

**Occupational Balance Status among Mothers of  
Children with Autism Spectrum Disorder (ASD): A  
Cross-sectional study.**



By  
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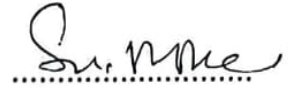
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## Statement of Authorship

Except where it is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis presented by me for any other degree or seminar. No other person's work has been used without due acknowledgment in the main text of the thesis. This thesis has not been submitted for the award of any other degree in any other tertiary institution. The ethical issue of the study has been strictly considered and protected. In case of dissemination of the findings of this project for future publication, the research supervisor will be highly concerned, and it will be duly acknowledged as an undergraduate thesis.

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## **Dedication**

Dedicated to my honorable and beloved parents, my respected all teachers of Bangladesh Health Professions Institute.

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## List of Abbreviations

ASD	Autism Spectrum Disorder
IQR	Interquartile Range
OT	Occupational Therapy
OB	Occupational Balance
OBQ	Occupational Balance Questionnaire
PCWD	Parents of Children with Disability
QoL	Quality of Life
ReDO	The Redesigning Daily Occupation
SWB	Subjective Well-being
WMA	World Medical Association

## Abstract

**Background:** ASD is a growing global public health concern. Caring for children with ASD can significantly impact various aspects of a mother's life including her occupational balance. Low occupational balance has been identified as a risk factor for stress-related disorders.

**Aim:** The study aimed to examine the status of occupational balance among mothers of children with ASD.

**Methodology:** This study was conducted by the quantitative approach with a cross-sectional design and purposive sampling. Data was collected through a face-to-face survey among 117 participants by using a standard questionnaire (OBQ11). Data was processed by using SPSS software 20.0 using descriptive analysis. The chi-square and fisher exact test were done to find out the association between occupational balance and sociodemographic characteristics.

**Results:** Among the 117 mothers, the median score for occupational balance was 17 (interquartile range [IQR] 11.5). 54.7% of them reported lower occupational balance and 45.3% of them reported higher occupational balance. Three sociodemographic characteristics: age of children, family status, and availability of paid help were significantly associated with the mother's occupational balance.

**Conclusion:** The results indicate that the majority of the mothers had low occupational balance that may negatively impact for caring of children with ASD. Occupational therapists need to focus on occupational balance to improve the mother's occupational balance.

**Keywords:** Occupational balance, mothers of children with ASD.

# CHAPTER I: INTRODUCTION

## 1.1 Background

Over the last decade, there has been an increase in global awareness of autism spectrum disorders and its prevalence. About twenty-six years ago, it was questioned whether ASD was universal and it was assumed to occur primarily in Western industrialized countries with advanced technological progress (Bakare & Munir, 2011).

The prevalence of ASD in the world was 0.6% (95% confidence interval: 0.4–1%) and subgroup analyses indicated that the prevalence of ASD in Asia, America, Europe, Africa and Australia was 0.4% (Salari et al., 2022). The prevalence of autism is a serious health issue in Bangladesh. Bangabandhu Sheikh Mujib Medical University (BSMMU) estimated that almost 2 in 1000 children have ASD in Bangladesh (Hasan MS, 2020). According to a recent study, there are 7.5 ASD cases for every 10,000 children in rural Bangladesh, and the finding raises the possibility that there are more ASD cases in Bangladesh than previously believed (Omar et al., 2023).

The neurological condition known as autism spectrum disorder (ASD) is typified by difficulties with social communication, interest inhibition, and repetitive behavior. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) included it in 2013 (Vahia, 2013). Environmental and hereditary variables that impact brain development are the causes of ASD. Though no common etiology of ASD has been identified yet, ongoing research is expanding our understanding of potential etiological pathways (Hodges et al., 2019). ASD based not only on the specific items of ASD, but involving other specific characterizations such as cognitive and adaptive function, language skills, comorbidity, other medical conditions and other psychiatric features in order to standardize the clinical characteristics of individuals

with ASD (Higashida & Munesue, 2013).

Many individuals with ASD need ongoing assistance, although their symptoms might range from moderate to severe (Lord et al., 2018). Along with fundamental limitations, children with ASD may also struggle with mental retardation, delayed adaptive skills, irritability, and severe behavioral problems. ASD has a variety of consequences for mental and physical health that impact health-related quality of life, so the symptoms that are linked to these conditions, such as agitation, rage, inattention, violence, self-harm, and other mental illnesses, not only hinder social functioning but also add to the stress of caring for family members and caregivers and decrease engagement in routine tasks (Kuhlthau et al., 2013).

Achieving a balance between professional, personal, and family obligations is a major problem for parents who work as productive, meaningful, and demanding parents. Having children surely alters how parents, particularly mothers, use their time (Dunn, 2012). A person with ASD often faces significant lifelong expenses, including those to their family, the community, and themselves (Horlin et al., 2014). ASD is a rising public health concern internationally, which is connected with a tremendous financial impact on the family, society, and nation (Bhuiyan & Medicine, 2020). It is important for parents and guardians to make an effort to balance their requirements with those of their children in order to satisfy the needs of their children, and physical exercise can have an effect on the QoL of children with ASD. Their families are underappreciated, so it is a challenging job to be a guardian or family member (Memari et al., 2015).

Mothers are generally seen as the children's major caretakers, and one of the inherent human characteristics that affects children's involvement is their attitudes and beliefs (Margalit et al., 2007). Mothers' engagement in everyday activities is impacted



by having a child with ASD, which also impacts the balance of family life (Td et al., 2016). Numerous studies have demonstrated that mothers of children with ASD feel fulfillment in raising their kids, but that this care also has a big influence on their lives in a lot of different ways (Hoefman et al., 2014). It can be challenging for mothers to balance the demands of their family, including housekeeping, other everyday responsibilities, and childcare (Bonis & Bonis, 2016). Mothers of children with ASD may have health and well-being problems as a result of their extensive duties (Mcauliffe et al., 2018). The stress of continuing to be a parent is one of the numerous obstacles and problems that mothers confront (Gona et al., 2016). Due to the child's lack of daily living skills, the mother must always provide support and supervision at home, as well as limit the child's capacity to leave the house or participate in other activities (Bashir et al., 2014). Mothers have several challenges when it comes to controlling their children's disruptive conduct (Ludlow et al., 2011), teaching their children to communicate and perform basic life skills, protecting their children from danger, as well as preparing for their children's future (Riany et al., 2016). Furthermore, parents must deal with the negative attitudes and stigma that are still present in society, which causes mothers of children with Autism to hide their children and limit social connections (Haq, 2021).

Having a child with special needs can disrupt a mother's routine and the harmony of her family life because a mother's engagement is influenced by various factors, such as her physical surroundings, the child's age, her health, and others (Lestari Weny & Yurika Fauzia Wardhani, 2014). When their child has ASD, mothers have less time to spend on self-care, housework, education, volunteer work, leisure, and social contact because they must continually attend to their child's shifting needs (Stein et al., 2011). For example, mothers of children with ASD spend a considerable amount of

time taking their children to different therapists and after school activities to enrich their children's experiences (Td et al., 2016). When their personal resources are depleted trying to satisfy their child's demands, parents of children diagnosed with autism spectrum disorders may experience varied degrees of financial difficulties and also have increased time commitment, fewer job prospects, and more expensive medical care, which are some of the things that have been proposed as contributing to this financial hardship (Liao, 2019).

A large proportion of caregivers of a child with ASD experienced mental health problems such as depression which eventually led to the decrease in physical health and quality of life (Santoso, 2021). Parents may experience elevated stress because they face challenges in managing the child's comorbidity-related deficits (Miranda et al., 2019). Previous studies revealed that mothers of children with ASD reported elevated psychological distress and caregiving burden (Estes et al., 2013), health-related problems (Fairthorne et al., 2015), lower levels of resilience and problems in various areas of family life (Ilias et al., 2019).

Mothers with children diagnosed with autism spectrum disorder (ASD) frequently express significant levels of psychological discomfort, including social distancing, symptoms of depression, and stress as parents, so that 33% to 59% of these moms report depressive symptoms that necessitate psychiatric treatment, and almost 40% express clinically substantial parental stress. Depressive symptoms can also have negative impacts, such as low energy, a lack of enthusiasm, and difficulties focusing (Feinberg et al., 2013). This study provides an overview of occupational balance of mothers of children with ASD. The study findings can also be a starting point for raising awareness about occupational balance among mothers of children with ASD.

## **1.2 Justification of the study**

Occupational balance is a core concept in occupational therapy, known to have a relationship to health and well-being from an individual perspective (Wagman & Håkansson, 2019). Lack of occupational balance or the experience of occupational imbalance has been associated with low self-rated health, high perceived stress (Håkansson et al., 2016) and an increased risk of stress-related mental health problems (Håkansson & Ahlberg, 2018). Occupational therapist's knowledge could be utilised to increase awareness of the importance of occupational balance within health services and improve mother's occupational balance (Uthede et al., 2022).

As the ASD is an emerging topic both globally and nationally, the student researcher is interested in studying about occupational balance status among mothers of children with ASD, it is of great importance to gain further knowledge of mothers' occupational balance. This knowledge can support occupational therapists in the development of interventions that respond to gender-specific needs for support. Furthermore, this research facilitated by occupational therapists to support a substantial improvement in mother's occupational balance. Depending on the mothers' total life situation and the cause of occupational imbalance, occupational therapy may need to be combined with other professional contributions such as counsellors and/or psychologists.

## **1.3 Operational Definition**

### ***1.3.1 Occupation***

The term "occupation" refers to any activity an individual performs in a setting or any aspect of daily life, including paid work, education, home chores, rest, or leisure. Typically, the term "occupation" are associated with the paid labor or a profession (Lee

et al., 2014).

In the occupational therapy context, occupation is defined as ‘activities and tasks of everyday life, named, organized, and given value and meaning by individuals and a culture’. The area of human occupation includes activities of daily living (ADLs), instrumental activities of daily living (IADL), rest, sleep, education, work, play, leisure and social participation (American Occupational Therapy Association, 2014)

### ***1.3.2 Occupational Balance***

The term "occupational balance" (OB) refers to a person's subjective perception of having an appropriate number of professions and an appropriate level of diversity between them (Wagman et al., 2012).

Occupational balance is defined as the harmony between all the many vocations one engages in on a daily basis and as the degree to which one's particular occupational patterns when considered in their context allow one to fulfill necessities for one's own well-being and standard of living (Karlsson et al., 2023).

### ***1.3.3 Autism Spectrum Disorder***

The term "autism spectrum disorder" refers to a group of early-onset sensory-motor repetitive behaviors and social communication impairments that have a significant genetic component in addition to other causes (Lord et al., 2018).

## **1.4 Aim of the study**

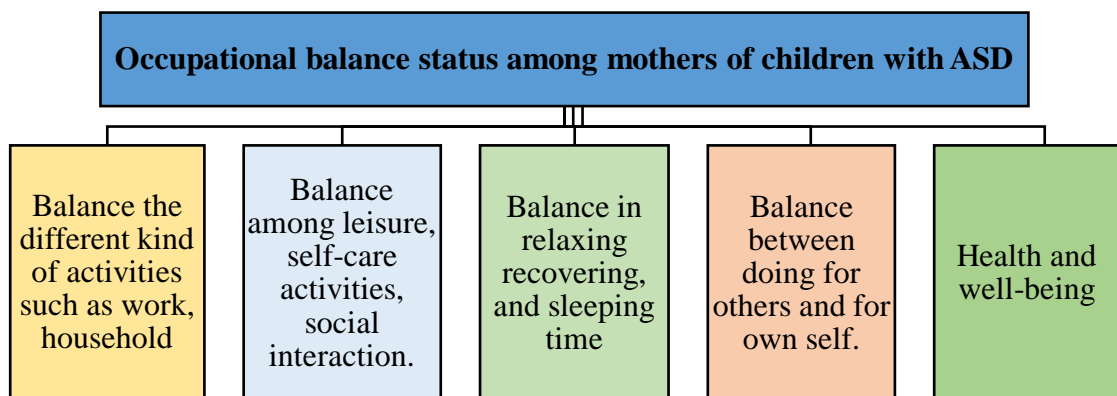
This study aimed to examine the status of occupational balance among mothers of children with ASD.

## CHAPTER II: LITERATURE REVIEW

This chapter reviews several key areas addressing the research literature regarding understanding the life of a mother with a child with an autism spectrum disorder.

**Figure 2.1**

Overview of literature review findings:



### **2.1 Occupational balance of mothers of children with ASD:**

Utilizing longitudinal data on 2223 employees of a Swedish government organization, a cohort study was conducted. The aim of the research was to investigate the potential predictive power of perceived occupational imbalance in relation to future gender differences, stress-related diseases, and the mediating effect of felt stress. The results of the study showed that the occurrence of stress-related disorders was predicted by occupational imbalance in both men and women. However, there are differences between each gender in the occupational imbalance features that predicted diseases linked to stress. Women's loss of energy for domestic tasks after profitable employment, the imbalance between daily occupations, and their lack of energy for friends,

recreation, etc. after a gainful job were also predictive factors for stress-related illnesses in women. It has been demonstrated that perceived stress acts as a mediator in the association between occupational imbalance and stress-related disorders (Håkansson & Ahlborg, 2018).

Occupational imbalance is a common cause of the rising number of sick leaves taken for stress-related illnesses. These kinds of problems typically have a detrimental impact on one's general health experience as well as one's capacity to work and manage daily living. There is still a lack of understanding on how to get workers and workplaces ready for the process of going back to work following their involvement in a work rehabilitation program because of stress and occupational illness. Thus, the purpose of this study was to characterize the conditions that participants in a ReDO intervention faced to attain a balanced daily life that includes a paid job because of occupational imbalance and poor health. For qualitative content analysis, the closing notes from the medical records of 54 informants were employed. In order to restore their full job capability and enhance occupational health, the informants took part in a group occupational therapy intervention. Four categories and one main topic emerged from the study, which explained the informants' perceptions of the need to take charge of their daily lives as a whole. In order to achieve this, they must deal with social interaction, boundary-setting, scheduling and prioritization, and the significance of their work (Karlsson et al., 2023).

### ***2.1.1 Balance the different kind of activities such as work, household task.***

Finding a balance between work and everyday life involves setting aside enough time to accomplish tasks both at home and at work (Guest, 2002). It also involves maintaining mental and physical well-being. The capacity of working women to maintain a healthy balance between their job and family lives together with all the duties

that go along with it; has a big impact on their potential to live long. Phenomenological design is a qualitative research approach that forms the basis of this study. Five working mothers whose children have ASD and who have received training in special education and rehabilitation facilities located in Gaziantep's core districts are the study's participants. Semi-structured interviews were used to gather research data. The categories created based on pre-established codes in the content analysis were used to analyze the data. The study's findings demonstrate that working mothers with ASD children had a negative outlook on their experiences in both job and family life, feeling as though they were not receiving enough support and going through emotional disorientation (Karahan & Hacifazlioglu, 2022).

### ***2.1.2 Balance among leisure, self-care activities, social interaction***

In this study, mothers in Alberta, Canada, who had a child, adolescent, or young adult with autism participated in an explanatory, sequential, mixed-methods design. The study's objective was to investigate how professional services affected the career and leisure activities of mothers of children with ASD. The study's conclusions demonstrated that service discontinuity was a strong predictor of interrupted work and leisure activities. Of the 108 participants in that study, 78% said that their ability to engage in the workforce was lowered as a result of using professional support and services. Research has shown that mothers who accessed professional help and services had less time for leisure activities and 48% of poll respondents stated that their free time was interfered (Hodgetts et al., 2014)

Studies around the world have shown that having a child with disability impacts a mother's time use, the purpose of this study was to compare the time use of mothers of children with autism spectrum disorder (ASD) with mothers of typically developing children. Findings of this research is that mothers of ASD children spent more time

doing childcare activities ( $P < 0.001$ ), but no significant differences were found in time spent in self-care, rest/sleep, leisure, household chores, job or social participation activities. Furthermore, quality and enjoyment of daily activities were significantly lower in mothers of children with ASD compared to mothers of typically developing children so that mothers of ASD children are more prone to having an imbalanced life. Hence, there is a need for occupational therapists to work in partnership with mothers to support their occupational engagement and life satisfaction (Behnia et al., 2017).

In a systematic literature, leading to the publication of 27 studies that examined the living conditions of parents of children with autism spectrum disorders. This study examined the relationship between family life satisfaction, family functioning, leisure participation, and leisure satisfaction. The study included 123 Ohio parents of children with normal development and 112 participants with ASD. The results state that parents of kids with ASD reported engaging in the same amount of leisure time as parents of kids with typical development. Nonetheless, they discovered that leisure time was linked to a decrease in family life satisfaction and worse family interaction. A number of academics have also looked at how to adopt and strike a balance between leisure and family interaction, as well as leisure and communication within the family. In her research, Katherine discovered that leisure happiness was a more significant metric than leisure participation. acknowledgement of commitment to one's hobbies as a legitimate standard of satisfaction. They concluded that family functioning acted as a mediating factor between family leisure participation and family complacency. Families with children diagnosed with ASD participated in fewer family recreational activities and experienced less fulfilling leisure time compared to families without ASD or other impairments. However, the research did not examine how satisfied people were with their families or their free time. Owing to the higher rate of depression in this



demographic and the finding that engaging in leisure activities enhances mental health, none of this research took into account the potential impact of caregivers' psychological conditions on their opinions (Sylvia & Laveena, 2021).

It is acknowledged that engaging in meaningful work is the core idea of occupational science, essential to survival and health maintenance. The existing literature was examined using a scoping review in order to find research that discussed mothers' experiences during social events and family get-togethers with their children. To examine and synthesize the results, a theme synthesis was carried out. Four analytical themes emerged from the analysis of the included studies: feeling dread, worry, and anxiety; avoiding family gatherings; enjoying less and becoming less confident; and using techniques. The dominant topic of the study was negative experiences despite efforts. These results suggest that even when measures are used, mothers of children with ASD still struggle during social interactions, which limits their involvement (Moorthy, 2023).

With less time for personal care and leisure, mothers of children with ASD often have lower levels of life satisfaction than fathers. This is because mothers tend to spend more time than fathers caring for their children. To evaluate the participants' experiences in their everyday activities over the course of a full week (7 days), a time diary was created. In order to measure their experiences in terms of productivity, restoration, and enjoyment for each activity, the participants classified their occupations. This study examined the association between mothers' subjective well-being (SWB) and their child's developmental abilities and their daily occupational experiences of productivity, restoration, and satisfaction (Hsieh & Lo, 2013).

### ***2.1.3 Balance in relaxing recovering, sleeping time***

In order to fully comprehend the daily occupational balance of mothers of children with ASD, including their work patterns and problems, a qualitative phenomenology study was carried out in Indonesia. Six people took part in this study, and an in-depth interview was used to gather data. Four topics about the occupational balance of mothers of children with ASD in their everyday lives have been identified from the thematic analysis that was done: occupational pattern; problems in assuming roles; coping and carrying out duties within the roles; and attaining balance. Due to their very limited time, they gave up other fields of employment, social interaction, a paid job, rest, and sleep in order to devote more of their time to their child's care (Santoso, 2021).

### ***2.1.4 Balance between doing for others and for own self***

A case-control study was conducted with including 40 Israeli Arab mothers, aged 25 to 40 years, who worked outside the home. The aim of the study of this study was to assess the contribution of occupational competence, occupational settings, and role load to the health and life satisfaction of Arab mothers of children with and without ADHD. The research group contained 20 mothers (Mage = 33.50, SD = 4.43) of children between 1 to 14 years (Mage = 7.19, SD = 2.63), whose only one of them diagnosed with ADHD (17 boys, 3 girls, Mage = 7.2, SD = 1.1). The control group contained 20 mothers (Mage = 33.80, SD = 3.82) of typically developing children (Mage = 7.71, SD = 2.77) who attended mainstream schools and were never referred to any developmental intervention. The findings of this study showed that mothers of children with ADHD reported having a higher role load than mothers of children without ADHD (Bar et al., 2015).

A cross-sectional study was conducted in Sweden with a total of 302 working parents (200 mothers and 102 fathers). The study aim was to examine the occupational

balance of parents of preschoolers and identify any potential distinctions between mothers and fathers. The study's inclusion requirements included being a parent and having at least one child under the age of seven residing at home either full- or part-time. The findings of the study showed that a median score of 10 for mothers and 12 for fathers, mothers reported a lower occupational balance than fathers. In three categories- 'Balance between work, home, family, leisure, rest and sleep', 'Having sufficient time for doing obligatory occupations' and 'Balance between doing things for others and for oneself' mothers scored much lower than fathers did (Uthede et al., 2022).

Multiple studies have shown that parents of children with ASD have different difficulties and are under more stress than parents of children who are typically developing. Mothers who are the primary caretakers for children with ASD should particularly be aware of this. Mothers who prioritize their children's needs at the expense of their own may experience anxiety, despair, stress isolation, and dissatisfaction with everyday life since involvement requires ongoing balancing of one's own and others' needs (Moorthy, 2023).

### ***2.1.5 Health and well-being***

For mothers, raising a child with autism spectrum disorder (ASD) can be a challenging task. The significance of coping support is underscored by the fact that mismanaged high levels of stress can result in the development of depressive symptoms. The present study looks at psychological health and stress levels of mothers of children with ASD based on a nationwide survey. Mothers of children with ASD were shown to be more vulnerable to poor mental health and high levels of stress than mothers of children without ASD, even after adjusting the child, mother, and family level features. These risks were lower when mother-coping mechanisms were present, such as excellent

coping abilities and emotional and social support from the community (Zablotsky et al., 2013).

The importance of mothers of children with ASD in establishing and sustaining regular home routines, as well as the way in which they provide structure to the lives of their children, was emphasized in this study. As a result of the considerable demands placed on their time and energy, mothers of children diagnosed with autism spectrum disorder (ASD) may experience a strain on both their physical and emotional health. It may be simpler for them to deal with the burden of managing the routines of their family if they develop a mentality that acknowledges their inherent limits while yet believing in their capabilities. There is a possibility that parents of children with autism spectrum disorder (ASD) would experience stress as a result of domestic labour divisions. It is essential to not forget the reasons why these mothers take on these obligations, such as the expectations that society places on women. We have already discussed the significance of "me-time" as a method of getting through difficult times. It is essential for mothers to engage in activities that allow them to participate in "me-time" because of the commitment they have to caring for their families and children. When parents take part in activities like these, they are better able to deal with the obstacles that they face on a daily basis. In order to encourage these mothers to take care of themselves, it could be beneficial to include activities that are considered "me-time" in the routines that the family follows. Family traditions that reflect the mother's thoughts, values, and requirements are a source of nourishment for the mother's spirituality. Occupational therapists may find it most beneficial to get insight into family routines in order to enhance occupational engagement and health and wellness among mothers whose children have ASD. This is because occupational therapists are able to better understand the routines of families (McAuliffe et al., 2019).

## CHAPTER III: METHODS

### **3.1 Study Question, Aim, Objectives**

#### ***3.1.1 Study Question***

What is the status of Occupational Balance among Mothers of Children with ASD?

#### ***3.1.2 Aim of the Study***

This study aims to examine the status of occupational balance among mothers of children with ASD.

#### ***3.1.3 Objectives***

- To find out the sociodemographic characteristics of the mother's having ASD (CWD) children
- To find out the occupational balance among the mothers of Children with ASD
- To find out the association between sociodemographic characteristics and the occupational balance status of the respondents

### **3.2 Study Design (Method, Approach)**

This study aimed to determine the status of occupational balance among mothers of children with ASD. For this reason, a quantitative cross-sectional type study design was used.

#### ***3.2.1 Method***

Since the researcher used quantitative techniques to describe events or situations that have an impact on individuals, a quantitative study design was selected. The reason it was implemented was to collect data from the whole population using questionnaires and closed-ended questions. The numbers and statistics used in this study make its findings quite evident. It was beneficial as the researcher gathered information from a

large and varied sample of respondents (Bloomfield & Fisher, 2019).

### ***3.2.2 Approach***

Cross-sectional studies are characterized by the collection of relevant information (data) at a given point in time (Kesmodel, 2018). In a cross-sectional study, investigators measure outcomes and exposures of the study subjects at the same time. It is described as taking a “snapshot” of a group of individuals (Wang & Cheng, 2020).

## **3.3 Study Setting and Period (Study Setting and Period)**

### ***3.3.1 Study Setting***

The study was conducted at Pediatric department of Centre for the Rehabilitation of the Paralysed (CRP)- Savar and Mirpur, Therapist Point and Shonirvor special school for Autism and Neurodevelopmental disorder.

### ***3.3.2 Study Period***

The study period was between May 2023 to February 2024 and the data collection period was between 1 December to 31 December.

## **3.4 Study Participants**

### ***3.4.1 Study Population***

Mothers of diagnosed children with ASD taking service at rehabilitation centres, special schools, private and government organizations of Dhaka city

### ***3.4.2 Sampling Techniques***

Participants were chosen for the study using a purposive sampling technique based on some inclusion and exclusion criteria. Purposive sampling procedures steer clear of any sort of random sampling and work to ensure that types of cases of people who might be included are represented in the research study's final sample. Purposive sampling is used because it better matches the sample to the aim and objectives of the research,

enhancing the study's rigour and the reliability of the data and findings (Campbell et al., 2020). The more purposeful the sample is, the more inclusion and exclusion sample selection criteria there are, each with a specific goal in mind (Andrade, 2021).

### ***3.4.3 Inclusion Criteria***

- Mothers of diagnosed children with ASD of any age.
- Mothers of children with ASD with all occupations are included such as housewife, private and government job holder, and Business.

### ***3.4.4 Exclusion Criteria***

- Having more than one child with developmental disabilities.
- Other family members, paid care-givers have been excluded from this study.
- Pregnant and mentally retarded mothers are excluded from this study

### ***3.4.5 Sample Size***

Sampling procedure for cross-sectional study done by following equation:

Here,

$n$ = Desired sample size

$Z$ = 99% confidence limit ( $Z$ - score used value 2.58)

$p$ = 0.2%, the prevalence of children with autism spectrum disorder in Bangladesh is 2 per 1000 people= 0.002 (Hasan MS, 2020)

$q = 1-p = 1- 0.002= 0.998$

$d$ = degree of accuracy, 0.01 level

Therefore, the sample size is,  $n = z^2pq/d^2 = (2.58)^2 \times 0.002 \times 0.998 / (0.01)^2 = 132.347$

Calculating sample was 133. However, as the research was conducted as an academic purpose so there were time limitations. So, researcher had taken 117 samples for the study.

### **3.5 Ethical Consideration**

#### ***3.5.1 Ethical Clearance***

The ethical clearance was given by the Institutional Review Board (IRB) through the Department of Occupational Therapy, Bangladesh Health Professions Institute (BHPI) with a brief description of the aim and objectives. The IRB number CRP-BHPI/TRB/10/2023/756. Also, permission was taken from the Head of the Occupational Therapy department of BHPI in order to collect data from Centre for the Rehabilitation of the Paralysed (CRP)-Savar and Mirpur, and also from other organizations. All ethics were followed by the ethical principles, WMA created for medical research (World Medical Association et al., 2022).

#### ***3.5.2 Informed Consent***

Written consent was taken from the participants as they were interviewed in face to face. Researcher explained the research aim to the participant and ensured every participant that they could leave any time during data collection.

#### ***3.5.3 Unequal Relationship***

The researcher collected data with a standardised scale and ensured that there was no bias.

#### ***3.5.4 Risk and Beneficence***

The student researcher made sure that participants had no risk, and they did not suffer



any negative effects for their participation in this study. Participants did not gain any pecuniary or any other benefits for participating in this study.

### ***3.5.6 Confidentiality***

The researcher was cautious about the participant's confidentiality. The researcher provided an information sheet to the participants where it was explained that their information would be confidential.

## **3.6 Data Collection Process**

### ***3.6.1 Participant Recruitment Process***

The participants were recruited through meeting the inclusion and exclusion criteria. Those who did not meet within the inclusion criteria, was not be able to participate in this study. After discussing with the supervisor 117 participants were recruited.

### ***3.6.2 Data Collection Method***

The researcher collected data through a face-to-face survey. Face-to-face surveys are distinguished by the fact that the survey is conducted by a person who meets with the respondent in person. Face-to-face surveys also make it possible to survey relatively difficult problems. Surveyor can provide more explanations, check to see if the respondent's response corresponds with the question, and encourage the respondent to answer all the questions. Additionally, in face-to-face survey, the surveyor can take more time to conduct the survey compared to other modes of survey. Face-to-face surveys are recommended as the strategy for obtaining the highest response rates in survey literature (Schroder, 2016).

### ***3.6.3 Data Collection Instrument***

The instruments that needed for the study were Consent form, Socio-demographic Questionnaire form, Scale- Occupational Balance Questionnaire (OBQ11); Pen, Pencil, Paper, calculator, File, Notebook, Clipboard, Laptop.

### **Occupational Balance Questionnaire (OBQ11)**

The instrument has 11 items. Each item is scored on a four-point ordinal scale from “strongly disagree” (scored 0) to “strongly agree” (scored 3) i.e., each item ranges from 0-3 in where higher ratings imply better occupational balance. Each item can be analyzed separately. The items can also be summed to a total score (ranging 0-33 where higher is better) (Wagman & Håkansson, 2014)

### **Socio-demographic questionnaire:**

The researcher used a semi-structured questionnaire for socio-demographic and other relevant information. Mothers of children with ASD was asked to complete this questionnaire. Different socio-demographic variables like- age, education level, occupation, marital status, monthly family income, number of children etc. are included in this questionnaire. Data was collected from Mothers of children with ASD by face-to-face interview using this questionnaire.

## **3.7 Data Management and Analysis**

### ***3.7.1 Data Management***

The data were kept in a locked-file cabinet.

### ***3.7.2 Data Analysis***

Data were analyzed by Statistical Package for Social Science (SPSS) and descriptive analysis of the data. The presentation of data organized in SPSS version 2. Microsoft word excels used to present data using table and bar chart. The chi-square and fisher exact test were done to find out the association between occupational balance and sociodemographic characteristics.

## **3.8 Quality Control and Quality Assurance**

All the data collection procedure was accurately done with the concern of the respective study supervisor. The researcher tried to follow every instruction of the responsible

supervisor. The investigator ensured that the methods of the study were fit for the purpose of the study. All participants received similar questions and environments so that the quality was assured for all participants. The response from the participants were authentic as the investigator did not impose his thoughts and bias. Nothing about the data was manipulated. The data was analysed using SPSS, therefore that's what determined the outcome.

## CHAPTER IV: RESULTS

### 4.1 Socio-demographic characteristics of the participants

**Table 4.1: Socio-demographic characteristics of the participants**

Variables		Frequency (n)	Percentage (%)
Age	20-27 years	20	17.1%
	28-35 years	60	51.3%
	36-43 years	32	27.4%
	44-51 years	5	4.3%
Educational Qualification	Illiterate	1	0.9%
	Primary	4	3.4%
	Secondary	25	21.4%
	Higher secondary & above	87	74.4%
Marital Status	Married	114	97.4%
	Widow	3	2.6%
Number of children	1-2	99	84.6%
	3-4	18	15.4%
Age of the children	2-6 years	69	59%
	7-11 years	36	31%
	12-16 years	12	10%
Occupations of mothers	Housewife	108	92.3%
	Business	2	1.7%
	Govt. job holder	4	3.4%
	Private job holder	3	2.6%
Family status	Single-family	78	66.7%
	Combined-family	39	33.3%
Family monthly income	15000-62000 tk.	87	74.4%
	63000-110000 tk.	27	23.1%

	111000-158000 tk.	2	1.7%
	159000-206000 tk.	1	0.9%
Availability of paid help	Never	38	32.5%
	Occasionally	1	0.9%
	Part-time	58	49.6%
	Full-time	20	17.1%

Among the 117 participants, about 51.3% (60) were between the ages of 28 and 35, around 27.4% (32) were between the ages of 36 and 43, 17.1% (20) were between the ages of 20 and 27, and a very small percentage of participants 4.3% (5) were between the ages of 44 and 51. Out of the 117 participants, the education qualification revealed that 74.4% (87) had completed higher secondary education or above, 21.4% (25) had completed secondary education, 3.4% (4) had completed primary education, and a very small percentage of participants 0.9% (1) were illiterate. The majority of participants (114, or 97.4%) out of the 117 total were married. In the meanwhile, widows made up just 2.6% (3).

84.6% (99) of the 117 participants' mothers had children between the ages of 1-2, while 15.4% (18) of the mothers had children between the ages of 3-4. The results showed that 31% (36) of the participants' children were between the ages of 7 and 11, 10% (12) were between the ages of 12 and 16, and 59% (69) of the children were between the ages of 2 and 6. 92.3% (108) of the 117 participants were housewives, 3.4% (4) of participants had government jobs, 2.6% (3) of participants held private jobs, and just 1.7% of participants were businesswomen. 33.3% (39) of the 117 respondents came from combined family, while 66.7% (78) of the participants were from single-family.

One crucial element is the financial position. The monthly income status of the 117 participants' families displayed that 74.4% (87) had an income between 15000 and 62000 Taka, 23.1% (27) had an income between 63000 and 110000 Taka, 1.7% (2) had an income between 110000 and 158000 Taka, and only a small percentage of 0.9% (1) participant had an income between 1590000 and 206000 Taka.

Among 117 participants, a noteworthy percentage of 49.6% (58) of participants got paid help for part-time, and another remarkable percentage of 32.5% (38) of participants got no paid help, conversely, a percentage of 17.1% (20) of participants got paid help for full time and remaining 0.9% (1) of participants got paid help for occasionally.

## 4.2 Results of individual items of the OBQ11 among the participants

**Table 4.2: Results of individual items of the OBQ11 among the participants**

Item	Strongly disagree	Disagree	Agree	Strongly agree	Median (IQR)
1. Having just enough to do during a regular week	6.8% (8)	32.5% (38)	35% (41)	25.6% (30)	2 (2)
2. Balance between doing things for others and for oneself	8.5% (10)	39.3% (46)	34.2% (40)	17.9% (21)	2 (1)
3. Time for doing things wanted	17.1%(20)	31.6% (37)	36.8% (43)	14.5% (17)	2 (1)
4. Balance between work, home, family, leisure, rest, and sleep	14.5% (17)	41.9% (49)	28.2% (33)	15.4% (18)	1 (1)
5. Having sufficient time to do the mandatory things	12% (14)	47.9% (56)	24.8% (29)	15.4% (18)	1 (1)
6. Balance between physical, social, intellectual, and restful occupations	10.3% (12)	44.4% (52)	30.8% (36)	14.5% (17)	1 (1)
7. Satisfaction with how time is spent in everyday life	9.4% (11)	44.4% (52)	26.5% (31)	19.7% (23)	1 (1)
8. Satisfaction with the number of activities during a regular week	6.8% (8)	44.4% (52)	28.2% (33)	20.5% (24)	1 (1)
9. Balance between obligatory and mandatory activities	2.6% (3)	43.6% (51)	47.9% (56)	6% (7)	2 (1)
10. Balance between energy-giving and energy-taking activities	9.4% (11)	37.6% (44)	35% (41)	17.9% (21)	2 (1)
11. Satisfaction with time spent in rest, recovery, and sleep	14.5% (17)	42.7% (50)	24.8% (29)	17.9% (21)	1 (1)
Total sample (117)					17(11.5)

Scale 0–3; strongly disagree 0; disagree 1; agree 2; strongly agree 3

The dataset's central tendency was shown by the median score of 17 obtained from the occupational balance questionnaire (OBQ-11). The middle 50% of the scores appear to be within the interquartile range, which extends from the first quartile (Q1) at 11.50 to the third quartile (Q3) at 23. The interquartile range (IQR), represents the range of scores inside the central section of the distribution and is calculated as 11.50. With a minimum of 0 and a maximum of 33 points, the overall score variation gave insight into the wide range of responses among the population in this study. The results of the study offer insightful information on occupational balance among mothers regarding various items.

Among the 117 participants, notably item one showed us that 35% (41) of the mothers agreed, 32.5% (38) of the mothers disagreed, 25.6% (30) of the mothers strongly agreed and 6.8% (8) of the mothers strongly disagreed. Item number two displayed that 39.3% (46) of the mothers disagreed, 34.2% (40) of the mothers agreed, 17.9% (21) strongly agreed, and 8.5% (10) of the mothers strongly disagreed. 36.8% (43) of the mothers agreed, 31.6% (37) of the mothers disagreed, 17.1% (20) of the mothers strongly disagreed, and 14.5% (17) of the mothers strongly agreed with item number three. 41.9% (49) of the mothers disagreed, 28.2% (33) of the mothers agreed, 15.4% (18) of the mothers strongly agreed, and 14.5% (17) of the mothers strongly disagreed with item number four. 47.9% (56) of the mothers disagreed, 24.8% (29) of the mothers agreed, 15.4% (18) of the mothers strongly agreed, and 12% (14) of the mothers strongly disagreed with item number five. 44.4% (52) of the mothers disagreed, 30.8% (n=36) of the mothers agreed, 14.5% (17) of the mothers strongly agreed, and 10.3% (12) of the mothers strongly disagreed with item number six. 44.4% (52) of the mothers disagreed, 26.5% (31) of the mothers agreed, 19.7% (23) of the mothers strongly agreed, and 9.4% (11) of the mothers strongly disagreed with item number



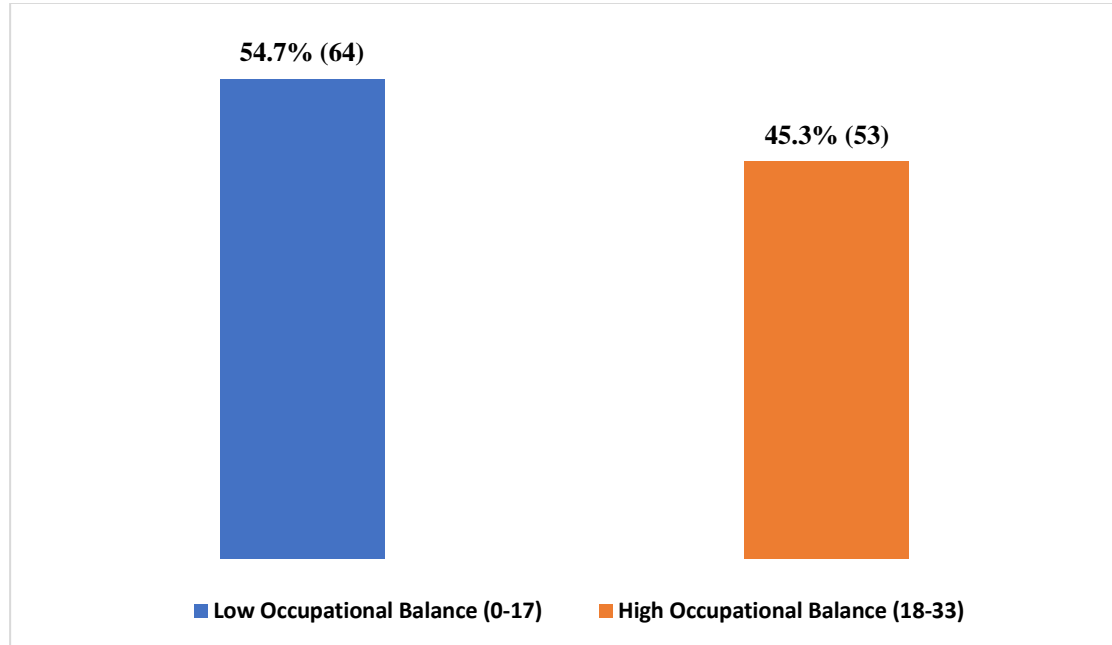
seven. 44.4% (52) of the mothers disagreed, 28.2% (33) of the mothers agreed, 20.5% (4) of the mothers strongly agreed, and 6.8% (8) of the mothers strongly disagreed with item number eight. 47.9% (56) of the mothers agreed, 43.6% (51) of the mothers disagreed, 6% (n=7) of the mothers strongly agreed, and 2.6% (3) of the mothers strongly disagreed with item number nine. 37.6% (44) of the mothers disagreed, 35% (41) of the mothers agreed, 17.9% (21) of the mothers strongly agreed, and 9.4% (11) of the mothers strongly disagreed with item number ten. 42.7% (50) of the mothers disagreed, 24.8% (29) of the mothers agreed, 17.9% (21) of the mothers strongly agreed, and 14.5% (17) of the mothers strongly disagreed with item number eleven.

Among the 117 participants, the most common answer for mothers tended to disagree (1) on various items of OBQ-11 including “Balance between work, home, family, leisure, rest, and sleep” (41.9%), “Having sufficient time to do the mandatory things” (47.9%), “Balance between physical, social, mental, and restful occupations” (44.4%), “Satisfaction with how time is spent in everyday life” (44.4%), “Satisfaction with the number of activities during a regular week” (44.4%), “Satisfaction with time spent in rest, recovery, and sleep” (42.7%).

### 4.3 OBQ11 overall ratings among the participants

**Figure 4.3**

OBQ11 overall ratings among the participants (n=117)



As there is no established cut-off point for occupational balance that indicates high and low levels. High occupational balance was defined as a total score over the median and low occupational balance was defined as a total score below or equal to the median (Borgh et al., 2017). In this study, the median of total occupational balance score was 17. So, the results for occupational balance were divided into two ranges; one was from 0 (minimum score) to 17 which indicates low occupational balance, and 18 to 33 (maximum score) which indicates high occupational balance. As presented in Table 3, among 117 participants, 54.7% (64) of mothers reported lower scores (between 0-17) indicating potentially lower occupational balance and 45.3% (53) of mothers reported higher scores (between 18-33) indicative of a greater sense of equilibrium in their occupational balance which is considered as higher occupational balance.

#### 4.4 Association between sociodemographic characteristics and occupational balance status of the participants

**Table 4.4**

Association between socio-demographic characteristics and occupational balance status of the participants

Socio-demographic variable	df	p-value
Age	3	0.803
Educational qualification	3	0.410
Marital status	1	1.000
Number of children	1	0.553 <sup>a</sup>
Age of children	2	0.002 <sup>a*</sup>
Occupation of mothers	3	0.385
Family status	1	0.026 <sup>a*</sup>
Family monthly income	3	0.581
Availability of paid help	3	0.037*

<sup>a</sup>Chi-square, \* $p < 0.05$ ,  $df =$  Degree of freedom

While conducting a chi-square test more than 20% scale has an expected count of less than 5 therefore the fisher exact significant value was considered

A chi-square and fisher exact test were used to assess whether the socio-demographic characteristics were related to occupational balance status of the participants. In table 4, among the nine variables three variables got statistically significant.

The chi-square test was statistically significant,  $p < 0.002$ ,  $df = 2$ , with Phi value coefficient of 0.332, indicating medium to large relationship (Kim, 2017) between age of children and occupational balance status of the respondents, where the majority of the participants (47) who have lower occupational balance with the children in between 2-6 years.

The chi-square test was statistically significant,  $p < 0.026$ ,  $df = 1$ , with Phi value coefficient of 0.206, indicating small to medium relationship between family status and occupational balance status of the respondents, where the majority of the participants ( $n=27$ ) of combined family were more likely to have low occupational balance and high occupational was seen in the majority of the participants ( $n=41$ ) of single family.

The chi-square test was statistically significant,  $p < 0.037$ ,  $df = 3$ , with Phi value coefficient of 0.256, indicating medium to large relationship between availability of paid help and occupational balance status of the respondents, where the mothers of children with ASD who got part-time paid help ( $n=32$ ) had low occupational balance than who had full-time or occasionally paid help or even who did not get any paid help. Hence,  $H_1$  was not supported association between others sociodemographic characteristics (age, educational qualification, marital status, number of children, occupation of mothers and family monthly income) with occupational balance status of the participants.

## CHAPTER V: DISCUSSION

The study aimed to examine the status of occupational balance among mothers of children with ASD. The discussion is based on 117 mothers who had children with ASD.

There is currently no set cut-off score for the OBQ11 that distinguishes between high and low levels of occupational balance (Håkansson et al., 2019). In the previous studies (Borgh et al., 2017; Magnusson et al., 2020; Wagman et al., 2019), a total score above the sample median was chosen to represent high occupational balance, and a total score below or equal to the median was chosen to represent low occupational balance. The median of the summed occupational balance score in this study was 17 (interquartile range [IQR] 11.5, variation 0-33 points). The OBQ11 was used in a previous study that assessed Swedish women's occupational balance, in which the median of the total score was 12 (interquartile range [IQR] 9, variation 0-32 points) (Magnusson et al., 2020). The occupational balance of Swedish occupational therapists was measured using the OBQ11 in an earlier study; the study's median occupational balance score was 11 with the median score for all items was 1 (Lex et al., 2020). In this study, among the 117 participants, the most common answer for mothers tended to disagree (1) on various items of OBQ-11 including "Time for doing things wanted", "Having sufficient time to do the mandatory things", "Balance between physical, social, mental, and restful occupations", "Satisfaction with how time is spent in everyday life", "Satisfaction with the number of activities during a regular week", "Satisfaction with time spent in rest, recovery, and sleep. In another study, occupational balance was measured by OBQ11 and the median score was 11 and fathers had significantly higher occupational balance than mothers (Uthede et al., 2022).

According to this research, the majority of the mothers had low occupational balance, which may have a detrimental effect on how well they care for their children with ASD. Another study showed that having a child with special needs can disrupt a mother's routine and family harmony due to factors like physical surroundings, child's age, and health (Lestari Weny & Yurika Fauzia Wardhani, 2014), including social distancing for mothers of children with ASD (Feinberg et al., 2013).

In this study, there was significant association between occupational balance and three socio-demographic characteristics which are children's age, family status and availability of paid help. High significance was seen in relation to mothers of young children and OBQ11. One reason for this could be that mother sacrifice their prior hobbies and activities out of a lack of desire to care for their children and their jobs, which results in a low occupational balance. A Swedish study showed that to achieve occupational balance, it's critical for working parents of young children to be able to balance work and family obligations (Wagman et al., 2019). A study showed that mothers of children with ASD spend more time on childcare activities, the quality and happiness of their daily activities are much lower than those of mothers of typically developing child (Behnia et al., 2017).

A study that was conducted in Qatar showed association between participant's characteristics with OBQ11 but did not get any association with availability of paid help (Dhas et al., 2023). But in this study, we can see a significant association between availability of paid help and OBQ11. The availability of paid help was found to have a medium to large relationship with the respondents' occupational balance status; mothers of ASD children who received part-time paid help (n = 32) reported lower occupational balance than mothers who received full-time, occasional, or no paid help at all.

## CHAPTER VI: CONCLUSION

### 6.1 Strength and Limitation

#### 6.1.1 Strength

- A cross-sectional study design was selected due to its affordability and flexibility in meeting the requirements of the participants.
- On the other hand, a cross-sectional study is useful for establishing preliminary evidence as it gives some indications of the associations that can be used in the planning of further studies (Wang & Cheng, 2020).
- The study's validity is increased when a valid and reliable questionnaire like the OBQ11 used (Håkansson et al., 2019).

#### 6.1.2 Limitation

- However, a limitation with OBQ11 is that it doesn't have a clear cut-off number, which means that participants' perception of occupational balance might be over- or under-estimated.
- Additionally, the short duration of the study might have restricted the scope of data collection, potentially affecting the comprehensiveness of the results.
- Another limitation of the study is that only mothers was included in the study where father was excluded.
- However, it might be challenging to draw conclusions about causality from this kind of study since the exposure and outcome variables are evaluated at the same time.

## **6.2 Practice Implication**

### ***6.2.1 Recommendation for Future Practice***

In pediatric OT services, treating OB in PCWD is a procedure that is often neglected. In this study, the majority of the participants had low occupational balance. Since occupational imbalance has been linked to an increased risk of stress-related mental health problems (Håkansson & Ahlberg, 2018), Occupational therapy settings should be prioritized for maintaining occupational balance for mothers of young children. Evidence suggests a connection between health and well-being and both the patterns of everyday activities and occupational balance (Lissner & Bjo, 2014). In terms of practical implication, occupational therapists may recommend that their clients should utilize the OBQ11 in conjunction with time-use diaries to establish practical and attainable goals.

### ***6.2.2 Research Recommendation***

Some research recommendations are as follows:

- Occupational Balance in parents of children with ASD: Potential difference between father and mother.
- Examine the role of social support networks in maintaining occupational balance for mothers of children with ASD. Investigate how family, friends, and community support contribute to or hinder their ability to engage in meaningful activities.
- Explore how the presence of siblings, especially neurotypical siblings, influences the occupational balance of mothers of children with ASD.



### **6.3 Conclusion**

The purpose of the study was to find out the occupational balance status of mothers of children with ASD. The findings reveal that a large percentage of mothers (about 54.7%) reported having low occupational balance, which could make it hard for them to handle their daily tasks and do things that are important to them. However, 45.3% of mothers had a higher level of occupational balance, which means they had a better balance between their different jobs and tasks. So, we can say that a majority of the participants had low occupational balance. The participant's occupational balance changed substantially with three sociodemographic characteristics: mothers of young children, family status, and availability of paid help (p-values are 0.002, 0.026, and 0.037, respectively). Therefore, the study's findings clearly show that the occupational balance among mothers of children with ASD is greatly affected by factors such as the children's age, family status, and the availability of paid help.

This study's findings support the need for occupational therapists to focus on occupational balance, to improve OB among mothers of children with ASD.

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## APPENDICES

### Appendix A: Approval / Permission Letter



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

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Ref: **CRP-BHPI/IRB/01/2023/718** Date: **18.10.2023**

To  
Redwan Islam  
4<sup>th</sup> Year B.Sc. in Occupational Therapy  
Session: 2018-2019; Student ID: 122180316  
Department of Occupational Therapy  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh


**Subject:** Approval of the thesis proposal "Occupational balance status among mothers of children with autism spectrum disorder: A cross-sectional study" by ethics committee.

Dear Redwan Islam,  
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 and Sk Moniruzzaman & Monika Singha as thesis supervisor & co-supervisor. The Following documents have been reviewed and approved:

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

The purpose of the study is to examine the status of occupational balance among mothers of children with ASD. The study involves use of Standardized scales (Occupational Balance Questionnaire-11) to measure the occupational balance that may take about 20 to 25 minutes to fill in the questionnaire for collection of specimen and there is no likelihood of any harm to the participants and no economical 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 23<sup>rd</sup> September 2023 at BHPI 38<sup>th</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,  
  
.....  
Member Secretary **Muhammad Milat Hossain**  
Associate Professor  
Project & Course Coordinator  
Dept. of Rehabilitation Science  
Institutional Review Board, CRP, Savar, Dhaka-1343, Bangladesh  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh.

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

Date: 18-10-23

To

The head of the Pediatric Department  
Centre for the Rehabilitation of the Paralyzed (CRP)  
CRP-Chapain, Savar, Dhaka-1343

Subject: Request for seeking permission to collect data for the research project.

Sir,

I beg most respectfully to state that I am a student of 4<sup>th</sup> year, 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. My thesis title is "Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study" which is supervised by Sk. Moniruzzaman & co-supervised by Monika Singha. The purpose of the study is to examine the status of occupational balance among mothers of children with autism spectrum disorder. Now I am looking for your kind approval to start my data collection and I would like to assure that anything of my research period will not be harmful for the participants.

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

Sincerely

*Redwan*

Redwan Islam  
4<sup>th</sup> year, B.Sc. in Occupational Therapy  
Session:2018-19  
Department of Occupational Therapy

Signature and comments of head of the department

*Sk. Moniruzzaman*

Sk. Moniruzzaman  
Associate Professor  
Head of the Department of Occupational Therapy  
Bangladesh Health Professions Institute  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

*He will collect data  
from this Department.  
please help him.*

*Thanks*

*SK*

*10-10-203*

**Hosneara Perveen**  
Head of Department  
Department of Paediatrics  
CRP, Savar, Dhaka

Date: 18-10-23

To  
Chairman  
Therapist point and Shonirvor special school for Autism and Neurodevelopmental disorder

Subject: Request for seeking permission to collect data for the research project.

Sir,

I beg most respectfully to state that I am a student of 4<sup>th</sup> year, 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. My thesis title is "Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study" which is supervised by Sk. Moniruzzaman & co-supervised by Monika Singha. The purpose of the study is to examine the status of occupational balance among mothers of children with autism spectrum disorder. Now I am looking for your kind approval to start my data collection and I would like to assure that anything of my research period will not be harmful for the participants.

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

Sincerely

*Redwan*

Redwan Islam  
4<sup>th</sup> year, B.Sc. in Occupational Therapy  
Session:2018-19  
Department of Occupational Therapy

Signature and comments of head of the department

*Sk. Moniruzzaman*  
Sk. Moniruzzaman  
Associate Professor  
Head of the Department of Occupational Therapy  
Bangladesh Health Professions Institute  
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

  
*Permission Granted*  
*Md. Nayem*  
*18/10/23*

Md. Nayem Nizam Majumdar  
B.Sc. OT (CRP, DU), MDS (JU-Incours...  
Senior Occupational Therapist & ...  
Therapist Point & Shonirvor Special School



## **Appendix B:**

### **Information Sheet**

**Research Title:** Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study.

Name of researcher: Redwan Islam, 4<sup>th</sup> year, B.Sc. in Occupational Therapy, Roll: 30

**Supervisor:** Sk. Moniruzzaman, Associate Professor and Head of the Department, Occupational Therapy Department, Bangladesh Health Professions Institute, Savar, Dhaka.

**Co-supervisor:** Monika Singha, Lecturer, Occupational Therapy Department, Bangladesh Health Professions Institute, Savar, Dhaka.

I am Redwan Islam, want to invite you to take part in the research. Before making the decision, you must know why this research is being done and how you relate to it. Please take time to read the given information. If you face any problem after reading or need to know more information, you can ask me.

#### **Background and Aim of this research.**

I am Redwan Islam, 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 Paralyzed. As a part of the B.Sc. course curriculum, I am going to conduct a research activity under the Associate Professor of occupational therapy, Sk. Moniruzzaman and Lecturer of occupational therapy Monika Singha. The topic of the research is Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study. The aim of this study is to examine the status of occupational balance among mothers of children with ASD.

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

As I will find out the occupational balance status among the mothers of children with ASD, I will use the Occupational Balance Questionnaire (OBQ11) Scale to find out the occupational balance among the mothers of children with ASD and a semi-structured sociodemographic questionnaire to find out the association between socio-demographic characteristics and the occupational balance status of the respondents. All the questions included in these scales of participants should be answered. Time will be taken for 20-25 minutes.

#### **Why are you invited to participate?**

As my research topic is Occupational balance status among mothers of children with ASD, I will invite all the participants according inclusion and exclusion criteria.

#### **Inclusion Criteria:**

- Mothers of diagnosed children with ASD of any age.

- All occupations are included such as housewife, private and government job holder, Business.

**Exclusion Criteria:**

- Having more than one child with developmental disabilities.
- Other family members, paid carers have been excluded from this study.
- Pregnant and mentally retarded mothers are excluded from this study

**Will you have to participate?**

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

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

There is no direct opportunity for this participation which means participation will not get any financial opportunity. Apart from this, there is no negative question in the two scales. Therefore, there is no physical or mental risk to the participants. If any problem is seen after participation, then a doctor will advise. Furthermore, by participating in this study I will know the occupational balance status among mothers of children with ASD.

**Will the participation be confidential?**

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

**Promotional results**

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

**If you have any questions you can contact through the given address**

**Researcher: Redwan Islam**

Bangladesh Health Professions Institute (BHPI)

B.Sc. in Occupational Therapy

Session: 2018-19, Roll: 30

Savar, Dhaka

E-mail: ritonmoy74@gmail.com

Contact number:01992250316

You can also contact with my supervisor.

Sk. Moniruzaman

Associate Professor and Head of the Department,

Occupational Therapy Department, BHPI, CRP

Phone: 01716358212



### Consent Form (English Version)

I am Redwan Islam, studying B.Sc. in occupational therapy at Bangladesh Health Professions Institute (BHPI) which is under the Medicine faculty of Dhaka University, an academic institute of Centre for the Rehabilitation of Paralyzed. As a part of B.Sc. course curriculum, I am going to conduct a research activity under the associate professor of occupational therapy SK Moniruzzaman and lecturer of occupational therapy Monika Singha. The topic of the research is Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study. The aim of this study is to examine the occupational balance status among mothers of children with ASD.

Please read the following statement and put tick (√) 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 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 (English Version)**

**Research Title:** Occupational balance status among mothers of children with autism spectrum disorder (ASD): A cross-sectional study.

**Name of the Researcher:** Redwan Islam, 4<sup>th</sup> year, Occupational Therapy, Roll:30

I \_\_\_\_\_ , confirm that I wish to withdraw all my data from the study before the data analysis has been completed and that none of my data will be included in the study.

Name of the participant \_\_\_\_\_

Signature of the participant \_\_\_\_\_ Date \_\_\_\_\_

Name of the Researcher \_\_\_\_\_ Date \_\_\_\_\_

## সম্মতি পত্র

### (অংশগ্রহণকারীর কপি)

আমি রেদোয়ান ইসলাম, ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের অন্তর্ভুক্ত পক্ষাঘাতগ্রস্তদের পুনর্বাসনকেন্দ্র (সিআরপি), সাভার, ঢাকা, এর একাডেমিক ইনস্টিটিউট বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই) এ অধ্যয়নরত ৪র্থ বর্ষের ছাত্র। বি.এস.সি ইন অকুপেশনাল থেরাপি কোর্স কারিকুলামের একটি অংশ হিসেবে আমি অকুপেশনাল থেরাপির একজন সহযোগী অধ্যাপক ও বিভাগীয় প্রধান এস কে. মনিরুজ্জামান এবং প্রভাষক মণিকা সিংহ এর অধীনে একটি গবেষণা পরিচালনা করতে যাচ্ছি। গবেষণার বিষয়- অটিজম স্পেকট্রাম ডিসঅর্ডারে আক্রান্ত শিশুদের মায়েদের মধ্যে পেশাগত ভারসাম্যের অবস্থা সম্পর্কিত গবেষণা। গবেষণার উদ্দেশ্য হলো অটিজম স্পেকট্রাম ডিসঅর্ডারে আক্রান্ত শিশুদের মায়েদের মধ্যে পেশাগত ভারসাম্যের অবস্থা সম্পর্কিত তথ্য 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 নভেম্বর 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 \_\_\_\_\_

**Appendix: C**  
**Research Questionnaire**  
**Section-A**  
**Identifying information**

Name	
Contact address	
Mobile number	

**Section-B**  
**Socio- demographic Information**

<b>Mother's age:</b>
<b>Educational qualification:</b> 1. Illiterate 2. Primary 3. Secondary 4. Higher secondary and above 5. Others
<b>Marital status:</b> 1. Married 2. Widow 3. Divorced
<b>No of children:</b> 1. One 2. Two 3. Three & more
<b>Age of Children with ASD:</b>
<b>Mother's Occupation:</b> 1. Housewife 2. Business 3. Government job holder 4. Private job holder
<b>Family status:</b> 1. Single 2. Combined
<b>Family monthly income status:</b>
<b>Availability of paid help</b> 1. Never 2. Occasionally

- |                              |
|------------------------------|
| 3. Part time<br>4. Full time |
|------------------------------|

**Section-C**

**Occupational Balance Questionnaire (OBQ11)**

©Carita Håkansson and Petra Wagman

1. In a typical week, I feel there are just enough things to do.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

2. There is a balance between things I do for myself and things I do for others.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

3. I make sure I do things I really want to do.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

4. I balance the different kinds of activities in my life, e.g., work, household chores, leisure, rest, and sleep.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

5. I have enough time to do the things that I must do.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

6. I have a balance among my physical, social, intellectual and restful activities.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

7. I am satisfied with the amount of time that I spend on my various daily activities.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

8. In a typical week, I am satisfied with the number of activities that I take part in

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

9. There is enough variation between things that I must do and things that I want to do.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

10. There is a balance between activities that give me energy versus those that drain my energy.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

11. I am satisfied with the amount of time that I spend relaxing, recovering, and sleeping.

Strongly Disagree                      Disagree                      Agree                      Strongly Agree

বাংলায় প্রশ্নপত্র

সেকশন-এ

সনাক্তকরণ তথ্য

নাম	
যোগাযোগের ঠিকানা	
মোবাইল নাম্বার	

সেকশন-বি

সামাজিক সম্পর্কিত তথ্য

মায়ের বয়সঃ
শিক্ষাগত যোগ্যতাঃ ১) নিরক্ষর ২) প্রাইমারী ৩) মাধ্যমিক ৪) সম্মান ও তার চেয়ে বেশি ৫) অন্যান্য
বৈবাহিক অবস্থাঃ ১) বিবাহিত ২) (বিধবা/ তালাকপ্রাপ্ত)
সন্তানের সংখ্যাঃ ১) এক ২) দুই ৩) তিন ৪) অধিক
অর্টিজম স্পেকট্রাম ডিসঅর্ডারে আক্রান্ত শিশুর বয়সঃ
মায়ের পেশাঃ ১) গৃহিণী ২) ব্যবসায়ী

৩) সরকারি চাকুরিজীবী ৪) বেসরকারি চাকুরিজীবী
পারিবারিক অবস্থা: ১) একক পরিবার ২) যৌথ পরিবার
পরিবারের মাসিক আয়:
অর্থপ্রদত্ত সাহায্যের প্রাপ্যতা: ১) কখনো না ২) মাঝেমধ্যে ৩) খন্ডকালীন ৪) পূর্ণ-সময়

### সেকশন-সি

#### পেশাগত ভারসাম্য সম্পর্কিত তথ্য

প্রশ্ন	জোরালোভাবে অসম্মতি	অসম্মতি	একমত	জোরালোভাবে একমত
১) আমি মনে করি একটি সাধারণ সপ্তাহে যথেষ্ট জিনিষ করার রয়েছে				
২) আমি নিজের ও অন্যের জন্য যে জিনিষগুলো করি তার মধ্যে একটি ভারসাম্য রয়েছে				
৩) আমি ওই জিনিষগুলোই করি, যা আমি প্রকৃতপক্ষে করতে চাই				
৪) আমি আমার জীবনের বিভিন্ন কার্যকলাপের মধ্যে ভারসাম্য বজায় রাখি যেমনঃ পেশাগত কাজ, গৃহস্থালির কাজ, অবসর, বিশ্রাম এবং ঘুম				
৫) আমার প্রয়োজনীয় কাজের জন্য যথেষ্ট সময় রয়েছে				
৬) আমি আমার শারীরিক, সামাজিক, বুদ্ধিবৃত্তিক এবং বিশ্রামমূলক কাজের মধ্যে ভারসাম্য বজায় রাখি				



৭) আমি আমার দৈনন্দিন কাজে যে পরিমাণ সময় ব্যয় করি তাতে আমি সন্তুষ্ট				
৮) একটি সাধারণ সপ্তাহে, আমি যে সংখ্যক কার্যকলাপে অংশগ্রহণ করি তাতে আমি সন্তুষ্ট				
৯) আমার যে সকল কাজ করতে হবে এবং আমি যেসকল কাজ করতে চাই তার মধ্যে পার্থক্য রয়েছে				
১০) যেসকল কাজ আমার শক্তির যোগান দেয় এবং যেসকল কাজ আমার শক্তির ক্ষয় করে তার মধ্যে ভারসাম্য রয়েছে				
১১) বিশ্রাম, পুনরায় কাজের উৎসাহ এবং ঘুমের জন্য যে সময় পাই তাতে আমি সন্তুষ্ট				

## 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: *Occupational Balance status among mothers of children with Autism spectrum Disorder (ASD) : A cross-sectional study*

Name of student: *Redwan Islam*

Name and designation of thesis supervisor: *Sk. Moniruzzaman, Associate Professor & Head of the Department.*  
*Co-supervisor: Monika Singha, Lecturer of Occupational Therapy Department.*

Appointment No	Date	Place	Topic of discussion	Duration (Minutes/ Hours)	Comments of student	Student's signature	Thesis supervisor signature
1	08.08.23	BHPI	Discussion about the topic	2hr	got a clear idea about the research topic	<i>Redwan Islam</i>	<i>Ms. Monika Singha</i>
2	14.08.23	BHPI	Discussion about title, aim, objectives	40 min	Learning and understanding of aim, objectives	<i>Redwan Islam</i>	<i>Ms. Monika Singha</i>
3	16.08.23	BHPI	Discussion about the tools (scales used)	2hr	clear idea about the scale	<i>Redwan Islam</i>	<i>Ms. Monika Singha</i>

4	24.08. 23	BHPI	Proceedence of E-mail writing to the author for getting permission	1hr 20 min	Effective discussion about the mail write up	Return	Member Singh
5	11.10. 23	BHPI	Discussion about the proposal write-up	2hr 15 hr	Helpful guideline	Return	Member Singh
6	21.10. 23	BHPI	Feedback about the proposal presentation	1 hr 30 min	Got an clear idea.	Return	Member Singh
7	25.10. 23	BHPI	Feedback on consent form, withdrawal form, information sheet	2hr 20 min	Got an idea to write well	Return	Member Singh
8	28.10. 23	BHPI	Discussion on the translated survey form	1hr 30 min	Effective discussion	Return	Member Singh
9	31.10. 23	BHPI	Discussed how to improve translation, difficulties faced during survey	1 hr 30 min	Helpful feedback	Return	Member Singh
10	16.12. 23	BHPI	Discussed about the data collection	1 hr 40 min	Effective guidelines	Return	Member Singh
11	18.12. 23	BHPI	Discussed about the process of collect the permission to collect the data	1 hr 45 min	Helpful ways and proeedure	Return	Member Singh
12	01.01. 24	BHPI	Discussion about data input on SPSS	2 hrs 10 min	Effective guideline	Return	Member Singh
13	21.04. 24	BHPI	Check the all data input	1 hr 30 min	Helpful feedback	Return	Member Singh
14	8.04. 24	BHPI	Discussion about data analysis	3 hrs	Effective discussion	Return	Member Singh



15	10.01. 24	BHPI	Discussion about background, justification literature review	2hr 30 min	Effective discussion	Return	Very good
16	20.01. 24	BHPI	Discussion about methodology, result	2hr	Helpful discussion	Return	Very good
17	31.01. 24	BHPI	Feedback on 1st draft	2hr	Effective guideline	Return	Very good
18	03.02. 24	BHPI	correction of the 1st draft	40 min	got idea about connection	Return	Very good
19	05.02. 24	BHPI	Analysis related problem discussion	30 min	Helpful discussion about analysis	Return	Good
20	19.03. 24	BHPI	Feedback on the 2nd draft	2hr	Effective guideline	Return	Very good
21	23.03. 24	BHPI	Discussion about research result	40 min	Helpful discussion	Return	Good
22	27.03. 24	BHPI	check the correction of 2nd draft	1hr 30 min	got an idea about connection	Return	Very good
23	28.03. 24	BHPI	Discussion about preparation for defense	1hr	Helpful discussion	Return	Very good
24	31.03. 24	BHPI	Thesis presentation guideline	40 min	Effective guideline	Return	Very good
25	03.04. 28	BHPI	Feedback of powerpoint presentation	45 min	Effective Feedback	Return	Very good

26	8.9.23	online	Feedback on title selection regarding	20 min	got a clear idea about literature	Redwan	Number singer
27	9.9.23	Online	Feedback on research proposal	40 min	Effective feedback	Redwan	Number singer
28	19.9.23	Online	Feedback on research proposal presentation	30 min	Helpful guideline	Redwan	Number singer
29	31.01.24	Online	Correction of socio-demographic result	20 min	Effective correction	Redwan	Number singer

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.