

**Psychological Fatigue, Well-Being and Parental Self-
Efficacy among Mothers of Autism Spectrum Disorder:
A Cross-Sectional Study**



By
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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

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List of Abbreviation

BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Peralysed
IRB	Institutional Review Board
ASD	Autism Spectrum Disorder
FAS	Fatigue Assessment Scale
PSE	Parental Self-Efficacy
WHO	World Health Organization
DASS	Depression, Anxiety, Stress Scale
PSOC	Parenting Sense of Competency
OT	Occupational Therapy
SPSS	Statistical Package of Social Science
HRQoL	Health-Related Quality of Life

Abstract

Background: Autism is a neurodevelopmental disorder that is an emerging factor and increasing day by day. Almost every child with autism spectrum disorder (ASD) has difficult behaviors, which include aggressive and disruptive tendencies toward others as well as themselves. Being a mother of an autistic child is a challenge in itself. There are several reasons why they could face psychological fatigue stress and low levels of self-efficacy as a parent when their children are socially isolated and people see them very differently due to various superstitions and social stigma.

Aim: This study aims to identify the level of stress, fatigue, and parenting competency among mothers of children with autism spectrum disorder.

Method: The study followed a quantitative cross-sectional study design and the data was collected using a purposive sampling technique from 123 mothers of children with autism spectrum disorder. Data collection was done by the face-to-face survey from CRP (Savar and Mirpur branches) alongside other therapy centers around Dhaka city. Biological mothers who are literate and 18 years old or above are included in this study. The researcher used DASS-21 (Depression Anxiety Stress Scale 21), FAS (Fatigue Assessment Scale), and PSOC (The Parenting Sense of Competence Scale) to measure the level of psychological well-being, fatigue, and parental self-efficacy among mothers of children. Descriptive analysis was done using SPSS (Statistical Package of Social Science) version 20. After identifying the levels of depression, anxiety, fatigue, and parental self-efficacy among mothers of children with autism spectrum disorder a Spearman's correlation test was performed to identify the strength and direction of relativity among these variables.

Result: According to mental health evaluations, 45.5% (56) of participants had normal levels of depression, 41.5% (51) had normal levels of anxiety, and 54.5% (67) had normal levels of stress. There was variation in the levels of fatigue, 59.3% (73) reported normal fatigue. The majority of parents had a low level of self-efficacy, with 54.5% (67) claiming such. The results of this study also indicated that there is a moderately strong and positive correlation among fatigue, depression, anxiety, and stress. The variables depression ($r = -0.447$), anxiety ($r = -0.371$), stress ($r = -0.433$), and fatigue ($r = -0.445$) are all moderately and negatively correlated with parental self-efficacy (PSOC) ($p < 0.05$).

Conclusion: The results of this research emphasize the need for focused treatments and systems of support to improve the general mental health and parental self-efficacy of mothers who are raising children with autism spectrum disorder.

Keywords: Autism Spectrum Disorder, Fatigue, Depression, Anxiety, Stress, Parental self-efficacy.

Chapter I: Introduction

1.1 Background

The phrase "autism spectrum disorder" is used to describe a subset of individuals who exhibit specific challenges while interacting with others in addition to routine conduct, severely restricted interests, and/or sensory behaviors that commence early in life and cause them to participate in solitary activities and repetitive behaviors. Though estimates are higher in high-income nations, the prevalence of ASD is just under 1% around the globe (Gertz & Boudreault, 2016; Lord et al., 2020). Worldwide, the prevalence of ASD is estimated to be 1 in 100 children (Zeidan et al., 2022). 52 million instances of ASDs were estimated in 2010, translating to a prevalence of 7.6 per 1000, or one in 132 people. Between 1990 and 2010, there was no discernible shift in the prevalence of autism spectrum disorders or other ASDs, even after correcting for methodological variances (Hahler & Elsabbagh, 2015; Lord et al., 2020).

The prevalence of ASD in eight South Asian nations was described in a systematic study that gathered and assessed publications released between January 1962 and July 2016. In South Asia, the incidence of ASD varied from 0.09% in India to 1.07% in Sri Lanka, meaning that up to one in 93 children live with ASD. The frequency in Dhaka city was estimated to be alarmingly high (3%). The size of the study samples varied from 3,74 in Sri Lanka to 18,480 in India. There was a variety of ages from 1 to 30. They noted that they could not locate any research on the prevalence of ASD in Afghanistan, the Maldives, Nepal, Bhutan, or Pakistan (Hossain et al., 2017).

0.75 out of 1000 children in rural communities of Bangladesh were found to have ASD, these children aged between 20 to 30 months old (Akhter et al., 2018).

“Recent data from Bangabandhu Sheikh Mujib Medical University (BSMMU) reveals that around 2 out of every 1000 children in Bangladesh are affected by ASD, with a higher prevalence in urban regions compared to rural areas. In the Southeast Asian area, it is estimated that 1 in 160 children are affected by ASD”(Autism Spectrum Disorder and Its Care in Bangladesh / *The Daily Star*, n.d.).

Parents commonly assume a key role and are the main caregiver for an ASD child. So, it's difficult to raise and care for a child with ASD. The family must invest a substantial amount of time, energy, and money in providing care for children with ASDs. To investigate HRQoL (Health-Related Quality of Life) among parents of children with ASDs, the following study used a mixed methods approach. The results of combining the qualitative and quantitative data pointed to a strong correlation among how parents' way of life is influenced by their ASD children which can either positively or negatively impact their life. To provide greater support and integrated treatment, it is also mentioned that parents' health and well-being must be attended to in addition to that of the afflicted children (Kuhlthau et al., 2014).

For any parent with a child suffering from ASD, represents multiple challenges that might cause enormous effects on their physical and psychological well-being (Giallo et al., 2013). In one study, compared to traditionally developed children, mothers of ASD children had noticeably higher fatigue levels (Benedetto & Ingrassia, 2021; Giallo et al., 2013). According to another study, parents of children with ASD are purportedly under more stress. Moreover, the findings demonstrated that mothers of autistic children had greater stress levels than fathers. The findings showed that there were notable differences in feelings of anxiety, depression, and stress levels between parents of autistic children and

parents of non-autistic children. It was assumed that parents of autistic children experienced worse mental health than their fellow parents (Kayesh & Muhammad, 2019). Demographic, child, and parent characteristics are among the many factors that impact maternal fatigue. Higher levels of education (trade certificates or high school diplomas), difficult-to-manage children, insufficient rest, exercise, and nutrition, as well as a greater sense of needing social support, are all noteworthy influences (Giallo et al., 2013).

One piece of literature stated that among parents of autistic children, there was a notable difference in anxiety levels according to work status. The influence of employment on parental anxiety is highlighted by the fact that mothers who were employed reported much lower levels of worry than jobless mothers. Again, that study revealed that there were statistically significant variations in depression among mothers with different educational backgrounds. In this study, postgraduate mothers consistently reported lower levels of depression than their graduate and undergraduate counterparts (Kayesh & Muhammad, 2019). Another study found that parental stress was not associated with demographic traits, but instead, the level of a child's disability and a sense of parental competence were the primary determinants (Batoool & Khurshid, 2015). The research included 324 parents who had children with ASD, aged 12 to 25. Findings from that study revealed that a variety of factors, including child age, parent immigration status, obstacles to service access, and caregiver load, are associated with parent self-efficacy rather than just a child's clinical circumstances (Weiss et al., 2016).

Low levels of satisfaction and effectiveness in parenting roles were found to be in mothers with high levels of fatigue. The cognitive functions of these parents, such as their ability to think clearly and solve problems, may be affected. They may find it difficult to

come up with solutions for some of the parenting problems they encounter, such as dealing with a particular behavioral issue with their children (Giallo et al., 2013).

For these parents, parental self-efficacy is associated with stress, depression, and anxiety (Giallo et al., 2013; Jones & Prinz, 2005). When any child behaves stubbornly parents feel these are unsolvable problems and blame themselves which leads to poor parental self-efficacy (Benedetto & Ingrassia, 2021).

PSE should be considered to improve in the case of promoting a child's overall development in crucial life situations and stressful environmental conditions (Jones & Prinz, 2005). There is a highly suggested connection between PSE and parenting sense of competence. To deal with a child's challenging behaviors, PSE appears to foresee the level of parenting competence and has proven to show better parenting even in the circumstances of difficult behavior among children (Jones & Prinz, 2005).

Furthermore one of the studies suggests that therapy programs for parents of children with ASD must give particular attention to mothers' self-efficacy and engagement in a range of pursuits to improve mother's sense of well-being and pleasure and enhance the involvement of their children (Avrech Bar et al., 2016).

This study has the potential to provide an understanding of the experiences encountered by mothers who have children with ASD. Exploring how fatigue, overall well-being, stress, and self-belief interact in this context can offer insights into the challenges faced by these mothers.

1.2 Justification of the Study

ASD is becoming more common in Bangladesh as well as many other nations. In light of the particular difficulties these families encounter in Bangladeshi society, research on the

psychological health and self-efficacy of mothers of autistic children is vital.

A considerable amount of study has not yet been done on the effects of ASD on mothers in Bangladesh, even though this neurodevelopmental disorder has become more widely recognized in recent years. Bangladesh, as a country that is still developing, provides a unique set of societal and financial factors that may impact the experiences of mothers parenting children with ASD. Undertaking cross-sectional research in this particular setting will yield significant perspectives on the lives of mothers from Bangladesh.

This study has the potential to contribute significantly to the broader field of ASD research by shedding light on how maternal well-being and self-belief play a role in the caregiving process. This information can complement existing knowledge about this disorder and its impact, on families.

Parents of children with ASD frequently struggle with fatigue, and the effects of this problem on mothers' well-being in Bangladesh may be different from those in other cultural contexts. A thorough understanding of the psychological and physical costs of caring in Bangladesh's unique cultural and economic context may be obtained by measuring mothers' levels of fatigue, depression, anxiety, and stress.

Also, understanding parental self-efficacy is crucial for enhancing the quality of care provided to children with ASD in Bangladesh. This is because family and community support play an important role in this regard. Moreover, studying demographic data can help in developing treatments that are tailored to address the unique challenges faced by mothers from diverse socioeconomic backgrounds.

By examining the factors that influence self-belief it may help to identify areas

where interventions and support can be focused to enhance the well-being and confidence of mothers caring for children with ASD. It can highlight if any additional counseling programs should be included in the health sector for the parents of ASD children.

The outcomes of this research could inform the development of targeted interventions or support programs designed specifically for mothers who have children with ASD. Strategies aimed at reducing fatigue and improving well-being may ultimately bolster self-belief and consequently enhance the overall quality of life for both mothers and their children.

1.3 Operational Definition

1.3.1 Autism Spectrum Disorder

“Autism spectrum disorders are neurodevelopmental disorders, meaning they are caused by abnormalities in the way the brain develops and works. There are a range of different disorders covered by this term, including conditions that used to be considered separate such as autism and Asperger’s syndrome. Some people still use the term “Asperger’s syndrome”. It is generally thought to be at the milder end of the ASD spectrum. People with autism spectrum disorders have problems in social behavior and communicating with others; they tend to engage in solitary interests and activities which they do repetitively” (Gertz & Boudreault, 2016).

1.3.2 Fatigue

“Fatigue is a complex state characterized by a lack of alertness and reduced mental and physical performance, often accompanied by drowsiness” (Wong, 2021).

1.3.3 Self-efficacy

“The term “self-efficacy” describes an individual’s belief in their ability to successfully

perform a given task. Self-efficacy can inform how an individual may behave, indicating whether they attempt a task, how much effort they put into the task, and how long they persist in the face of obstacles and aversive experiences” (Bandura, 1988).

1.3.4 Psychological well-being

“Psychological well-being is a multifaceted and multidimensional construct that encompasses an individual's overall happiness, satisfaction with life, and mental and emotional health. It includes key components such as positive emotions, autonomy, positive relationships, low levels of negative emotions, purpose in life, life satisfaction, and personal growth”(Dr. M. Dhanabhakym & Sarath M, 2023).

1.3 Aim of the Study

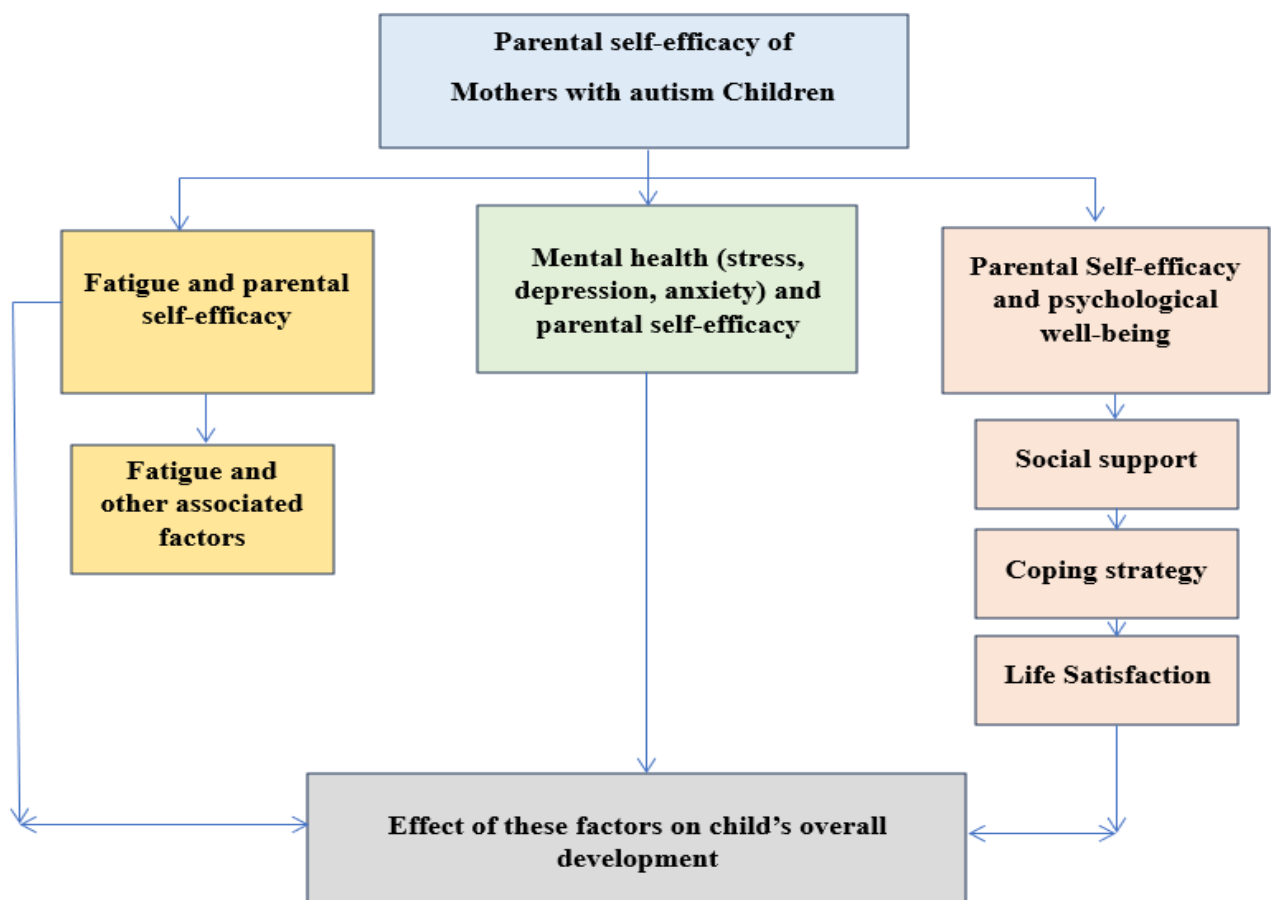
To identify the level of stress, fatigue, and parenting competency among mothers of children with ASD.

Chapter II: Literature Review

This chapter offers an extensive overview of studies on mothers of children with ASD that concentrate on psychological fatigue, well-being, and parental self-efficacy. Through a comprehensive analysis of existing research, the purpose of this review is to highlight the intricate interactions among these variables and their influence on mothers' experience in the context of parenting a child diagnosed with ASD.

Figure 2.1

Overview of literature review findings



1. Parental self-efficacy of mothers with autistic children

In a study held in 2016, the United States included 598 parents to investigate self-efficacy among parents of children with ASD with other parents of children with disabilities discovered that, out of the five categories(ASD, Down syndrome, ASD, and Down syndrome, emotional and behavioral disorders and no identified diagnoses) parents of children with ASD had the lowest rates of parental self-efficacy (Benedetto & Ingrassia, 2021; Smart, 2016).

There have been very few in-depth studies and research undertaken on this issue, even though parental competence has been highlighted as a vital component in improving the standard of life for parents of autistic children. A systematic review conducted in 2019 which analyzed 350 publications, highlighted the need to develop appropriate tools to assess the parenting skills of these parents. This study has helped medical professionals and researchers to better evaluate and support the parenting abilities of parents with autistic children (Mohammadi et al., 2019).

2. Fatigue and parental self-efficacy

In 2011, a study was conducted in Australia to examine the extent of fatigue experienced by parents and how it affects their overall well-being and parenting abilities. The research included fifty mothers whose children, aged two to five, were diagnosed with ASD. The results indicated that mothers of children with ASD experience significantly higher levels of fatigue compared to mothers of typically developing children (Benedetto & Ingrassia, 2021; Giallo et al., 2013).

In one research, parents of ASD children aged 2 to 12 from all over Canada were asked to participate as mothers (N = 78) and fathers (N = 34). The findings from that study said that there was a correlation between fatigue and psychological, physiological, and

environmental aspects, particularly those about children; nonetheless, mothers were more possibility to experience fatigue than fathers. Guardians' parental satisfaction and self-efficacy were shown to be adversely connected with fatigue in both parents (Sarah Elizabeth Ivens Regina, 2015).

2.1. Fatigue and Other factors

Above mentioned study also found that fatigue was strongly associated with stress, anxiety, depression, lower parenting self-confidence, poor sleep quality, a higher need for social support, and insufficient physical activity. These factors contributed to the elevated levels of fatigue reported by the mothers. An important finding of this study is that parental fatigue should be taken into account in theoretical frameworks that address how parents adjust to disability or chronic disease in the family (Giallo et al., 2013).

3. Mental health (stress, depression, anxiety) and parental self-efficacy

Parents of children with ASD report higher levels of stress, higher levels of marital conflict, and higher rates of divorce different from parents of normally growing children and parents of children of other conditions (Chiel, 2018). The interplay between parenting stress, self-efficacy, and parental assessment of child behavioral issues also predicted the observed harsh parenting practices. Additionally, women with significant levels of fatigue also reported increased stress levels, worry, and sadness (Giallo et al., 2013).

Another study with a sample size of 134 mothers, stated that the connection between children's behavioral issues and parents' self-efficacy has an impact on parenting stress. Behavior issues made parents more anxious and depressed, lowered their self-efficacy, and elevated their stress levels (Rezendes & Scarpa, 2011).

A cohort study with 152 parents explored the linkage of co-parenting quality, stress, and parenting self-efficacy among the parents of ASD children. The stress of the parents was

also similar, with associations with co-parenting quality and autism-specific parenting efficiency. Enhanced views of parenting confidence particularly in autism not likely to have an impact on parenting stress when parents experience inadequate co-parenting (May et al., 2015).

In Lahore, Pakistan, a cross-sectional research comprising 100 parents (50 mothers and 50 fathers) of children with ASD revealed that parents' stress levels might be lowered by their belief in raising a child through challenging circumstances (Sarwar et al., 2019).

4. Parental self-efficacy and psychological well-being

A study held in 2011, including 134 women, showed that there is a correlation between parental stress and anxiety or depression, which is associated with parents' self-efficacy. The findings also showed that parenting stress and parental anxiety or depression were mostly mediated by parenting self-efficacy and that declining parenting self-efficacy was the cause of increased mother anxiety or depression levels (Rezendes & Scarpa, 2011).

In a study, purposive sampling was used to choose 125 participants from a group of parents of ASD children living in the Yamet village in Central Java. The research subjects were 92 females and 33 males. In summary, how parents of children with ASD are feeling psychologically is positively correlated with both parental self-efficacy and hardiness, and all three factors are crucial in raising autistic children. The findings of this study support the hypothesis that parental hardiness and self-efficacy are significantly correlated with the psychological health of parents of children with ASD. Increasing the sense of self-worth and endurance of parents can help to improve mental health. The study's findings also highlight the significance of self-efficacy and strict parenting in enhancing the mental well-being of parents of children with ASD. Parenting self-efficacy and

hardiness are important factors in lowering stress, anxiety, and depression that can result from raising autistic children. They also aid in helping parents adjust to and feel confident about the challenges of raising autistic children. Ultimately, enhancing psychological health fosters a commitment to and prioritizing parenting, a positive outlook on parenting, and an emphasis on the present moment (Desiningrum & Kurniawati, 2023).

In a survey with a total of 129 parents (64 men and 65 women), the results reported that fathers exhibit higher levels of self-efficacy, which may be due to their strong connection to their jobs and time spent partially away from demanding caregiving duties (Salas et al., 2017).

A mixed method study was conducted in 2020, USA which tries to comprehend the variables that affect parents' self-efficacy when putting in place an online medical care intervention that is parent-centric. Results suggest that worldwide parental self-efficacy has a major role in determining parental therapeutic self-efficacy in parent-mediated treatments (Russell & Ingersoll, 2021).

4.1. Social support

To investigate the effects of family resiliency, alleged social support, and parent self-efficacy on family suffering, research including 138 mothers of individuals with ASD, aged between 4 to 41, has been carried out. The study found that the relationship between stress and family distress might be partially explained by family hardiness. Furthermore, it was shown that the relationship between the buildup of stress and hardiness was mediated by perceived self-efficacy and support from society (Weiss et al., 2013).

Attica's Special Education Schools (Greece) hosted a convenience sample cross-sectional research. There were 123 parents in the sample. The study stated that the influence of spirituality and social support on fatigue levels was investigated in this study, which

involved parents of children with ASD. An absence of spirituality and social support can have a detrimental effect on parental fatigue, which can result in lacking care for children with ASD. Low levels of general fatigue, strongly low levels of social support, and a moderate amount of spirituality were reported by the parents in this study. Participants' reports of fatigue indicated that they were more physically and less mentally exhausted. Based on the study's findings, it appears that greater levels of overall social support as well as assistance from close friends, family, and partners were linked to higher levels of spirituality in terms of meaning of life, peace, and faith (Halki et al., 2024).

An online survey, which evaluated the usage of official and informal social supports, the perceived efficacy of those social supports, marital satisfaction, and parental stress, was completed by 151 mothers of children with ASD. The results of this study highlight the significance of offering sufficient informal assistance to mothers of children with ASD. Furthermore, to lower stress and grow marital satisfaction, having access to strong informal support benefits the well-being of the mother and father, the children with ASD, and the entire family unit. To further assist this population, treatments aimed at boosting informal support and their efficacy through training or group interventions are required (Millan, 2022).

4.2. Coping strategy

A recent survey of 129 parents (64 men and 65 women) found that as parents age, they require less cognitive restructuring and social assistance. Additionally, the survey revealed that mothers tend to utilize coping strategies that focus on emotions, such as seeking social support or expressing their feelings when facing gender-based inequalities (Salas et al., 2017).

Using a relational approach, one study investigated the association between the

degree of burnout, anxiety, and dealing strategies of parents whose children were identified as having ASD and demographic characteristics. 180 parents of ASD children participated in the study. So, it was noted that the parents' anxiety levels and coping mechanisms varied considerably based on their history of mental illness. Anxiety and burnout levels in parents were shown to be strongly positively correlated. The parents' coping skills and emotional exhaustion levels were also shown to have a somewhat beneficial association. It has been demonstrated that parents with high levels of stress and burnout have more possibility to use unhealthy coping mechanisms. The study's findings confirm that ASD has an impact on family dynamics and the entire family. It is crucial to address parents' issues and provide them with all the help they require because of this. Conversely, the acquisition of effective coping mechanisms by parents will help them gather the strength to confront this challenging circumstance (Ulu & Karacasu, 2022).

4.3. Life satisfaction

Parents' life satisfaction is more strongly related to functional coping mechanisms. Interestingly, there are gender differences in the coping mechanisms that are linked to higher life satisfaction. Women tend to prioritize perceived self-efficacy, while men tend to rely on problem-solving techniques. Additionally, the age of the child is an important factor that affects parents' overall contentment, with life satisfaction decreasing as children grow older. These findings highlight the need for early interventions aimed at improving parents' coping mechanisms and self-efficacy, despite the shortcomings of the study for taking a small sample size and being dependent on self-reported measures (Salas et al., 2017). Additionally, greater satisfaction with life is associated with an increased level of self-efficacy (Jones & Prinz, 2005).

5. Effect of these factors on a child's overall intervention and development

In 2010 a study was conducted to fill in the gap of research about the effectiveness of specified coaching on parental self-efficacy. It included mothers of ASD whose children aged between 4 to 8 years old. They were 30 in number and divided into 2 parent groups. Parents in group 1 (n = 15) got coaching using the agency's current parent coaching methodology, whereas parents in group 2 (n = 15) received customized coaching for two hours on a certain day of the week, every parent who took part in the research got 1:1 coaching while the child was present. The best indicator of parent participation in therapy is self-efficacy. So, parents who are more assured that they can positively impact their children's lives and make a difference tend to be more engaged in the intervention. Their children benefit from their commitment. The study's findings generally provide evidence for the use of sensitive parent-coaching models with mothers of autistic children to raise their task-specific self-efficacy. According to the findings of this study, autism programs may find it helpful to make investments in developing, implementing, and assessing interventions like sensitive coaching that target parental behavior via parenting cognitions (Raj & Salagame, 2010).

A study rated mothers' experience of involvement in their child's interventions and satisfaction with intervention-related training across a range of widely used autism spectrum disorder-related treatments, 438 participants completed the parenting self-efficacy scale which is autism specific. Additionally, respondents filled out a caregiver burden scale. The findings demonstrate that when parents report being more active in their child's therapy and are happier with the training they got for these interventions, their self-efficacy is elevated. Parents who report higher economic and social strain have worse parenting self-efficacy regarding autism. The hypothesis suggested greater levels of self-

reported caregiver burden are associated with lower PSE, although caregiver load did not ultimately appear to counteract the effects of engagement and training satisfaction on the growth of parental self-efficacy (Kurzrok et al., 2021).

In a controlled trial focusing on parents' self-efficacy, psychological well-being, and perceptions of changes in their children's sleeping, eating, and mobility, the study's goal was to determine the efficacy of an intervention for parents of children with disabilities. 95 parents participated in the sample (49 in the intervention group and 46 in the waiting-list control group). The purpose of the Training and Support Program (TSP) was to provide parents with a basic massage technique that they could apply to children at home. The TSP showed statistically noteworthy beneficial impacts on the wary mood of parents, self-efficacy for managing children's psychosocial well-being, self-efficacy in administering massage treatment, and views of children's sleeping and eating. Among parents, mothers in particular, there were found to be significant levels of psychological distress. The research points to the need for broader Program implementation and for paying more attention to the mental health of parents of children with impairments (Barlow et al., 2006).

Key gaps

- Many studies were conducted in Western countries (USA, Australia, Spain) but in Bangladesh, this type of study is very less.
- In Bangladesh previous studies were focused on only one domain such as: parental stress or quality of life.
- There are fewer studies incorporating psychological well-being as well as parental self-efficacy.

- The understanding of the maternal psychological health of ASD children has not been investigated well yet.

Conclusion: To gain a better understanding of the difficulties experienced by parents of ASD children, it is essential to address the gaps in current research. This will enable the creation of effective strategies to promote their well-being and self-belief as parents. This knowledge can then be used to develop targeted interventions and support programs to improve the quality of life for these families.

Chapter III: Methods

3.1 Study Question, Aim, Objective

3.1.1 Study Question

What is the level of psychological fatigue, well-being, and parental self-efficacy among mothers of children with ASD?

3.1.2 Aim

To identify the stress, fatigue, and parenting competency among mothers of children with ASD.

3.1.3 Objective

1. To identify the sociodemographic information among mothers of children with ASD.
2. To identify the level of psychological well-being including stress, anxiety, and depression in mothers of children with ASD.
3. To identify the level of fatigue in mothers of children with ASD.
4. To identify the levels of parental self-efficacy in mothers who have children with ASD.
5. To identify the correlation between psychological well-being, fatigue, and parental self-efficacy.

3.2 Study Design

3.2.1 Method

This study followed a quantitative cross-sectional study design. “Quantitative research relies on the collection and analysis of numerical data to describe, explain, predict, or

control variables and phenomena of interest” (Salkind, 2013). When it comes to comprehending phenomena like psychological fatigue, well-being, and parental self-efficacy among mothers of children with ASD, quantitative approaches emphasize the need for objective measures and statistical analysis. This research strategy strongly emphasizes gathering numerical data via polls, questionnaires, and survey instruments and employing computer tools to manipulate statistical data that is already available. To get a deeper knowledge of the relationship between psychological fatigue, well-being, and parental self-efficacy in the context of parenting a child with ASD, this study focuses on quantitative research to collect numerical insights that may be generalized across groups of mothers (Labaree, n.d.).

3.2.2 Approach

This study was conducted following a cross-sectional study approach. In a cross-sectional study, data are collected at a single point in time. During a cross-sectional study, researchers equally evaluate the study subjects' outcomes and how they were exposed at the same time. So here, the exposure is ASD in children, and the outcomes are psychological fatigue, well-being, and parental self-efficacy. In these circumstances, the dependent variables are psychological fatigue, well-being, and parental self-efficacy and the independent variable is ASD in children. Also, it is described simply as taking a "Snapshot" of an assembled group of individuals. There is no exact time duration involved for this kind of study and as we have limited time to conduct this study so cross-sectional study design will be appropriate in leading this research with both time and cost-effectiveness (Kesmodel, 2018; Wang & Cheng, 2020).

3.3 Study Setting and Period

3.3.1 Study Setting

The study setting was CRP (Savar and Mirpur branches) as well as another therapy center around Dhaka city.

- ✓ Centre for the Rehabilitation of the paralysis (Savar and Mirpur branch)
- ✓ Therapist Point and Shanirvor Special School for Autism and Neurodevelopmental Disorder, Dogormora, CRP road, Savar, Dhaka-1343
- ✓ Prottasha Centre for Autism Care, Dogormora, CRP road, Savar, Dhaka
- ✓ Autism Welfare Foundation, Modder char, Keraniganj model thana, Dhaka 1312
- ✓ Therapist Point, House no: 30, Road No: 5/A, Sector: 5, Uttara, Dhaka

3.3.2 Study Period

The total study period was from May 2023 to February 2024. And The data was collected between 1st December to 31st December of 2023.

3.4 Study Participants

3.4.1 Study Population

The study was focused on mothers of children with ASD who receive services from special schools and therapy centers.

3.4.2 Sampling techniques

In this study, the researcher used purposive sampling, also known as judgmental or selective sampling. This involved relying on the researcher's judgment to select the most appropriate participants for the study. To ensure that the target population was accurately

identified, the researcher established specific inclusion and exclusion criteria. Purposive sampling allowed for a careful selection of participants based on their ability to provide insights into the subjects, ideas, or occurrences being studied. This sampling approach was deemed best suited to meet the study's objectives, which aimed to gain a better understanding of psychological exhaustion, well-being, and parental self-efficacy among mothers of children with ASD. By carefully selecting participants who could make a significant contribution, the study was better able to achieve its goals (Sharma, 2017).

3.4.3 Inclusion criteria

Mothers must meet the following inclusion criteria to participate:

1. To participate in the study, participants must be at least 18 years old or older. Bangladesh banned child marriage in 1929 and raised the legal age of marriage for women to 18 years old. For this reason, a minimum age of 18 years has been set for mothers in this study (Arnab & Siraj, 2020).
2. Mothers must be literate, and able to complete the questionnaire in Bangla, the chosen language.
3. The biological mother of autistic children is required to participate in the study.
4. Participants should have children receiving medical interventions from any health care center.

3.4.4 Exclusion criteria

Mothers who meet any of the following criteria will be disqualified from taking part in the study:

1. Mothers with children who are suffering from any physical disability.

2. Mothers will be excluded who have any serious medical condition or any kind of physical problem because that can affect their level of psychological well-being, fatigue, and self-efficacy.

3.4.5 Sample size

The sampling size was estimated by using the Cochran formula, $n = \frac{Z^2 \cdot p \cdot (1-p)}{d^2}$

Here,

n = required sample size

Z = Z-score corresponding to the desired confidence level

p = estimated prevalence (proportion)

d = margin of error (expressed as a proportion)

In this study, Prevalence (p) = 2 in 1000 (Patricia, 2021) = 0.2% = 0.002 (as a proportion)

Confidence level (C) = 99% (which corresponds to a Z-score of approximately 2.576 for a two-tailed test at this confidence level)

The margin of error (d) = 1% (0.01 as a proportion)

To sum it up, $n = \frac{Z^2 \cdot p \cdot (1-p)}{d^2}$

$$= \frac{(2.576 \times 2.576) \times 0.002 \times (1 - 0.002)}{(0.01 \times 0.01)}$$

$$= 132.45$$

$$= 133$$

As the data will be collected by face-to-face interview so 10% non-response rate will be added to it. So, then the actual sample size will be = 133 + 10% = 146.3 or 147.

The student researcher could collect 123 data due to time limitations.

3.5 Ethical Consideration

3.5.1 Ethical Clearance

The Institutional Review Board (IRB) provided ethical permission for the study via the Bangladesh Health Professions Institute's (BHPI) Department of Occupational Therapy. IRB form number: CRP-BHPI/IRB/10/2023/744 (See Appendix A).

Throughout the application process, the goal, objectives, and purpose of the study were clearly stated. Furthermore, consent was sought from the OT Pediatric department and the head of the BHPI occupational therapy department before any participant data was collected (WMA International Code of Medical Ethics, 2022).

3.5.2 Informed Consent

All participants stated informed consent to sign, confirming their willingness to participate in as well as with full knowledge regarding the study's purpose and procedures. A consent form retaining important information about the research procedure was provided. It was created by the researcher in both Bangla and English for the participants to sign. The researcher provided these consent forms to the participants to sign and a copy to be kept with the researcher. The student researcher also provided a withdrawal form if any participants wanted to withdraw their provided information (See Appendix B).

3.5.3 Unequal Relationship

The researcher did not have any unequal relationship with the participants, and no pressure was placed on them to participate in the study. There was no excessive pressure or compulsion to take part in the study because the researcher treated participants fairly and impartially. Prioritizing ethical issues encouraged voluntary and consensual involvement

in the study process, maintaining the values of informed and independent consent.

3.5.4 Risk and Beneficence

There were some unusual events such as emotional outbursts, guilt, shame, and distress while collecting data from the participants. This kind of risk is minimized by stopping the data collection method for that time and continuing sometime later or giving the participant the choice not to continue in the study. There were no financial or any other type of benefits involved in this study.

3.5.5 Confidentiality

Complete confidentiality was ensured about participant data during the whole study period. The supervisor was the only person who knew the names and identities of the participants, as stated clearly on the information sheet. Participants received a strong assurance that their identities would be kept strictly private for all purposes, including future communication, verbal talks, report writing, publication, conferences, and any other study-related activities. The goal of this pledge to secrecy was to create a safe and dependable atmosphere that would uphold the research's ethical standards and protect the participants' privacy and anonymity throughout the study and any possible after-effects.

3.6 Data Collection Process

3.6.1 Participant recruitment process

Figure 3.6.1.1.

Participant recruitment process

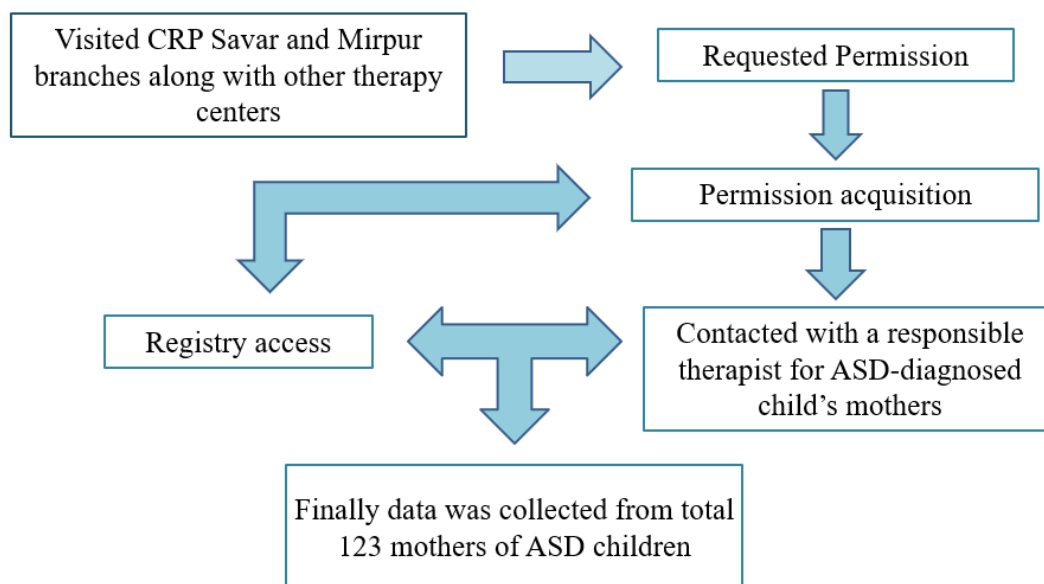


Figure 3.6.1.1 represents the participant recruitment process. The student researcher first visited CRP branches at Savar and Mirpur and other therapy centers around Dhaka city. A formal application was submitted to acquire the permission for data collection. After gaining permission the student researcher contacted the responsible therapists for the registry books, and contacts and to access the participants through them. Finally collected data from 123 mothers of children with ASD.

3.6.2 Data Collection Method

Data was collected through a face-to-face survey method. Face-to-face surveys entail the interviewer asking questions and providing assistance to participants in answering them. When compared to mail and telephone surveys, this kind of survey administration offers several advantages, especially when it comes to the precision and depth of the data collected. While conducting this research, the face-to-face survey method enabled interviewers to not only ask questions but also provide necessary assistance to participants, thereby minimizing misunderstandings and ensuring accurate responses (Doyle, 2005).

3.6.3 Data Collection Instrument

The Fatigue Assessment Scale (Michielsen et al., 2003)

“The FAS is a scale comprising 10 items that assess symptoms of chronic fatigue. Each item on the scale is rated on a Likert-type scale ranging from 1 ("never") to 5 ("always"). Items 4 and 10 are scored in reverse. The total score of the scale ranges from 10 (representing the lowest level of fatigue) to 50 (representing the highest level of fatigue)” (Giallo et al., 2013).

The Depression Anxiety Stress Scale 21

“The DASS 21 is a 21-item self-report questionnaire designed to measure the severity of a range of symptoms common to both Depression and Anxiety. The questionnaire assesses the presence of depression, anxiety, stress, and tension in the past week. Participants rate each item on a 4-point scale. Each item is scored from 0 (did not apply to me at all over the last week) to 3 (applied to me very much or most of the time over the past week). The DASS-21 should not be used to replace a face-to-face clinical interview (Giallo et al., 2013). The Depression, Anxiety, and Stress Scale - 21 Items (DASS-21) is a set of three

self-report scales designed to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The scale to which each item belongs is indicated by the letters D(Depression), A(Anxiety), and S (Stress). For each scale (D, A &S) sum the scores for identified items. Because the DASS 21 is a short-form version of the DASS(the long form has 42 items). The final score from each group must be multiplied by 2 (x2)” (Parkitny & McAuley, 2010).

The Parenting Sense of Competence Scale (Gibaud-Wallston, J & Wandersman, L.P., 1978; Johnston & Mash, 2010) “This is a tool that consists of 16 items to evaluate an individual's confidence in their parenting abilities. The Efficacy subscale evaluates perceived knowledge, confidence, and competence in parenting, whereas the satisfaction subscale evaluates motivation, enjoyment, and happiness in the parenting role” (Giallo et al., 2013).

3.6.4 Field test note

The student researcher translated questionnaires into Bangla. Then a pilot survey was carried out with 3 participants at CRP, in the pediatric outpatient unit. Two of them reported that they were having difficulties while filling up some items on the PSOC scale. Because the language is stereotyped and difficult to understand. So, the student researcher discussed with the supervisor and another faculty member and took some advice. Finally collaborated with a translator and made some changes for the participants so that they face less difficulty in understanding the questions. The translated survey was improved by using simpler synonyms to increase participant understanding. In the end, this iterative procedure improved the validity and reliability of the data gathered by making sure the survey

instruments were accessible in terms of both culture and language. The collaborative approach demonstrated the study process's dedication to scientific rigor and participant inclusion.

3.6.5 Non-participant

While collecting data student researchers faced non-participant involvement in some cases. The children of mothers were creating a disturbance and distracting the attention of the participants while participating in the study.

3.7 Data Management and Analysis

The collected data was managed and analyzed with Statistical Package for the Social Sciences (SPSS) version 20. All the data was stored in a Google Drive for safe access. The socio-demographic data were analyzed through 'Descriptive Statistics' of the SPSS.

Based on the results of the Kolmogorov-Smirnov test the distributions of the scores from three scales, each with sub-scales, did not follow a normal distribution. As a result, Spearman's rank correlation coefficient was used as a non-parametric substitute to investigate the correlations among psychological well-being, fatigue, and parental self-efficacy. So, this study employed Spearman's correlation test to examine the relationships between mothers of children with ASD and their psychological well-being, level of fatigue, and parental self-efficacy. This test is appropriate because it helps in the interpretation and analysis of the linear relationships between continuous variables by quantifying their intensity and direction. This makes it easier to understand how these elements interact in this specific situation. The bar charts were made in Microsoft Excel. Finally, all the findings are presented and interpreted in a Microsoft Word file.

3.8 Quality Control and Quality Assurance

The study ensured the highest level of data quality and safety by strictly adhering to the five steps of data cycle management. 123 individuals in all took an active role in the study. The surveys were provided in a paper document format with areas set aside for answers, along with informed consent and withdrawal forms. Every document was photocopied for further preservation to increase security. The student researcher maintained the utmost confidentiality of the received data.

The gathered information was first documented and systematically entered into the system. Both the data-gathering procedure and the ensuing data input were carried out with fairness. For in-depth analysis, all data was originally saved in the Statistical Package for the Social Sciences (SPSS). Furthermore, copies of the data were safely kept on the Google Drive cloud storage platform, protected by strong password security by Google security guidelines. There was a strong focus on making sure the data was used responsibly, and strict precautions were taken to avoid any unwanted access. Throughout the investigation, the data were kept in their original condition; neither alteration nor exploitation took place. Every file on the Google Drive system is properly preserved to better protect the data. As they anticipate its significance for future research projects, the supervisor and the student researcher both urge for comprehensive preservation. Realizing that the data will only be useful for a short time once the study period is over, the data utilized in this research will be properly disposed of after its assessment is over (Martin et al., 2017).

Chapter IV: Results

This chapter represents the findings of the study with tables, figures, and descriptions. It includes the sociodemographic information, level of depression, anxiety, stress, fatigue, parental self-efficacy (satisfaction and efficacy) of mothers with ASD children, and correlation among these variables.

4.1 Socio-demographic Characteristics

Table 4.1.1

Sociodemographic characteristics

Variable		Frequency (n=123)	Percent (%)
Mother's age	20-31	48	39.0
	32-43	70	56.9
	44-55	4	3.3
	56-67	1	.8
	Mean \pm SD = 33.04 \pm 6.578		
Mother's educational qualification	Primary	2	1.6
	Secondary	17	13.8
	Higher Secondary	25	20.3
	Tertiary	79	64.2
Occupational status	Housewife	103	83.7
	Service holder	14	11.4
	Student	4	3.3
	Business	1	.8
	Retired	1	.8
Marital status	Married	122	99.2
	Divorced	1	.8
Number of children	1-2 Children	109	88.6
	3-4 Children	14	11.4
Number of children with ASD	1-2 Children	123	100.0
Gender of children	Boys	97	79
	Girls	26	21
Age of the children with ASD	2-8 years	93	75.6
	9-15 years	22	17.9
	16-22 years	7	5.7
	23-29 years	1	.8

Table no 4.1.1 shows the participant's age, mother's educational qualification, occupational status, marital status, number of children, number of children with ASD, gender of children, age of the children with ASD .39.0%(48) mothers age ranged from 20-31 years,56.9%(70)mothers are from 32-43 years age range,3.3%(4) mothers from 44-55 age range and 0.8%(1) mother is from 56-67 years range, Mean is 33.04%,(SD \pm 6.578).

The maximum number of mothers who have a tertiary level of education is 64.2% (79). The second highest participant's educational qualification was H.S.C passed 20.3% (25). A smaller percentage has Secondary 13.8% (17) and Primary 2(1.6%) education. So, it can be said that mothers of children with ASD are maximum well educated, the table also shows that a maximum number of mothers are housewives which is 83.7%(103). Few of them are engaged in different types of job sectors. The majority of the mothers are married 99.2% (122) and only a very small portion 0.8%(1) is divorced. 88.6%(109) of the participants have one or two children, compared to 11.4%(14) who have three or more. The number of boy children is greater than the number of girl children. Here, 79%(97) are boys while 21%(26) are girls.

Most of the children with ASD are between 2-8 years old 75.6%(93). A small portion are from age groups 9-15 years 17.9% (22), 16-22 years 5.7%(7), and 23-29 years 0.8%(1).

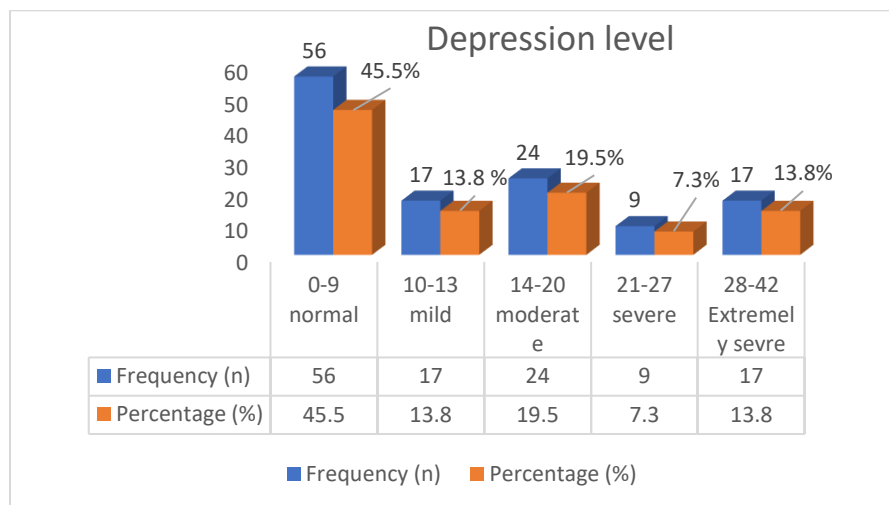
Table 4.1.2
The age of ASD diagnosis and duration of therapy

Variable		Frequency (n=123)	Percent (%)
When was your child first diagnosed with ASD in years	1-3	107	86.3
	3-5	16	12.9
How long are they taking therapy	Less than 1 month	9	7.3
	Less than 6 month	26	21.1
	6-8 month	5	4.1
	9-12 month	4	3.3
	1-5 years	60	48.8
	6-10 years	14	11.4
	11-15 years	2	1.6
15-20 years	2	1.6	

In the case of the age when a child was first diagnosed with ASD majority of children were diagnosed with ASD between 1 to 3 years 86.3(107) and then others in between 3 to 5 years 12.9% (16). Maximum is taking therapy for 1-5 years 48.8% (60). Noteworthy percentages were also identified for durations of less than six months 21.1% (26) and six to eight months 4.1% (5).

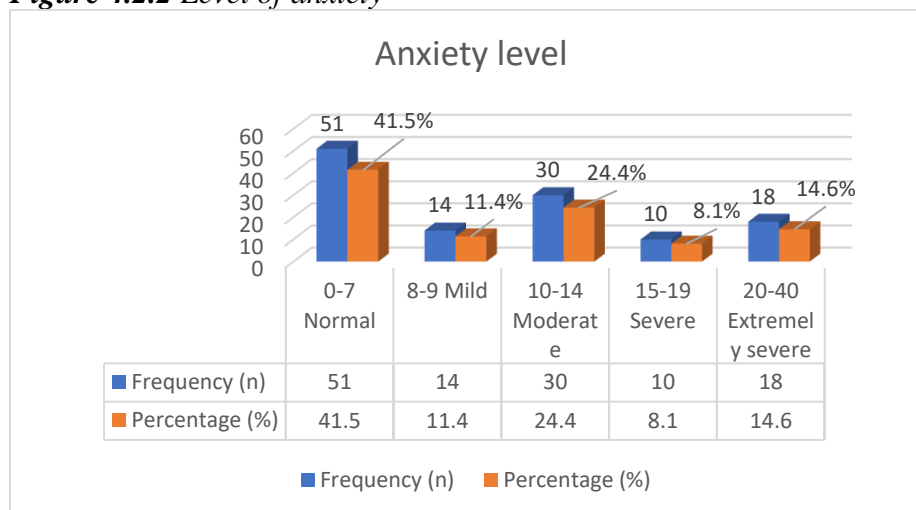
4.2 Level of Depression, Anxiety, and Stress among Mothers with ASD Children

Figure 4.2.1 Level of depression



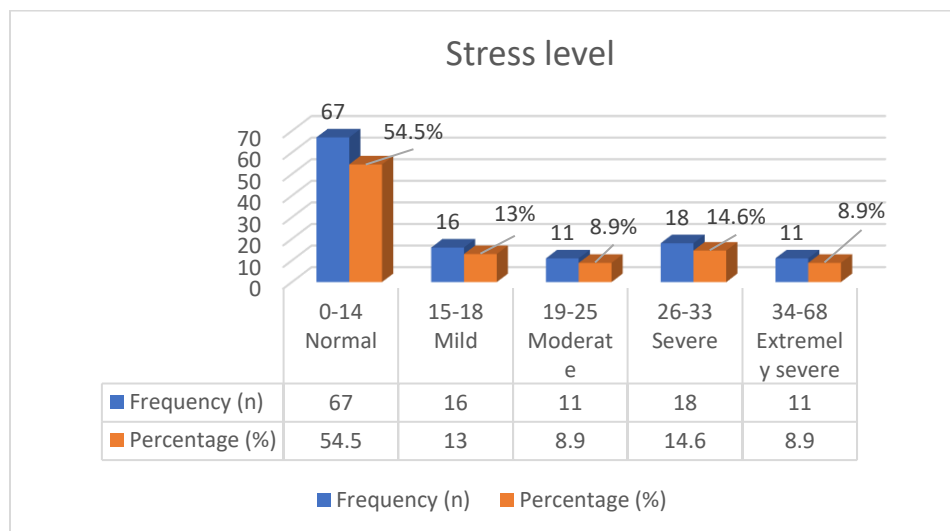
DASS-21 has 5 categories for the scoring of depression which are: “Normal 0-9, Mild 10-13, Moderate 14-20, Severe 21-27, Extremely Severe 28+”(Depression-Anxiety-and-Stress-Scale-Dass21.Pdf, n.d.).Here, The bar chart shows that 45.5%(56) of participants had a normal level of depression. A mild level of depression was found in 13.8%(17) participants. Moderate levels of depression were present in 19.5%(24) participants. Severe levels of depression were present in 7.3%(9) participants. An extremely severe level was within 13.8%(17) of participants. And the median with Interquartile Range (IQR) was recorded 10.00 (4.00-18.00).

Figure 4.2.2 Level of anxiety



DASS-21 has a distinct scoring category for the level of anxiety. These are: "Normal 0-7, Mild 8-9, Moderate 10-14, Severe 15-19, Extremely Severe 20+" (*Depression-Anxiety-and-Stress-Scale-Dass21.Pdf*, n.d.). The bar chart shows that 41.5% (51) of participants had a normal level of anxiety, 11.4% (14) participants had a mild level of anxiety. On the other hand, 24.4% (30) of participants had a moderate level of anxiety. Severe and extremely severe levels of anxiety were present in 8.1% (10) participants and 14.6% (18) participants reportedly. The median with Interquartile Range (IQR) was 8.00 (4.00-14.00).

Figure 4.2.3 Level of stress



For the stress, DASS-21 again uses the different categories. These are:” Normal 0-14, Mild 15-18, Moderate 19-25, Severe 26-33, Extremely Severe 34+”(Depression-Anxiety-and-Stress-Scale-Dass21.Pdf, n.d.).The above bar chart represents the normal level of stress were present in 54.5% (67) participants, respectively.13.0% (16)participants had a mild level of stress while 8.9% (11) participants had a moderate level of stress. Then, severe and extremely severe levels of stress were present in 14.6% (18) and 8.9% (11) participants. The median with Interquartile Range (IQR) score was 14.00(6.00-24.00).

4.3 Level of Fatigue in Mothers

Table 4.3.1

Level of fatigue among mothers

Fatigue level	Frequency(n)	Percent (%)	Median (IQR)
10-21 Normal	73	59.3	20.00 (17.00-24.00)
22-34 Mild to moderate	41	33.3	
35-50 Severe	9	7.3	

Table no. 4.3.1 represents the level of fatigue among mothers of children with ASD.

“Less than 22 indicates “normal” (i.e. healthy) level of fatigue, between 22 and 34 indicates the mild-to-moderate level of fatigue and 35 or more indicates the severe level of fatigue”(De Vries et al., 2004; Dr Ben Buchanan, 2018). So, the table shows that 59.3%(73) participants had a normal level of fatigue,33.3%(41) participants reported mild to moderate levels of fatigue, and 7.3%(9) participants had severe levels of fatigue. And the median with Interquartile Range (IQR) score was 20.00(17.00-24.00).

Table 4.3.2
Scores of Fatigue Assessment sub-scales

Fatigue item		Frequency (n)	Percentage (%)	Median (IQR)
Mental Fatigue	5-10 Normal	88	71.5	
	11-16 Mild	24	19.5	1.00(1.00-2.00)
	17-21 Moderate	9	7.3	
	22-26 Severe	2	1.6	
Physical Fatigue	5-10 Normal	50	40.7	
	11-16 Mild	57	46.3	2.00(1.00-2.00)
	17-21 Moderate	13	10.6	
	22-26 Severe	3	2.4	

Table 4.3.2 shows that Most respondents (71.5%) reported normal levels of mental fatigue. A smaller percentage reported mild (19.5%), moderate (7.3%), or severe (1.6%) levels of mental fatigue. The overall mean mental fatigue score was 9.67 ± 3.908 . The median with Interquartile Range (IQR) score was 1.00(1.00-2.00). Again, for physical fatigue, most respondents (40.7%) reported normal levels of physical fatigue. A significant percentage reported mild (46.3%) and a smaller percentage reported moderate (10.6%) or severe (2.4%) physical fatigue. The overall mean physical fatigue score is 12.18 ± 3.884 . The median with Interquartile Range (IQR) score was 2.00(1.00-2.00).

For Mental Fatigue, the majority of respondents fall within the normal range, indicating that mental fatigue is generally not a significant concern among the participants.

4.4 Level of Parental Self-Efficacy in Mothers Who Have Children with ASD

Table 4.4.1 *Level of parental self-efficacy among mothers*

PSOC level	Frequency(n)	Percentage (%)	Median (IQR)
16-57 Low level of PSOC	67	54.5	57.0(52.00-61.00)
58-74 Average level of PSOC	53	43.1	
75-96 Highest level of PSOC	3	2.4	

Table 4.4.1 illustrates that 54.5% (67) of participants had a low level of parental self-efficacy. 43.1%(53) reported an average level of parental self -efficacy and only 2.4%(3) participants reported the highest level of parental self-efficacy. So, it was clear that parental self-efficacy was low in most mothers of children with ASD. And the median with Interquartile Range (IQR) score was 57.0 (52.00-61.00).

Table 4.4.2

Scores of PSOC sub-scales

PSOC item	Frequency (n)	Percentage (%)	Median (IQR)
Satisfaction	9-35 Low level of satisfaction	113	91.9
	36-44 Average level of satisfaction	9	7.3
	45-54 Highest level of satisfaction	1	.8
Efficacy	7-21 Low level of efficacy	6	4.9
	22-31 Average level of efficacy	75	61.0
	32-42 Highest level of efficacy	42	34.1

Table 4.4.2 represents the level of satisfaction in mothers with ASD children. It shows that the majority of respondents (91.9%) reported a low level of satisfaction. A smaller percentage reported an average (7.3%) or the highest level of satisfaction (0.8%). The overall mean satisfaction score with a standard deviation (SD) is $27.60 \pm .357$. The mean score of 27.60 reflected an overall low level of satisfaction. Here, the median (IQR) score was 28.00(23.00-32.00). In the case of efficacy, a small percentage of respondents (4.9%) reported a low level of efficacy. A majority reported an average (61.0%) or the highest level of efficacy (34.1%). The overall mean efficacy score with a standard deviation (SD) was 29.17 ± 4.740 . Overall, the participants reported a low level of satisfaction and an average level of parental self-efficacy. The median with Interquartile Range (IQR) score was 30.00(26.00-33.00).

4.5 Correlation among Psychological Well-Being, Fatigue and Parental Self-Efficacy

Table 4.5.1

Correlation among Depression, Anxiety, Stress, Fatigue and Parental Self-Efficacy

	Depression	Anxiety	Stress	Fatigue	PSOC
Depression	1				
Anxiety	.670**	1			
Stress	.812**	.760**	1		
Fatigue	.633**	.444**	.582**	1	
PSOC	-.447**	-.371**	-.433**	-.445**	1

Table 4.5.1 represents Spearman's correlation test between depression, anxiety, stress, fatigue, and parental self-efficacy. There is a strong and positive correlation between depression and anxiety ($r = 0.670, p < 0.05$), depression and stress ($r = 0.812, p < 0.05$), and anxiety and stress ($r = 0.760, p < 0.05$). This means as depression scores increase, there is a tendency for anxiety and stress scores to increase as well. Also, higher anxiety scores are

associated with higher stress scores. A moderate and positive correlation exists among depression and fatigue ($r= 0.633, p< 0.05$), stress and fatigue ($r=0.582, p< 0.05$), and anxiety and fatigue ($r=0.444, p< 0.05$). This means as depression, anxiety, and stress increase the fatigue scores also increase moderately.

All of these three variables are negatively correlated with parental self-efficacy. The results show a strong and negative correlation between depression and PSOC ($r=-0.447, p< 0.05$), stress and PSOC ($r=-0.433, p< 0.05$), fatigue and PSOC ($r=-0.445, p< 0.05$). And a moderately strong and negative correlation between anxiety and PSOC ($r=-0.371, p< 0.05$). So, it indicates that when depression, stress, anxiety, and fatigue increase there is a tendency for parental self-efficacy to decrease moderately.

Chapter V: Discussion

5.1 Discussion

This study was conducted to measure the level of psychological well-being, stress, and parenting competency among mothers of children with ASD. Also, to identify the correlation of psychological fatigue and well-being on parental self-efficacy. The study was conducted through a face-to-face survey with the participant where the participant completed the questionnaire. The total participant for this study was 123 mothers of children with ASD.

There are many studies based on mental health, fatigue, distress, parental self-efficacy, resilience, hope, coping, quality of life, relationship, and effects of psychological well-being among parents of children with ASD (Benedetto & Ingrassia, 2021; Benson, 2010; Bhagat et al., 2015; Blumberg, 2015; Bohadana et al., 2019; Costa E Silva & Roama-Alves, 2023; Desiningrum & Kurniawati, 2023; Dr. M. Dhanabhakym & Sarath M, 2023; Fayız & Palancı, 2023; García-López et al., 2016; Giallo et al., 2013; Halki et al., 2024; Kanwal & Asad, 2018; Kayesh & Muhammad, 2019; Kim, 2022; Kurzrok et al., 2021; Ley 25.632, 2002; May et al., 2015; Millan, 2022; Mohammadi et al., 2019; Ni'matuzahroh et al., 2022; Rezendes & Scarpa, 2011; Salas et al., 2017; Weiss et al., 2013).

The first objective was to identify sociodemographic information among mothers of children with ASD. So, in this study the sociodemographic section represents that the majority of mothers age are between 32 and 43 years old, mostly their educational qualification is tertiary level. The results then show that the majority of children were diagnosed with ASD between 1-5 years old, and most of them have been receiving therapy for 1-5 years.

In the context of psychological well-being including stress, anxiety, and depression in mothers of children with ASD, the results demonstrated that the maximum number of participants had normal levels of depression, stress, and anxiety. A significant proportion reports moderate to severe levels, suggesting a noteworthy effect on mental health.

In terms of fatigue, most respondents (40.7%) reported normal levels of physical fatigue. A significant percentage reported mild (46.3%) and a smaller percentage reported moderate (10.6%) or severe (2.4%) physical fatigue. A particular outcome is participants in this study tend to experience more physical fatigue than mental fatigue. One literature findings also support this result that in the case of fatigue, parents reported lower levels of mental fatigue and higher levels of physical fatigue (Halki et al., 2024).

Hence, in the case of parental self-efficacy majority of mothers reported a low level of parental self-efficacy. Their satisfaction levels are generally low, indicating challenges in finding fulfillment in their parenting role. On the other hand efficacy levels are mostly average to high.

A study, where parents were raising small children at the time of the diagnosis reported that they typically handled it well, with their stress, anxiety, and depression scores falling below the clinical criteria. Many also reported feeling good affect despite increased parental stress (Ley 25.632, 2002). Parenting stress may not have an immediate negative effect on the mental health of parents of children with ASD; rather, the effects may take time to show themselves as parents of older children deal with the continual problems of managing their children's symptoms and developmental issues (Ekas et al., 2010).

The results of this study indicated that there is a strong and positive correlation between fatigue, depression, anxiety, and stress. This means as depression scores increase,

there is a tendency for anxiety and stress scores to increase as well. A moderate and positive correlation exists among depression and fatigue ($r= 0.660$, $p< 0.05$), stress and fatigue ($r=0.611$, $p< 0.05$), and anxiety and fatigue ($r=0.474$, $p< 0.05$). This means as depression, anxiety, and stress increase the fatigue scores also increase moderately. While the previous studies reported that compared to parents of normally developing (TD) children, mothers with ASD children reported moderate levels of fatigue, which were considerably higher. Furthermore, there was a correlation between mothers' assessments of anxiety, stress, and desperation and their higher levels of fatigue (Giallo et al., 2013; Rezendes & Scarpa, 2011).

All of these three variables are negatively correlated with parental self-efficacy. The results show a moderate negative correlation between depression and PSOC ($r=-0.447$, $p< 0.05$), anxiety and PSOC ($r=-0.371$, $p< 0.05$), Stress and PSOC ($r=-0.433$, $p<0.05$), fatigue and PSOC ($r=-0.445$, $p< 0.05$). So, it indicates that when depression, stress, anxiety, and fatigue increase there is a tendency for parental self-efficacy to decrease moderately. Previous studies reported mothers who felt fatigued than average also showed lower efficacy and role satisfaction as parents (Giallo et al., 2013; Rezendes & Scarpa, 2011). For both mothers and fathers, parenting satisfaction and parenting self-efficacy had strong negative relationships with fatigue, suggesting that fatigue is associated with positive ideas about parenting as well as feelings of enjoyment from being a parent (Batool & Khurshid, 2015; Sarah Elizabeth Ivens Regina, 2015). Fatigue and low parental self-efficacy may reinforce one another. The negative relationship between parental pleasure and fatigue suggests that a sense of fulfillment in one's role as a parent may mitigate the cognitive exhaustion caused by fatigue (Sarah Elizabeth Ivens Regina, 2015).

In terms of parental self-efficacy, the results are showing clearly that parental self-efficacy is low in most mothers of children with ASD. However, other literature reported that early childhood experiences create difficulties for parents of children with ASD, which affects their self-efficacy, or their sense of competence as parents (Benedetto & Ingrassia, 2021; Giallo et al., 2013; Morawska et al., 2014; Rezendes & Scarpa, 2011).

In conclusion, this study revealed the complex dynamics affecting mothers' health as they deal with the difficulties of parenting children who have ASD. It became clear that important elements were parental self-efficacy, psychological health, and fatigue. These components' complex interactions highlight the need for focused treatments and specialized assistance. The study highlights the necessity of individualized counseling and all-encompassing solutions in light of the particular challenges these moms confront. The research enhances the understanding of these intricate relationships and highlights the necessity of comprehensive approaches that tackle the various facets of raising a child with ASD, thereby improving the health of mothers and their children.

Chapter VI: Conclusion

6.1 Strengths and Limitations

6.1.1 Strengths

- The study ensured the highest level of data quality and safety by strictly adhering to the five steps of data cycle management by incorporating data collection, processing, storage, analysis, and distribution.
- The copies of the data were safely kept on the Google Drive cloud storage platform, protected by strong password security by Google security guidelines.
- There was a strong focus on making sure the data was used responsibly, and strict precautions were taken to avoid any unwanted access.
- Throughout the investigation, the data were kept in their original condition; neither alteration nor exploitation took place.
- It can be used for future research work in this field.

6.1.2 Limitations

- Fathers were excluded from this study. So, the study missed out on information from the father's perspective and experience.
- The time limitation caused to taking limited data.
- It was not possible for the student researcher to include subjects who were receiving therapy for a set amount of time. So, further investigation is required.
- Longitudinal or pre-test, the post-test study could give a deeper and comprehensive description of co-relation among the variables of the study.
- Some participants were very disinterested to participate.

6.2 Practice Implications

6.2.1 Recommendation for Future Practice

Organization-based practice implications

Ensuring counseling and individual parent-child sessions at the therapy centers and organizations working with ASD children. Involves specialized programs for mothers focusing on their psychological health and well-being. Collaborating with mothers to arrange one-day workshops and seminars to discuss the psychological issues and techniques to cope with them.

Community-based practice implication

To raise awareness and understanding of the difficulties faced by mothers of children with ASD, therapists should actively advocate on behalf of these mothers in the community. This advocacy might involve planning events and taking part in campaigns to raise awareness of the particular challenges those mothers face. Furthermore, social welfare organizations and community-based groups have to take the initiative to launch campaigns and programs that address and lessen the social difficulties faced by mothers of autistic children. These cooperative efforts contribute to a more accepting and compassionate community by creating a network of understanding and support, which in turn improves the well-being of mothers and their ASD children.

Occupational Therapy practice implication

- Occupational therapists may help mothers better regulate their energy levels and enhance everyday functioning by using energy conservation strategies, and relaxation exercises. They can also programs for handling fatigue that are especially suited to the requirements of mothers who are feeling exhausted.

- To improve parental self-efficacy, interventions can be carried out to raise mothers' confidence in raising children with ASD. Occupational therapists can instruct and teach parents in behavior management, communication, and parenting practices that are specific to the requirements of children with ASD.
- To create thorough care plans for mothers and their ASD-affected children, it is important to work collaboratively with other medical specialists, including psychologists, social workers, and educators. Occupational therapists can be invaluable members of multidisciplinary teams when it comes to addressing the functional difficulties that families encounter and fostering holistic well-being.
- OTs can offer skill-building seminars for mothers who have children with ASD. The seminars will cover useful tactics that can help them participate in activities, interpret sensory information, and encourage independence.
- For helping mothers of children with ASD develop support systems within their communities. Occupational therapists can plan support groups where mothers can get information to help them deal with the challenges that come with raising a child with ASD. They can also share their experiences and receive emotional support from others going through similar situations.
- Occupational therapists can promote awareness and understanding of the unique needs of mothers with children who have ASD by participating in advocacy campaigns. This can help reduce stigma and increase access to resources and support services for families. By putting these practical implications into practice, occupational therapists can significantly improve the quality of life for mothers of children with ASD.

6.2.1 Recommendation for Future Research

- Identify the comparison between two or more groups of parents.
- Explore a longitudinal follow-up study on this topic.
- Explore the pre-test, and post-test study on maternal psychological well-being.
- Identify the association between quality of life and parental self-efficacy.

6.3 Conclusion

In summary, the purpose of this cross-sectional study was to evaluate the level of psychological well-being, fatigue, and parental self-efficacy among mothers of children with ASD. The researcher found that the level of parental self-efficacy among mothers is very low while they also face moderate levels of fatigue and psychological distress. And importantly the study highlights that there is a moderately strong correlation among these psychological variables. The results of this research emphasize the need for focused treatments and systems of support to improve the general mental health and coping skills of mothers who are raising children with ASD.

To summarize, the main goal of this study was to evaluate mothers of children diagnosed with ASD in terms of their psychological health, degree of fatigue, and parental self-efficacy. The research's conclusions highlight a concerning pattern: mothers in this group had a very low degree of parental self-efficacy. They also experience mild fatigue and psychological discomfort at the same time. The study is particularly significant since it highlights a reasonably substantial association between these important psychological characteristics, indicating an interaction that needs more investigation. The complex interplay of high degrees of fatigue, low parental self-efficacy, and psychological distress highlights the many obstacles' mothers of ASD children must overcome. The research's consequences go beyond simply identifying these difficulties; emphasizing how important

it is to implement focused solutions and strong support networks. Given these mothers' increased vulnerability, it is clear that specialized care and networks of support are necessary to improve their general mental health and adaptive abilities. The findings underscore how important it is to attend to the particular requirements of mothers belonging to this group, promoting targeted interventions that not only mitigate short-term difficulties but also foster long-term enhancements in their mental health. We can try to create a more compassionate and useful framework that supports the resilience and mental health of women navigating the challenges of raising children with ASD by accepting and acting upon these results.

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Appendices

Appendix A: Approval/Permission letter



বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
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 Department of Occupational Therapy
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal "Psychological Fatigue, Well-Being and Parental Self-Efficacy among Mothers of Autism Spectrum Disorder: A Cross-Sectional Study" by ethics committee.


Dear Tirsha Rahman,
 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, Associate Professor Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) as thesis 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 measure the level of psychological fatigue and well-being and parental self-efficacy among mothers of children with ASD. The study involves use of Standardized scales (The Depression Anxiety Stress Scale 21, The Parenting Sense of Competence Scale and The Fatigue Assessment scale) to measure the psychological fatigue and well-being and parental self-efficacy 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 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 23rd September 2023 at BHPI 38th 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,


Md. Wahidul Hossain
 Associate Professor
 Project & Course Coordinator
 Dept. of Rehabilitation Science
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

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

সিআরপি-চাপাইন, সাজার, 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: 18/10/2023

To
The Head of Pediatric Department
Centre for the Rehabilitation of the Paralysed
CRP-Chapain , Savar, Dhaka-1343

Subject: Application for permission to collect data for the research project.

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **"Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother's Of Autism Spectrum Disorder: A Cross-Sectional Study "**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralysed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

So, I kindly request your permission to proceed with this research and start collecting data which is essential for my academic progress and contributes to the field of occupational therapy.

Sincerely yours,

Tirsha Rahman
Tirsha Rahman
4th Year B.Sc. in Occupational Therapy
Session: 2018-2019, Student ID: 122180300
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-1343, Bangladesh

*She will collect data
from this department
please help her.*

Thanks

H
10-10-23

Signature and comments of the head of the department

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

Hosnara Perveen
Head of Department
Department of Paediatrics
CRP Savar, Dhaka

Date: 18/10/2023

To
The Centre Manager
Centre for the Rehabilitation of the Paralyzed
CRP, Mirpur, Dhaka

Subject: Application for permission to collect data for the research project.

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **"Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother's Of Autism Spectrum Disorder: A Cross-Sectional Study "**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralyzed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

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Signature and comments of the head of the department

Sk. Moniruzzaman

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

Rakib Usain
5/12/23
In Charge of Dept

Date: 18/10/2023

To

The Chairperson,

Autism Welfare Foundation

Moddher Char, Shamlapur, Keraniganj Model Thana ,Dhaka -1312

Subject: **Application for permission to collect data for the research project.**

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **"Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother's Of Autism Spectrum Disorder: A Cross-Sectional Study "**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralysed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

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4th Year B.Sc. in Occupational Therapy

Session: 2018-2019, Student ID: 122180300

Bangladesh Health Professions Institute (BHPI)

CRP-Savar, Dhaka-1343, Bangladesh

Signature and comments of the head of the department

Sk. Monir

Sk. Moniruzzaman

Associate Professor & Head of the Department

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

CRP-Savar, Dhaka-1343, Bangladesh

Permission Granted
Mariyam Monwar
 8.12.23
 Vice Principal
 Autism Welfare Foundation

Date: 18/10/2023

To
The Chairperson,
Therapist Point and Shanirvor Special School for Autism and Neurodevelopmental Disorder
Dogomora, CRP road, Savar, Dhaka-1343
Subject: **Application for permission to collect data for the research project.**

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **“Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother’s Of Autism Spectrum Disorder: A Cross-Sectional Study ”**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralyzed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

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Sincerely yours,

Tirsha Rahman
Tirsha Rahman
4th Year B.Sc. in Occupational Therapy
Session: 2018-2019, Student ID: 122180300
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-1343, Bangladesh

Signature and comments of the head of the department

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



Permission Granted

Md. Nayem Nizam Majumder
21/10/23
Md. Nayem Nizam Majumder
B.Sc. OT (CRP, DU), MDS (JU-Incourse)
Senior Occupational Therapist &
Therapist Point & Shanirvor Special School

Date: 18/10/2023

To

The Chairperson,

Therapy Point: A Centre for Child Neuro – Development

House No: 30, Road No:5A, Sector 5, Uttara, Dhaka – 1230

Subject: **Application for permission to collect data for the research project.**

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **“Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother’s Of Autism Spectrum Disorder: A Cross-Sectional Study ”**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralyzed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

So, I kindly request your permission to proceed with this research and start collecting data which is essential for my academic progress and contributes to the field of occupational therapy.

Sincerely yours,

Tirsha Rahman

Tirsha Rahman

4th Year B.Sc. in Occupational Therapy

Session: 2018-2019, Student ID: 122180300

Bangladesh Health Professions Institute (BHPI)

CRP-Savar, Dhaka-1343, Bangladesh

Signature and comments of the head of the department

Sk. Moniruzzaman

Sk. Moniruzzaman

Associate Professor & Head of the Department

Department of Occupational Therapy

Bangladesh Health Professions Institute (BHPI)

CRP-Savar, Dhaka-1343, Bangladesh

You are permitted to collect data from Therapy Point.

Monika
20/11/2023.

Chairman
THERAPY POINT
House No- 30 (4th Floor), Road No- 5A,
Sector No- 05, Uttara, Dhaka-1230, Bangladesh

Date: 18/10/2023

To
The Chairperson,
Prottasha Centre For Autism Care
74/20, Dogormora, CRP road, Savar, Dhaka-1343

Subject: **Application for permission to collect data for the research project.**

Sir,

With due respect, I would like to draw your kind attention that I am a 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI). I have to submit a research paper to the University of Dhaka in partial fulfilment of the degree of Bachelor of Science in Occupational Therapy. The research title is : **"Psychological Fatigue, Well-Being And Parental Self-Efficacy Among Mother's Of Autism Spectrum Disorder: A Cross-Sectional Study "**. The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI) to accomplish the objectives of this research, I intend to gather data through a quantitative approach, primarily utilizing a questionnaire (survey form) and conducting face-to-face interviews with mothers who have children diagnosed with ASD. These participants will be selected from various settings, including the **Centre for the Rehabilitation of the Paralysed (Savar and Mirpur branches), special education centers, therapy centers, and autism schools in and around Dhaka city.** That is why I need permission to start my research project. I assure you that all ethical standards will be followed, and participant confidentiality will be maintained.

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Sincerely yours,

Tirsha Rahman

Tirsha Rahman
4th Year B.Sc. in Occupational Therapy
Session: 2018-2019, Student ID: 122180300
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-1343, Bangladesh

Signature and comments of the head of the department

Sk. Moniruzzaman

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

Principal 23.10.2023
Principal
Prottasha Centre for Autism Care
CRP Road, Savar, Dhaka-1343

Appendix B: Information sheet & Consent form

(English Version)

Bangladesh Health Professions Institute (BHPI)

Occupational Therapy Department

CRP, Savar, Dhaka -1343

Information Sheet

Title of the study: Mothers of Children with ASD: The Association among psychological fatigue, well-being, and parental self-efficacy

Name of the researcher: Tirsha Rahman, Roll- 05,4th year student of B.Sc. in Occupational Therapy.

Name of supervisors: The study is supervised by SK. Moniruzzaman, Associate Professor, Head of the Occupational Therapy Department and co-supervised by Monika Singha, lecturer of the Occupational Therapy Department, Bangladesh Health Professions Institute (BHPI).

I am inviting you to take part in a research study. It's important that you fully understand the purpose of the study and what it would involve before deciding. Please read the information provided carefully. If there's anything you don't understand or if you need more information, don't hesitate to ask questions. Take as much time as you need to decide whether or not you want to participate.

My identity and the purpose of this research are as follows:

I am Tirsha Rahman, 4th year student, B. Sc in Occupational Therapy Department of Bangladesh Health Professions Institute (BHPI), the academic institute of Centre for the Rehabilitation of the Paralysed (CRP). As a part of my academic course curriculum, I must conduct a dissertation this academic year. The title of my study is "**Mothers of Children with ASD: The association among psychological fatigue, well-being and parental self-efficacy**" This study aims to identify the impact of fatigue and psychological well-being on parental self-efficacy.

What things are involved in participating in the study?

In this study, I will be measuring the levels of fatigue, psychological well-being, and parental self-efficacy in mothers of children with ASD using three different scales. Participants will need to answer all the questions included in these scales, and the total

survey should take approximately 25 to 30 minutes to complete.

Why you have been invited to take part?

As my study involves the mothers of children with ASD you are an eligible participant for my research topic and you meet all the inclusion criteria to be a part of this study

Do you have to take part?

Your participation in the study is entirely voluntary and you have the right to withdraw your consent and discontinue participation at any time until data is analyzed without any repercussions.

What are the possible risks and benefits of taking part?

The participant will not get any direct financial or other types of benefit for participating in this research, however, the information gained from this research will contribute to future development and improvement of targeted interventions or support programs designed specifically for mothers who have children with ASD and shed lights on the necessity of counseling or individualized intervention programs for mothers of ASD children. Participants will not face any type of problem or harm to participating in the research but if they feel any type of psychological discomfort while participating in the survey then the student researcher will take a break or discuss re-scheduling the timing of the survey conduction. A participant can withdraw their consent at any time if they want.

Will taking part be confidential?

Any information gathered during this study will be treated with utmost confidentiality. It will not be disclosed to any third party unless mandated by law. Access to the data is limited to the student researcher and supervisor only. Participants' identities will not be revealed in any reports, publications, or presentations related to this study.

What will happen to the result of the study?

This study has the potential to contribute significantly to the broader field of ASD research by shedding light on how maternal well-being and self-belief play an important role in the caregiving process. This information can complement existing knowledge about this disorder and its impact, on families. It can highlight if any additional counseling programs should be included in the health sector for the parents of ASD children. This research can make an ideal proof which can provide concepts for other researchers. They can use this proof for their study. The result of the study may be published in a scientific journal.

Who should you contact for further information?

If you have any queries regarding the study now or in the future, please feel free to ask and you are always welcome to contact to following person:

The student researcher's name: Tirsha Rahman

B.Sc. in Occupational Therapy

4th year, Session: 2018-19

Department of Occupational Therapy

Contact Number: 01883680765, E-mail: arleentirsha@gmail.com

Consent Form (English Version)

Title of the study: **Mothers of Children with ASD: The association among psychological fatigue, well-being and parental self-efficacy**

I am _____ , I have read the above statement, understand the nature of my participation in the research, and I freely agree to participate. I recognize my right to withdraw my consent and discontinue participation in the study at any time until data is analyzed without fear of any prejudice and recognize that my activities and data generated by my participation will remain strictly confidential.

I am _____ , inform that, all information from the participation will be kept private and secure. Only the researcher and supervisor are allowed to access the data here.

I _____ , have been informed about all mentioned and I voluntarily consent to taking part in the study.

Name of the participant _____

Signature of participant/thumbprint _____

Date _____

Student researcher's signature _____

Date _____

Withdrawal form (English Version)

Title of the study: **Mothers of Children with ASD: The association among psychological fatigue, well-being, and parental self-efficacy**

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 participant/thumbprint _____

Date _____

তথ্য পত্র (বাংলা)

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)

অকুপেশনাল থেরাপি বিভাগ

সিআরপি, সাভার, ঢাকা-১৩৪৩

আমার স্নাতকের গবেষণার শিরোনাম - অটিজম স্পেকট্রাম ডিসঅর্ডারের মায়েদের মধ্যে মানসিক ক্লান্তি, সুস্থতা এবং পিতামাতার স্ব-কার্যকারিতা: একটি ক্রস-সেকশনাল স্টাডি।

গবেষকের নাম: তিসাঁ রহমান, রোল- ০৫, ৪র্থ বর্ষ বি.এস.সি. অকুপেশনাল থেরাপি বিভাগ।

সুপারভাইজারদের নাম: গবেষণাটি পরিচালনায় থাকবেন সহযোগী অধ্যাপক এবং অকুপেশনাল থেরাপি বিভাগের প্রধান এসকে. মনিরুজ্জামান। এবং সহ-পরিচালনায় থাকবেন অকুপেশনাল থেরাপি বিভাগের প্রভাষক মনিকা সিংহ।

আমি আপনাকে একটি গবেষণায় অংশ নিতে আমন্ত্রণ জানাচ্ছি। গবেষণাটির উদ্দেশ্য এবং এতে কি কি বিষয় জড়িত থাকবে তা সম্পূর্ণরূপে জানা এবং বোঝা আপনার জন্য গুরুত্বপূর্ণ এই সিদ্ধান্ত নেওয়ার আগে যে আপনি গবেষণাটিতে অংশগ্রহণ করতে চান কি না। প্রদত্ত তথ্যগুলি মনোযোগ দিয়ে পড়ুন, যদি এমন কিছু থাকে যা আপনি বুঝতে পারছেন না বা আপনার আরও তথ্যের প্রয়োজন হয় তবে প্রশ্ন জিজ্ঞাসা করতে দ্বিধাবোধ করবেন না। আপনি অংশগ্রহণ করতে চান কি না সে বিষয়ে সিদ্ধান্ত নিতে যতটা সময় লাগবে ততটা সময় নিয়ে চিন্তা করুন।

আমার পরিচয় এবং এই গবেষণার উদ্দেশ্য:

আমি তিসাঁ রহমান, , বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই), সেন্টার ফর দ্য রিহ্যাবিলিটেশন অফ দ্য প্যারালাইজড (সিআরপি) এর একাডেমিক ইনস্টিটিউটের অকুপেশনাল থেরাপি বিভাগে বি.এসসি কোর্সের ৪র্থ বর্ষের ছাত্রী। আমার একাডেমিক কোর্সের পাঠ্যক্রমের একটি অংশ হিসাবে, আমার এই শিক্ষাবর্ষে একটি গবেষণা পরিচালনা করতে হবে। আমার গবেষণার শিরোনাম হল "

অটিজম স্পেকট্রাম ডিসঅর্ডারের মায়েদের মধ্যে মানসিক ক্লান্তি, সুস্থতা এবং পিতামাতার স্ব-কার্যকারিতা: একটি ক্রস-সেকশনাল স্টাডি " এই গবেষণার লক্ষ্য হল পিতামাতার স্ব-কার্যকারিতার উপর ক্লান্তি এবং

মানসিক সুস্থতার প্রভাব চিহ্নিত করা। .

গবেষণায় অংশগ্রহণের জন্য কী কী বিষয় জড়িত?

এই গবেষণায়, আমি তিনটি ভিন্ন স্কেল ব্যবহার করে অটিজম আক্রান্ত শিশুর মায়েদের মানসিক ক্লান্তি ও সুস্থতা এবং পিতামাতার বাচ্চার দেখাশোনা করার ক্ষেত্রে আত্মবিশ্বাস পরিমাপ করব। অংশগ্রহণকারীদের এই স্কেলগুলিতে অন্তর্ভুক্ত সমস্ত প্রশ্নের উত্তর দিতে হবে এবং জরিপটি সম্পূর্ণ করতে প্রায় ১৫ থেকে ২০ মিনিট সময় লাগবে।

কেন আপনাকে অংশ নিতে আমন্ত্রণ জানানো হয়েছে?

যেহেতু আমার গবেষণায় অটিজম এ আক্রান্ত শিশুর মায়েদের নিয়ে তাই আপনি আমার গবেষণার বিষয়ের জন্য একজন যোগ্য অংশগ্রহণকারী।

আপনার কি অংশ নিতে হবে?

গবেষণায় অংশগ্রহণ করা বা না করা সম্পূর্ণরূপে আপনার ইচ্ছার উপর নির্ভরশীল। আপনার সম্মতি প্রত্যাহার করার এবং কোনো প্রতিক্রিয়া ছাড়াই ডেটা বিশ্লেষণ করা না হওয়া পর্যন্ত যেকোনো সময় অংশগ্রহণ বন্ধ করার অধিকার রয়েছে।

গবেষণায় অংশ নেওয়ার সম্ভাব্য ঝুঁকি এবং সুবিধাগুলি কী কী?

অংশগ্রহণকারীরা এই গবেষণায় অংশগ্রহণের জন্য কোনো ধরনের আর্থিক বা অন্য কোন সুযোগ সুবিধা পাবেন না, তবে, এই গবেষণা থেকে প্রাপ্ত তথ্য ভবিষ্যতে অটিজমে আক্রান্ত মায়েদের জন্য ডিজাইন করা সহায়তা কর্মসূচির উন্নতির জন্য বিশেষভাবে অবদান রাখবে। এবং অটিজম শিশুর মায়েদের জন্য কাউন্সেলিং বা অন্যান্য কর্মসূচির প্রয়োজনীয়তার উপর আলোকপাত করবে। অংশগ্রহণকারীরা গবেষণায় অংশগ্রহণের জন্য কোনো ধরনের সমস্যা বা ক্ষতির সম্মুখীন হবেন না কিন্তু জরিপে অংশগ্রহণ করার সময় যদি তারা কোনো ধরনের মানসিক অস্বস্তি বোধ করেন তাহলে ছাত্র গবেষক একটি বিরতি নেবেন বা জরিপ পরিচালনার সময়সূচি পরিবর্তন করবেন। একজন অংশগ্রহণকারী চাইলে যেকোনো সময় তাদের সম্মতি প্রত্যাহার করতে পারবেন।

অংশগ্রহণকারীর দেয়া তথ্যের গোপনীয়তা কি রক্ষা করা হবে ?

এই গবেষণার সময় সংগৃহীত যেকোন তথ্য অত্যন্ত গোপনীয়তার সাথে বিবেচনা করা হবে। আইন দ্বারা বাধ্যতামূলক না হওয়া পর্যন্ত এটি কোনও তৃতীয় পক্ষের কাছে প্রকাশ করা হবে না। ডেটা অ্যাক্সেস শুধুমাত্র ছাত্র গবেষক এবং সুপারভাইজার পর্যন্তই সীমাবদ্ধ থাকবে। অংশগ্রহণকারীদের পরিচয় এই গবেষণা সম্পর্কিত কোনো প্রতিবেদন, প্রকাশনা বা উপস্থাপনায় প্রকাশ করা হবে না।

গবেষণায় রেসাল্ট কী করা হবে?

মায়ের মানসিক স্বাস্থ্য এবং আত্মবিশ্বাস কীভাবে শিশুর যত্ন নেওয়ার প্রক্রিয়াতে গুরুত্বপূর্ণ ভূমিকা পালন করে সে বিষয়ে আলোকপাত করে এই গবেষণায় অটিজম নিয়ে গবেষণার বিস্তৃত ক্ষেত্রে উল্লেখযোগ্যভাবে অবদান রাখার সম্ভাবনা রয়েছে। এই তথ্যটি এই রোগের এবং পরিবারের উপর এর প্রভাব সম্পর্কে জানা তথ্যের পরিপূরক হতে পারে। অটিজম আক্রান্ত শিশুর পিতামাতার জন্য স্বাস্থ্য খাতে কোন অতিরিক্ত কাউন্সেলিং প্রোগ্রাম অন্তর্ভুক্ত করা উচিত কিনা তা তুলে ধরতে পারে। এই গবেষণাটি একটি আদর্শ প্রমাণ তৈরি করতে পারে যা অন্যান্য গবেষকদের ধারণা প্রদান করতে পারে। তারা তাদের গবেষণার জন্য এই প্রমাণ ব্যবহার করতে পারবেন পরবর্তীতে এই গবেষণার ফলাফল একটি বৈজ্ঞানিক জার্নালে প্রকাশিত হতে পারে।

আরও তথ্যের জন্য আপনার কার সাথে যোগাযোগ করা উচিত?

আপনার যদি এখন বা ভবিষ্যতে এই গবেষণা সংক্রান্ত কোন প্রশ্ন থাকে, অনুগ্রহ করে নির্দিধায় জিজ্ঞাসা করুন। এবং আপনি নিম্নলিখিত ব্যক্তির সাথে যোগাযোগ করতে পারেন:

ছাত্র গবেষকের নাম: তিসাঁ রহমান

বি.এস.সি. অকুপেশনাল থেরাপি বিভাগ

৪র্থ বর্ষ, সেশন: ২০১৮-১৯

অকুপেশনাল থেরাপি বিভাগ

যোগাযোগের নম্বর: 01883680765, ই-মেইল: arleentirsha@gmail.com

সুপারভাইজারের নাম

এসকে. মনিরুজ্জামান

সহযোগী অধ্যাপক এবং অকুপেশনাল থেরাপি বিভাগের প্রধান

বাংলাদেশ হেলথ প্রফেশনস ইনস্টিটিউট (বিএইচপিআই)

সিআরপি, সাভার, ঢাকা-১৩৪৩

ই-মেইল - monir_ot@yahoo.com

সম্মতি পত্র (বাংলা সংস্করণ)

গবেষণার শিরোনাম: অটিজম স্পেকট্রাম ডিসঅর্ডারের মায়েদের মধ্যে মানসিক ক্লান্তি, সুস্থতা এবং পিতামাতার স্ব-কার্যকারিতা:একটি ট্রান্স-সেকশনাল স্টাডি

আমি..... উপরের বিবৃতিটি পড়েছি, গবেষণায় আমার অংশগ্রহণের কারণ বুঝতে পেরেছি এবং আমি নিজে থেকে অংশগ্রহণ করতে সম্মত। আমি যেকোনো সময় আমার অংশগ্রহণ করার সম্মতি প্রত্যাহার করার অধিকার সম্পর্কে জেনেছি যতক্ষণ পর্যন্ত ডেটা বিশ্লেষণ না করা হয় এবং আরও বুঝতে পেরেছি যে আমার অংশগ্রহণের মাধ্যমে দেয়া তথ্য/ডেটার কঠোরভাবে গোপনীয় থাকবে। আমি.....জানাচ্ছি যে, অংশগ্রহণ থেকে সমস্ত তথ্য গোপন এবং সুরক্ষিত রাখা হবে। শুধুমাত্র গবেষক এবং সুপারভাইজার এখানে ডেটা অ্যাক্সেস করতে পারবেন। আমাকে..... উল্লিখিত সকল বিষয়ে অবহিত করা হয়েছে এবং আমি স্বেচ্ছায় অধ্যয়নে অংশ নিতে সম্মতি দিচ্ছি।

অংশগ্রহণকারীর নাম -

অংশগ্রহণকারীর স্বাক্ষর -

তারিখ -

ছাত্র গবেষকের স্বাক্ষর -

তারিখ -

প্রত্যাহার ফর্ম (বাংলা সংস্করণ)

গবেষণার শিরোনাম: অটিজম স্পেকট্রাম ডিসঅর্ডারের মায়েদের মধ্যে মানসিক ক্লান্তি, সুস্থতা এবং
পিতামাতার স্ব-কার্যকারিতা :একটি ট্রান্স-সেকশনাল স্টাডি ।

আমি নিশ্চিত করছি যে ডেটা বিশ্লেষণ সম্পূর্ণ হওয়ার আগে আমি অধ্যয়ন থেকে আমার সমস্ত ডেটা
প্রত্যাহার করতে চাই এবং আমার কোনও ডেটা অধ্যয়নে অন্তর্ভুক্ত করা হবে না।

অংশগ্রহণকারীর নাম -

অংশগ্রহণকারীর স্বাক্ষর/ থাম্বপ্রিন্ট -

তারিখ -

Appendix C: Questionnaire

Socio-demographic Questionnaire (English version)

What is your age ?	
What is your educational qualification?	
What is your occupation?	
What about your marital status?	
The number of children you have?	
Number of children with ASD?	
Gender of the child with ASD?	
Age of the child with ASD?	
When has your child first been diagnosed with ASD or with any developmental disorder?	
How long have you been taking therapy or intervention for your child?	

Bangla version

আপনার বয়স কত?	
আপনার শিক্ষাগত যোগ্যতা কি?	
আপনার পেশা কি?	
আপনার বৈবাহিক অবস্থা কি?	
আপনার কয়টি সন্তান আছে?	
এএসডি আক্রান্ত শিশুর সংখ্যা?	
এএসডি আক্রান্ত শিশুর লিঙ্গ?	
এএসডি আক্রান্ত শিশুর বয়স?	
কখন আপনার সন্তানের প্রথম এএসডি বা কোনও বিকাশজনিত ব্যাধি ধরা পরেছিল?	
আপনি আপনার সন্তানের জন্য কতদিন হল থেরাপি নিচ্ছেন?	

Scale: DASS21**Name :****Date :**

Please read each statement and circle a number 0, 1, 2, or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

- 0 Did not apply to me at all
- 1 Applied to me to some degree, or some of the time
- 2 Applied to me to a considerable degree or a good part of time
- 3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3(d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4(a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5(d)	I found it difficult to work up the initiative to do things	0	1	2	3
6(s)	I tended to over-react to situations	0	1	2	3
7(a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8(s)	I felt that I was using a lot of nervous energy	0	1	2	3
9(a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10(d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated	0	1	2	3
12(s)	I found it difficult to relax	0	1	2	3
13(d)	I felt down-hearted and blue	0	1	2	3
14(s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17(d)	I felt I wasn't worth much as a person	0	1	2	3
18(s)	I felt that I was rather touchy	0	1	2	3
19(a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20(a)	I felt scared without any good reason	0	1	2	3
21(d)	I felt that life was meaningless	0	1	2	3

DASS-21 Scoring Instructions

The DASS-21 should not be used to replace a face to face clinical interview. If you are experiencing significant emotional difficulties you should contact your GP for a referral to a qualified professional.

Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress.

Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic nonspecific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety, and stress are calculated by summing the scores for the relevant items.

The DASS-21 is based on a dimensional rather than a categorical conception of psychological disorder. The assumption on which the DASS-21 development was based (and which was confirmed by the research data) is that the differences between the depression, anxiety, and stress experienced by normal subjects and clinical populations are essentially differences of degree. The DASS-21 therefore has no direct implications for the allocation of patients to discrete diagnostic categories postulated in classificatory systems such as the DSM and ICD.

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

NB: Scores on the DASS-21 will need to be multiplied by 2 to calculate the final score.

	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

ডাস-২১ বাংলা ভার্শন

নামঃ

তারিখঃ

অনুগ্রহ করে নিচের প্রতিটি বিবৃতি পড়ুন এবং ০.১.২ অথবা ৩ এর মধ্যে গত সপ্তাহ ব্যাপী আপনার জন্য প্রযোজ্য যে কোন একটি সংখ্যাই গোল চিহ্ন দিন। এখানে কোন সঠিক বা ভুল উত্তর নেই। কোন বিবৃতির জন্য বেশী সময় ব্যয় করবেন না।

মানদণ্ড টি নিম্নরূপ

০ আমার জন্য একেবারেই প্রযোজ্য নয়

১ আমার জন্য অল্পমাত্রায় বা কখনো বা কখনো প্রযোজ্য

২ আমার জন্য বেশ কিছুমাত্রায় বা বেশখানিকটা সময়ের জন্য প্রযোজ্য

৩ আমার জন্য খুব বেশী বা বেশীরভাগ সময়ের জন্য প্রযোজ্য

১	কোন উৎকর্ষা বা উত্তেজনামূলক কাজের পর আরামদায়ক অবস্থায় ফিরে আসা আমার জন্য কঠিন ছিল	০	১	২	৩
২	আমি বুঝতে পারতাম যে আমার গলা শুকিয়ে আসছে	০	১	২	৩
৩	ইতিবাচক কোন অনুভূতিই আমার মধ্যে কাজ করত না	০	১	২	৩
৪	আমার শ্বাসকষ্টের অনুভূতি হত (যেমন অতিক্রম শ্বাসপ্রশ্বাস, শারিরিক পরিশ্রম ছাড়াই নিঃশ্বাস বন্ধ হয়ে আসা)	০	১	২	৩
৫	নিজে উদ্বেগী হয়ে কোন কাজ শুরু করা আমার জন্য কঠিন হত	০	১	২	৩
৬	আমার মধ্যে বিভিন্ন পরিস্থিতি তে অতিরিক্ত প্রতিক্রিয়া করার প্রবণতা ছিল	০	১	২	৩
৭	আমার শরীর কাঁপার অভিজ্ঞতা হয়েছিল (যেমন হাত কাঁপা)	০	১	২	৩
৮	আমার মনে হত যে আমি খুব স্নায়ু চাপে ভুগছি	০	১	২	৩
৯	আমি এমন পরিস্থিতি সম্পর্কে দুচিন্তা গ্রস্ত ছিলাম যেখানে আমি তীব্রভাবে আতঙ্কিত হতে পারি এবং এমন কোন কাজ করতে পারি যাতে অন্যরা আমাকে বোকা মনে করবে	০	১	২	৩
১০	আমার মনে হচ্ছিল ভবিষ্যতে আমার ভাল কিছুই আশা নেই	০	১	২	৩
১১	আমি অনুভব করতাম যে আমি খুব অস্থির হয়ে যাচ্ছি	০	১	২	৩
১২	আরাম বোধ করা আমার জন্য কঠিন হত	০	১	২	৩
১৩	আমি মন মরা এবং বিষন্ন অনুভব করতাম	০	১	২	৩
১৪	আমার কাজে বাধা হয় এমন যে কোন জিনিসই আমার কাছে অসহ্য লাগত	০	১	২	৩
১৫	আমার মনে হত এই বুঝি আমি হঠাৎ তীব্রভাবে আতঙ্কিত হচ্ছি	০	১	২	৩
১৬	কোন কিছুতেই আমি বেশী আগ্রহী হতে পারতাম না	০	১	২	৩
১৭	আমি অনুভব করতাম বাস্তব হিসেবে আমার বিশেষ কোন মূল্য নেই	০	১	২	৩
১৮	আমি অনুভব করতাম আমি একটু তেই মনে বাথ্যা পাই	০	১	২	৩
১৯	শারিরিক পরিশ্রম না করলেও আমি হৃদপিণ্ডের কাজ করা বুঝতে পারতাম (যেমনঃ হৃদস্পন্দন বৃদ্ধির অনুভূতি বা বুক ধরফর করা, হৃদপিণ্ডের স্পন্দনে ব্যঘাত)	০	১	২	৩
২০	যথাযথ কারন ছাড়াই আমি ভিত সন্ত্রস্ত বোধ করতাম	০	১	২	৩
২১	জীবনটা অর্থহীন বলে মনে হত	০	১	২	৩

Parenting Sense of Competence Scale
Being A Parent – Mother

Name: _____ Date: _____

Listed below are a number of statements. Please respond to each item, indicating your agreement or disagreement with each statement in the following manner.

If you strongly agree, circle the letters SA

If you agree, circle the letter A

If you mildly agree, circle the letters MA

If you mildly disagree, circle the letter MD

If you disagree, circle the letter D

If you strongly disagree, circle the letter SD

- | | | |
|----|--|-----------------|
| 1. | The problems of taking care of a child are easy to solve once you know how your actions affect your child, an understanding I have acquired. | SA A MA MD D SD |
| 2. | Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age. | SA A MA MD D SD |
| 3. | I go to bed the same way I wake up in the morning – feeling I have not accomplished a whole lot. | SA A MA MD D SD |
| 4. | I do not know what it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated. | SA A MA MD D SD |
| 5. | My mother was better prepared to be a good mother than I am. | SA A MA MD D SD |
| 6. | I would make a fine model for a new mother to follow in order to learn what she would need to know in order to be a good parent. | SA A MA MD D SD |
| 7. | Being a parent is manageable, and any problems are easily solved. | SA A MA MD D SD |
| 8. | A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one. | SA A MA MD D SD |
| 9. | Sometimes I feel like I'm not getting | SA A MA MD D SD |

anything done.

- | | | | | | | | |
|-----|---|----|---|----|----|---|----|
| 10. | I meet my own personal expectations for expertise in caring for my child. | SA | A | MA | MD | D | SD |
| 11. | If anyone can find the answer to what is troubling my child, I am the one. | SA | A | MA | MD | D | SD |
| 12. | My talents and interests are in other areas, not in being a parent. | SA | A | MA | MD | D | SD |
| 13. | Considering how long I've been a mother, I feel thoroughly familiar with this role. | SA | A | MA | MD | D | SD |
| 14. | If being a mother of a child were only more interesting, I would be motivated to do a better job as a parent. | SA | A | MA | MD | D | SD |
| 15. | I honestly believe I have all the skills necessary to be a good mother to my child. | SA | A | MA | MD | D | SD |
| 16. | Being a parent makes me tense and anxious. | SA | A | MA | MD | D | SD |

Parent Sense of Competency Scale (PSOC)

Scoring Instructions

Scoring Instructions for the Being A Parent Scale
(Measure of Parenting Satisfaction and Efficacy, Johnston & Mash, 1989,
Journal of Clinical Child Psychology)

Satisfaction Scale

Items 2, 3, 4, 5, 8, 9, 12, 14, and 16

Disagreeing indicates greater satisfaction so:

SD = 6, D = 5, MD = 4, MA = 3, A = 2, SA = 1

- | | |
|----------------------------|-----|
| 2 (frustrated) | ___ |
| 3 (not accomplished) | ___ |
| 4 (feel manipulated) | ___ |
| 5 (mother better prepared) | ___ |
| 8 (don't know if good) | ___ |
| 9 (not getting done) | ___ |
| 12 (talents elsewhere) | ___ |
| 14 (better if interested) | ___ |
| 16 (tense) | ___ |

Satisfaction Total _____

Efficacy Scale

Items 1, 6, 7, 10, 11, 13, and 15

Agreeing indicates greater efficacy so:

SA = 6, A = 5, MA = 4, MD = 3, D = 2, SD = 1

1 (problems easy) _____

6 (fine model) _____

7 (manageable) _____

10 (meet expectations) _____

11 (I can find answer) _____

13 (familiar with role) _____

15 (have skills) _____

Efficacy Total _____

PSOC Total _____

(Satisfaction + Efficacy)

Interpreting the PSOC:

Parenting Sense of Competence Scale The PSOC uses 16 questions to understand how capable a caregiver feels as a parent and how satisfied they are with being a parent. Average total scores have been reported between 58-66 (Ohan et al., 2000). Satisfaction questions are intended to understand how a parent feels when they are parenting, such as feelings of success or accomplishment as a parent. Average scores on the satisfaction scale have been reported between 36 and 44. Lower scores on these questions may indicate a parent's uncertainty about whether they can be a good parent or how they could become one. Efficacy questions are intended to understand how a parent feels about their parenting skills. These questions ask about a parent's confidence and their ability to solve problems when they arise. Average scores on this scale have been reported between 22 and 31 depending on the gender of the child (with slightly lower scores for parents of boys). Lower scores may indicate a parent's uncertainty about whether they have the knowledge or skills required to be an effective parent. Summarizing the results of these studies, combined scores under 58 may be considered low, scores 58-74 average, and 75+ to be high parenting self-esteem and sense of efficacy (Johnston & Mash, 1989; Ohan, Leung, & Johnston, 2000).

PSOC – বাংলা ভাষন

দয়া করে নিম্নলিখিত বিবৃতিগুলির প্রতিটির সাথে আপনি কতটা একমত বা দ্বিমত পোষণ করেন তা রেট করুন এবং আপনার জন্য প্রযোজ্য যে কোন একটি সংখ্যাই গোল চিহ্ন দিন।।

দৃঢ়ভাবে একমত না	কিছুটা দ্বিমত	একমত না	একমত	কিছুটা একমত	দৃঢ়ভাবে একমত
১	২	৩	৪	৫	৬

১। আমার বাচ্চার যত্ন নেওয়া/দেখাশোনা করার ক্ষেত্রে যে সমস্যাগুলো হয় সেগুলো সহজেই সমাধান করা সম্ভব, যখন থেকে আমি বুঝতে পেরেছি যে আমার কাজ আমার সন্তান কে কিভাবে প্রভাবিত করে	১	২	৩	৪	৫	৬
২। যদিও একজন অভিভাবক হওয়া খুব সুন্দর একটি ব্যাপার কিন্তু আমার সন্তানের বর্তমান বয়সে আমি হতাশাবোধ করছি	১	২	৩	৪	৫	৬
৩। আমি সকালে যেভাবে উঠি ঠিক একইভাবে রাতেও বিছানায় ঘুমাতে যাই- মনে হয় আমি কোন কিছুই সেরকম ভাবে শেষ করতে পারিনি।	১	২	৩	৪	৫	৬
৪। আমি জানি না কেন মাঝে মাঝে এমন মনে হয় যে যখন আমার নিয়ন্ত্রণে রাখার কথা, আমাকেই বেশি নিয়ন্ত্রণ করা হচ্ছে	১	২	৩	৪	৫	৬
৫। আমার মা একজন ভাল মা হওয়ার জন্য আমার থেকে বেশি প্রস্তুত ছিলেন	১	২	৩	৪	৫	৬
৬। আমি একজন নতুন মায়ের জন্য ভাল আদর্শ হতে পারি যাকে অনুসরণ করে সে একজন ভাল অভিভাবক হওয়া সম্পর্কে জানতে এবং বুঝতে পারবে।	১	২	৩	৪	৫	৬
৭। একজন অভিভাবক হওয়া সহজ এবং যে কোন সমস্যা সহজেই সমাধান করা যায়	১	২	৩	৪	৫	৬
৮। অভিভাবক হওয়ার ক্ষেত্রে একটি কঠিন সমস্যা হল এটা না জানা যে আপনি একজন বাবা-মা হিসেবে ভাল কাজ করছেন নাকি খারাপ কাজ করছেন	১	২	৩	৪	৫	৬
৯। মাঝে মাঝে আমার মনে হয় আমি কিছুই ঠিকমত করতে পারছি না	১	২	৩	৪	৫	৬
১০। সন্তানের যত্ন নেওয়ার দক্ষতার ব্যাপারে আমি নিজের ব্যক্তিগত প্রত্যাশা পূরণ করতে পারি	১	২	৩	৪	৫	৬
১১। কোন ব্যাপার আমার শিশুকে কষ্ট দিচ্ছে কিনা তার উত্তর শুধু	১	২	৩	৪	৫	৬

আমিই খুঁজে দিতে পারি						
১২। অভিভাবক হওয়ার চেয়ে আমার প্রতিভা এবং আগ্রহ অন্যান্য ব্যাপারে বেশি	১	২	৩	৪	৫	৬
১৩। আমি যতদিন ধরে মা হয়েছি তা বিবেচনা করলে , আমি এই দ্বায়িত্বের সাথে অনেকটাই পরিচিত হয়ে গিয়েছি	১	২	৩	৪	৫	৬
১৪। অভিভাবক হওয়া যদি খুব মজার কিছু হত তাহলে আমি একজন অভিভাবক হিসেবে আরও ভাল কাজ করার জন্য উৎসাহ পেতাম	১	২	৩	৪	৫	৬
১৫। আমি একান্তভাবে বিশ্বাস করি যে আমার সন্তানের ভালো মা হওয়ার জন্য প্রয়োজনীয় সমস্ত দক্ষতা আমার মধ্যে আছে ।	১	২	৩	৪	৫	৬
১৬। একজন অভিভাবক হওয়া আমাকে চিন্তিত এবং উদ্ভিন্ন করে তোলে।	১	২	৩	৪	৫	৬
১৭। একজন ভাল মা হওয়া এমনতেই একটি পুরস্কার	১	২	৩	৪	৫	৬

Fatigue Assessment Scale (FAS)

The following 10 statements refer to how you usually feel. For each statement you can choose one out of five answer categories, varying from *never* to *always*. 1 = *never*; 2 = *sometimes*; 3 = *regularly*; 4 = *often*; 5 = *always*.

	Never	Sometimes	Regularly	Often	Always
1. I am bothered by fatigue (WHOQOL)	1	2	3	4	5
2. I get tired very quickly (CIS)	1	2	3	4	5
3. I don't do much during the day (CIS)	1	2	3	4	5
4. I have enough energy for everyday life (WHOQOL)	1	2	3	4	5
5. Physically, I feel exhausted (CIS)	1	2	3	4	5
6. I have problems starting things (FS)	1	2	3	4	5
7. I have problems thinking clearly (FS)	1	2	3	4	5
8. I feel no desire to do anything (CIS)	1	2	3	4	5
9. Mentally, I feel exhausted	1	2	3	4	5
10. When I am doing something, I can concentrate quite well (CIS)	1	2	3	4	5

Administration The FAS is a self-report, paper-and-pencil measure requiring approximately 2 min for administration

Scoring Each item of the FAS is answered using a five-point, Likert-type scale ranging from 1 (“never”) to 5 (“always”). Items 4 and 10 are reverse-scored. Total scores can range from 10, indicating the lowest level of fatigue, to 50, denoting the highest.

A normative percentile for the total score is calculated based on an adult sample

(Michielsen et al., 2003), indicating how the respondent scored in relation to a typical pattern of responding for adults. For example, a percentile of 90 indicates the individual has more fatigue than 90 percent of the normal population.

Scores above 22 represent significant fatigue which corresponds to a normative percentile of 65. A horizontal dotted line is indicated on the Total Percentile graph for this cutoff score. A description of the fatigue experienced is presented for the total score where:

- less than 22 indicates "normal" (i.e. healthy) levels of fatigue,
- between 22 and 34 indicates mild-to-moderate fatigue,
- 35 or more indicates severe fatigue.

There are two subscales:

1. Mental fatigue (sum of items 3, 6, 7, 8, and 9) - a measure of the cognitive impacts of fatigue for the client (e.g. lack of motivation, problems beginning tasks, problems thinking).
2. Physical fatigue (sum of items 1, 2, 4, 5, and 10) - a measure of the physical impacts of fatigue for the client (e.g. physical exhaustion, lack of energy)(Dr Ben Buchanan, 2018).

Appendix D: Supervision record sheet

Bangladesh Health Professions Institute
 Department of Occupational Therapy
 4th 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: *Psychological Fatigue, Well-Being and Parental self-Efficacy Among Mothers of Autism Spectrum Disorders: A Cross-sectional study*

Name of student: *Tirsha Rahman*

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	2 hours	Got an clear idea about the research topic	<i>Tirsha</i>	<i>Sk. Moniruzzaman</i>
2	14.08.23	BHPI	Discussion about the title, aim	1 hour 30 min	Learning & understanding title and aim	<i>Tirsha</i>	<i>Sk. Moniruzzaman</i>
3	16.08.23	BHPI	Discussion about the tools (scales to be used)	1 hour 30 min	clear idea about scales	<i>Tirsha</i>	<i>Sk. Moniruzzaman</i>

4	19.8.23	BHPI	Discussion about methodology	1 hour 30 min	Effective feedback	tirsha	Su. Vaid
5	21.8.23	BHPI	Feedback on objectives	1 hour 20 min	Helpful guideline	tirsha	Su. Vaid
6	23.8.23	BHPI	Discussion about the e-mail write-up	1 hour	Effective feedback	tirsha	Su. Vaid
7	26.8.23	BHPI	Research scale scoring discussion	1 hour 30 min	Got clear idea	tirsha	Su. Vaid
8	28.8.23	BHPI	Discussion about proposal write-up	1 hour 20 min	Effective guideline	tirsha	Su. Vaid
9	10.9.23	Online	Discussion about the forward-backward translation	45 min	Helpful feedback	tirsha	Monika Singh
10	13.9.23	Online	Discussion about the sampling size	40 min	Effective guideline	tirsha	Monika Singh
11	20.9.23	Online	Feedback about proposal presentation	30 min	Helpful feedback	tirsha	Monika Singh
12	28.9.23	Online	Feedback on the translation	1 hour	Effective guideline	tirsha	Monika Singh
13	30.9.23	Online	Reviewed the permission of scales	30 min	Got a clear idea	tirsha	Monika Singh
14	01.10.23	BHPI	Feedback on the survey form	1 hour 30 min	Helpful guideline	tirsha	Monika Singh

15	07.10. 23	BHPI	Feedback on consent form, withdrawal form, information sheet	1 hour 20 min	Needs some correction	tiresha	Monika Singh
16	10.10. 23	BHPI	Discussed about how to improve translation some difficulties faced	1 hour	Effective guideline	tiresha	AJMA
17	17.10. 23	BHPI	Discussed about the field test	1 hour 20 min	Helpful discussion	Aresha	Monika Singh
18	22.10. 23	BHPI	Discussion on how to improve survey form	1 hour 30 min	Good an idea how to improve	tiresha	Monika Singh
19	25.10. 23	BHPI	Discussion about the procedure to collect data	1 hour	Helpful discussion	tiresha	Monika Singh
20	28.10. 23	BHPI	Discussion on writing application for data collection	1 hour	Effective guideline	tiresha	Monika Singh
21	30.10. 23	BHPI	Discussion about how to converse with participants	1 hour 30 min	Helpful guideline	tiresha	Monika Singh
22	12.12. 23	BHPI	Discussion about the update of data collection	1 hour	Effective discussion	tiresha	Monika Singh
23	18.12. 23	BHPI	Discussion about the update of data collection	1 hour 30 min	Effective discussion	tiresha	Monika Singh
24	04.01. 24	BHPI	Discussion about data analysis	1 hour	Helpful guideline	tiresha	Monika Singh
25	08.01. 24	BHPI	Results write-up guideline	1 hour 30 min	Effective feedback	tiresha	Monika Singh

26	10.01.24	BHPI	Discussion about abstract write-up	1 hour	Helpful guidance	Pirsha	Monika Singh
27	15.01.24	BHPI	Introduction write-up feedback	1 hour 30 min	Effective discussion	Pirsha	Monika Singh
28	30.01.24	BHPI	Feedback of the 1st draft	1 hour 40 min	corrections	Pirsha	Monika Singh
29	6.02.24	BHPI	Discussion on some analysis part	1 hour 30 min	Helpful guidance	Pirsha	Monika Singh
30	10.02.24	BHPI	Feedback on analysis and discussion	1 hour 40 min	Effective feedback	Pirsha	Monika Singh
31	19.03.24	BHPI	Feedback of the 2nd draft	1 hour 20 min	Helpful feedback	Pirsha	Monika Singh
32	23.3.24	BHPI	Some corrections of write-up	1 hour 30 min	got a clear idea	Pirsha	Monika Singh
33	6.4.24	BHPI	Feedback on defense presentation	30 min	Effective feed-back	Pirsha	Monika Singh
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35							

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.