক্ষার্থীদের সাথে কাজ করার ফলে এটি আপনার এনার্জি কতটা কমিয়ে দেয়?

- খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
4. আপনি যখন ক্লায়েন্টদের সাথে কাজ করেন তখন আপনার প্রচেষ্টার তুলনায় শিক্ষার্থীদের প্রতিক্রিয়া কম থাকে- এই ব্যাপারটা আপনাকে কতটা ভাবায়?
- খুবই উচ্চ মাত্রায়
  - উচ্চ মাত্রায়
  - কিছুটা উচ্চ মাত্রায়
  - নিম্ন মাত্রায়
  - খুবই নিম্ন মাত্রায়
5. আপনি শিক্ষার্থীদের সাথে কাজ করে কতটা ক্লান্ত থাকেন?
- সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না
6. আপনি কি কখনো ভেবেছেন কতটা সময় আপনি আপনার শিক্ষার্থীদের সাথে কাজ চালিয়ে যেতে পারবেন?
- সবসময়
  - প্রায়
  - মাঝেমাঝে
  - কদাচিৎ
  - কখনোই না/প্রায় কখনোই না



**Appendix D: Supervision Contact Schedule**

Bangladesh Health Professions Institute  
 Department of Occupational Therapy  
 4<sup>th</sup> Year B. Sc In Occupational Therapy  
 OT 401 Research Project

Thesis Supervisor- Student Contact; face to face or electronic and guidance record

Title of thesis: *Burnout and Work-related stress of Occupational Therapists.*

Name of student: *Aporona Paul.*

Name and designation of thesis supervisor: *Anita Jahan Fara, Lecturer, Department of Occupational Therapy*

Appointment No	Date	Place	Topic of discussion	Duration (Minutes/ Hours)	Comments of student	Student's signature	Thesis supervisor signature
1	<i>14.08.22</i>	<i>BHPI Building</i>	<i>Research supervision contact schedule.</i>	<i>15 min</i>	<i>Need to clarify about aim, objective &amp; question over.</i>	<i>Aporona Paul.</i>	<i>Anita Jahan Fara</i>
2	<i>20.08.22</i>	<i>Library</i>	<i>Qualitative, quantitative sampling, scale</i>	<i>2 hour 15 min</i>	<i>Need to clarify sampling, NFO &amp; definitions of DTI, NBS &amp; other scales</i>	<i>Aporona Paul.</i>	<i>Anita Jahan Fara</i>

3	21.08.22	Literature	Aim, objective, work-related stress scale, definition of keywords, inclusion, exclusion criteria, sampling	2 hours 30 min	Final method submission, literature references	Approved Paul	21.08.22
4	24.08.22	BHPF Office building	Feedback of methodology & work-related stress scale working.	1 hour	Searching of MRS working; complete the basic part of the research	Approved Paul	24.08.22
5	25.08.22	BHPF Office building	Feedback of questionnaire and significance	45 min	Feedback of questionnaire, MRS working.	Approved Paul	25.08.22
6	28.08.22	BHPF Office building	Feedback of questionnaire inclusion, exclusion, significance, socio-demographic status.	2 hours	PPT construction, MDT, socio-demographic status complete.	Approved Paul	28.08.22
7	06.09.22	BHPF Office building	Bangla translation of the thesis scale, socio-demographic ques	20 min.	Introduction, literature reviews	Approved Paul	06.09.22
8	20.09.22	BHPF Office building	Introduction, literature review, information sheet.	45 min	Bangla translation of the scale, information sheet, questionnaire	Approved Paul	20.09.22
9	18.10.22	BHPF Office	Information sheet, consent form, ethical	45 min	Information sheet	Approved	18.10.22

	building	forum, questionnaire		criticism, done of individual, questionnaire, DT list			
10	BHPF office building 19.10.22	DT list, questionnaire Example. construction	50 min	DT list, questionnaire letter	Aparna Paul	12.05.22	
11	BHPF office building 22.10.22	Bureau & work-related stress questionnaire	30 min 1 hour	questionnaire of bureau & work-related stress	Aparna Paul	22.05.22	
12	BHPF office building 23.10.22	Bureau & work-related stress scales meeting	15 min	articles about the study	Aparna Paul	22.05.22	
13	BHPF office building 25.10.22	Articles abstract & literature review	30 min	Literature review	Aparna Paul	22.05.22	
14	BHPF office building 29.10.22	Pardipants list check, questionnaire	1 hour 12 min	Check the list of pardipants	Aparna Paul	12.05.22	
15	BHPF office building 31.10.22	Pardipants list check, questionnaire Demographic status	45 min	Data collection questionnaire check	Aparna Paul	12.05.22	

16	8.11.22	BHPF Office Building	Data collection, Prevalence rate of Neurological Characterist	30 min	Data collection,	Apartment	Apartment
17	24.11.22	BHPF Office Building	Program of Data Collection Research work schedule & Submission dates.	15 min	Self administration form, sample size calculation	Apartment	Apartment
18	6.12.22	BHPF Office Building	Data collection experience, literature review.	45 min	Detailed chart of lit. review	Apartment	Apartment
19	7.12.22	BHPF Office Building	Literature review chart, referencing	45 min	Submission of lit review	Apartment	Apartment
20	13.12.22	BHPF Office Building	Discussion on methodology	25 min	Submission of methodology	Apartment	Apartment

Note:

1. Appointment number will cover at least a total of 40 hours; applicable only for face-to-face contact with the supervisors.
2. Students will require submitting this completed record during submission your final thesis.

21	21.12.22	BHPI Office Building	Data input & Sorting clarification	25 min	Data input	Apoena Paul	21.12.22
22	22.12.22	BHPI Office Building	Lecture review feedback	40 min	Lecture review feedback	Apoena Paul	22.12.22
23	23.12.22	BHPI Office Building	Methodology feedback, Analysis,	1:45 1 hour 45 min	Frequency analysis.	Apoena Paul	23.12.22
24	24.12.22	BHPI Office Building	Result analysis, Submission date	2 hours	50% Result submission.	Apoena Paul	24.12.22
25	25.12.22	BHPI Office Building	Result analysis, Data input clarification,	1.5 hours	Data input & result analysis	Apoena Paul	25.12.22
26	26.12.22	BHPI Office Building	Result write up	1 hour	Rest of the result analysis.	Apoena Paul	26.12.22
27	27.12.22	BHPI Office Building	Result write up and Discussion.	25 min	Rest of the result analysis OR Discussion write up	Apoena Paul	27.12.22

28.	22.03.23	BHPI Building	Result, Discussion	95 min	Co-relation table, Discussion	Aporena Parl.	Atuma
29.	25.03.23	BHPI Building	Table, Inclusion, exclusion, discussion	1 hour	Discussion	Aporena Parl.	Atuma
30.	6.04.23	BHPI Building	Result & Discussion	2 hours	Method, result lit. review	Aporena Parl.	Atuma Kendri'23
31.	11.04.23	BHPI Building	Result, discussion method, lit. review	2.15 hour	Discussion.	Aporena Parl.	Atuma 12.04.23
32.	16.04.23	BHPI Building	Discussion, conclusion, introduction.	1 hour	Full draft feedback.	Aporena Parl.	Atuma
33.	8.05.23	Library	Full Draft feedback	2.5 hour	Quality assurance, full test	Aporena Parl.	Atuma
34.	11.05.23	Library	Abstract feedback	1 hour	PPT, Full draft	Aporena Parl.	Atuma

35.	14.05.23	Office building	Feedback for presentation	1 hour 30 min	Prepare for degree	Aptera Paul.	Atua
36.	03.06.23	Literary	Checked full draft of literature for final thesis book submission	2 hours 30 min	Complete thesis	Aptera Paul.	Atua
37.							
38.							
39.							
40.							
41.							