Department of Rehabilitation Science
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QUALITY OF LIFE OF PARENTS AND BEHAVIORAL ASPECTS OF CHILDREN WITH AUTISM SPECTRUM DISORDERS (ASD).

By
Nure Naznin
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University of Dhaka Roll No: 215

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Md. Obaidul Haque,
Professor & Head Department of Physiotherapy,
BHPI, CRP, Savar

_____

Date:

We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for acceptance of this thesis entitled, "**Quality of Life of Parents and Behavioural Aspects of Children with Autism Spectrum Disorders (ASD)**" submitted by **Nure Naznin**, for the partial fulfillment of the requirements for the degree of M.Sc. in Rehabilitation Science.

Md. Obaidul Haque
Professor & Head
Department of Physiotherapy, BHPI _____
CRP, Savar, Dhaka

Firoz Ahmed Mamin
Associate Professor
Department of Physiotherapy, BHPI _____
CRP, Savar, Dhaka

Dr. Md. Mahmudul Haque
Associate Professor
Department of Community Medicine,
NIPSOM, Mohakhali, Dhaka _____

S.J.M. Ummul Ambia
Lecturer- Department of Rehabilitation Science
BHPI, CRP, Savar, Dhaka _____

Date of approval:

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ABSTARCT

Parent quality of life refers to the degree to which parent of individuals of children with disabilities are able to meet their basic needs, enjoy time together, and pursue leisure interests and activities. Children with ASD causes stress in the family, most especially among parents, consequently affecting parental quality of life (QOL). This paper describes the QOL of parents and behavioural aspects of children with Autism Spectrum Disorders (ASD) by using a quantitative method design. The participants are parents of children with ASD (n=153) and were asked to answer the World Health Organization Quality of Life-Brief (WHOQOL-BREF) Questionnaire Bengali Version and The Nisonger Child Behavior Rating Form (NCBRF). The WHOQOL-BREF was used to assess parental QOL while the Nisonger Child Behavior Rating Form (NCBRF) was used to assess the child's social behavior/ competence and problem behavior, demographic data were also obtained. The result indentified the significant association between parents quality of life (physical domain, psychological domain, social domain and environment domain) with all the characteristics of children with ASDs problem behavior as conduct problem, anxious, hyperactive, stereotypic and self isolated. The result showed that positive weak correlation between parent's quality of life (physical health, psychological, social relationships and environment) with children with ASD's social behavior ($0 < r_s < 0.25$). For the problem behavior (conduct problem, insecure, hyperactive, self injury and overly sensitive) of the children with ASD showed the positive correlation with respondent four domains of quality of life except self-isolation.

Keywords: Autism Spectrum Disorders (ASDs), Behavior and Quality of Life (QoL).

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ABBREVIATIONS

ADHD-Attention Deficit Hyperactivity Disorder

ASD- Autism Spectrum Disorder

BMRC- Bangladesh Medical Research Council

CIPRB-Centre for Injury Prevention and Research, Bangladesh

CRP- Centre for the Rehabilitation of the Paralysed

DSM- Diagnostic and Statistical Manual of Mental Disorders

FQOL-Family Quality of Life

ICF-International Classification of Functioning, Disability and Health

IRB-Institutional Review Board

NCBRF- The Nisonger Child Behavior Rating Form

PDD- Pervasive Developmental Disorder

QoL-Quality of Life

RRBs-Restricted and Repetitive Behaviors

SCD-Social and Communication Deficits

SPSS- Statistical Package for the Social Sciences

WHO-World Health Organization

WHOQOL-BREF- Health Organization Quality of Life Assessment-Bref

CHAPTER I INTRODUCTION

1.1 Background

Children make the family inclusive and whenever a new member arrives at the family they bring more happiness, the family plays an important role in developing the child's abilities and skills, and possibly the presence of a disabled child in the family may represent a change point in lives of the entire family, it reorganizes the life and priorities for coping with new circumstances. On the other hand, when the child has any medical or developmental difficulty the family is influenced in a negative way and often life becomes wretched for them. A disabled individual has several negative side effects on the various aspects of life in various life cycle, some of which are linked to disability they have, or the family environment in which they live, their economic and social circumstances, educational environment they learn, or their cultural aspects, which would affect the quality of life of these individuals and their families. Autism Spectrum Disorder (ASD) is one such developmental condition whose incidence is increasing rapidly across the world. The term "Autism" is a life-long brain disorder that is normally diagnosed in early childhood. Autism spectrum disorders characterizes a spectrum of complex, neurological, and developmental disorders characterized by deficits in reciprocal social interaction and communication, along with the presence of restricted, repetitive, and stereotyped interests and behaviors (Stefanatos, 2008). These deficits manifest in early development and are pervasive in nature, affecting individuals throughout their lifespan (Attwood, 2008). Children with autism have complications in communicating, creating relationships with others and finding hard to make sense of the

world around them (Ministry of Education, 2000). Bangladesh is a developing country where the number of children with ASD is increasing in a remarkable manner. It has been estimated that 1% of world population is suffering from Autism which can be explained as a life-long neurodevelopment condition interfering with the person's ability to communicate and relate to others (CIPRB, 2014). The complications connected to ASD not only affect the diagnosed individual but also his or her caregivers, family, teachers, and community. According to Karst & Van Hecke (2012) stated that the prevalence rate in the United States for ASD is estimated approximately one in 88 children. This study showed that parental understanding and explanation of deficits is correlated highly with the way ASD is explained to them by treatment of professionals. Parents of children with autism spectrum disorders face multiple challenges due to their child's developmental difficulties. Raising and supporting a child with an ASD appears to have negative effects on parents and families regardless of the severity of symptom or the time since diagnosis. According to Montes and Halterman, 39% of parents of children with ASD reported that they faced many problems in their job affairs for childcare, compared to 9% of typically developing children. In a study conducted by Perumal, Veeraraghavan & Lekhra (2014) it has been showed that parents signified that they refrained from participating in activities outside the home because their attention was constantly on their children with autism because they felt that others did not understand the behavior problems of their children. This study reported that parents of children with various developmental disabilities experience heightened stress, overburden and marginalization in society, sense of self accusation, tiredness or exhaustion, so the quality of life of the families of children with autism spectrum disorder is influenced by its varying degrees of behavioral

problems. Children with ASD is often conceptualized as a risk factor in terms of family well-being, as there is additional stress placed on family relationships, as well as on family member's roles and responsibilities (Zuckerman et al, 2014). According to the World Health Organization's world report of disability (WHO, 2011), one of the main obstacles that hamper the establishment of efficient support programs for parents of children with Autistic Disorder in the developing countries is the lack of research studies that can inform about the psychosocial impacts of raising children with Autistic Disorder on their parents (Dardas, 2014). Parents of children with ASD appearance challenges place them at risk for higher levels of stress and difficulties in reciprocal interaction as well as communication and stereotypically difficult behaviors, which are related to ASD. Parents have an important role in sibling relationships, not only in normal children but also in children with ASD and they also take on responsibilities of diagnosis, advocacy, and daily care. Increasing incidence of autism and related spectrum disorders in recent years, no specific treatment and the significantly high morbidity make the most of the children can't fit into society, the prognosis is a long-term social problem, and therefore, attaching importance to and paying attention to the survival quality of the autistic children is urgent and necessary (Abel, 2012). As parenting the children with ASD is emotionally, socially, financially, and physically challenging, mothers of children with autism are highly stressed more than the mothers of the normal children. Low quality of life among parents of children with autism spectrum disorder may later lead to various problems in their lives such as anxiety and introversion, social withdrawal, a sense of loneliness and loss of the meaning of life, the lack of efficiency in social relations and negative social behavior, and the failure to form and maintain friendships, emotional

imbalance and others. Quality of life can be achieved for the family if their needs are satisfied, through various fields such as financial condition, family interaction and a healthy social life (Fader et al, 2011). Parents of children with autism spectrum disorder face numerous challenges, including obtaining a diagnosis, finding appropriate treatment and educational programs, and struggling with the financial burden of paying for services and consequences of coping with these and many other challenges associated with raising a child with ASD, so that parents face greater levels of depression and higher levels of stress.

1.2 Justification

Speech & language therapist's has huge role to work with the children with ASD to be enhanced in the communication and adaptive behavior of daily living, family, community and society. For appropriate caring of children with ASD some of the parents have a lack of interest, low motivation, limited participation in the therapy session, do not continue the home advice and the mothers also does not engage their child in schooling, society, friends circle and relatives. Taking a child out in public cannot cause unlimited emotional stress for parents because the behavioral and developmental problems of children with Autism Spectrum Disorders (ASD) cause them to be very irregular. There is a complex relationship in disability, quality of life and behavioral context of ASD that represents an important area for rehabilitation practitioners. A child with ASD has a significant impairment on behavioral development which has negative impact on communication; socialization, behavioral and both quality of life of parents of ASD and children with ASD. Challenging behaviour is a term used to describe behaviors that threatens the quality of life and physical safety of an individual or others. Some common examples of challenging behaviour include: aggressive out bursts, self-injury, including ingesting or inhaling foreign bodies, property destruction and socially inappropriate behaviour (Emerson & Einfeld, 2011). In Bangladesh, there are some studies which focused on the parents satisfaction level, stress level, parents perception about different issues & others related to ASD but less focused on children's behavioral aspect in relation to parents' quality of life. There is no complete cure for Autism Spectrum Disorder; any recognized amount of a successful outcome for children will improve their family's quality of life. Consequently, the quality of life of parent evaluation will also assist in identifying the

effectiveness of the services provided for the management of such children. Though Autism spectrum disorder is not uncommon in Bangladesh, unfortunately, no study has been done on measuring the quality of life of parents and behavioral aspect of children with autism spectrum disorder in Bangladesh. Children who have ASD present mild to severe impairments in social interaction and communication along with restricted, repetitive, and stereotyped patterns of behaviors, interests, and activities. Diagnosis of ASD should be based on comprehensive behavioral evaluations, making diagnostic assessment complex and time-consuming (Hill et al, 2014). Therefore, from the very beginning it can be recognized as the difficulty that the children with autism experience with behavior and start dealing with them, then it can be hoped that at one level it would enable them to use language and interact with people like other normal kids. It can open a new pathway of hope for both the children with autism and their parents. It will also raise awareness among the general mass that they should facilitate every possibility to create an environment which will render support and encourage to the autistic children. So this study was initiated to find the quality of life of parents of children with autism spectrum disorder in Bangladesh. This will assist in identifying the effectiveness of services available in Bangladesh and it would also give us guidelines for managing the stress related issues in the parent. The quality of life of parent with ASD evaluation shall also assist in identifying the effectiveness of the services provided for the management of such children. These findings have important implications for intervention programs targeting this population. So the study would be a potential contributor to the knowledge regarding autism intervention.

1.3 Research Question

How does behaviour of ASD influence parents' attitude and quality of life?

1.4 Operational Definition

Autism Spectrum Disorders (ASDs)

Autism Spectrum Disorder (ASD) is a lifelong neurodevelopment disorder appearing during early childhood. In the DSM-V, autistic disorder is defined by five distinct domains: social use of verbal and nonverbal communication, Restricted, repetitive patterns of behavior, interests, or activities; Symptoms must be present in the early developmental period; Symptoms cause clinically significant impairment; these disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay (Huerta et al, 2012).

In this research Autism Spectrum Disorder is a group of complex disorder of brain development characterized by difficulties in social interaction, verbal and nonverbal communication and repetitive behaviors.

Behavior

Behavioral appearances of ASD differ generally from one individual to another. The heterogeneity is impacted by variability in different factors, such as developmental path, level of language, cognitive ability, gender, adaptive behaviors, and sensory and motor impairments (Kim & Lord, 2013).

In this research behavior is a positive social which is encouraging the social attitudes and problem behavior which is unacceptable in society and harmful for others.

Quality of Life

Quality of life is believed to be comprehensive and multidimensional outcome measure which can be used to explore subjective variables such as subjective wellbeing and life satisfaction. This study examined the QoL concept among parents of children with Autistic Disorder. The results exposed physical, psychological, social and environmental health scores. The QoL can be defined as the individual's perception of his position in life, in the context of culture and value systems in which he lives, and in relation to his goals, expectations, standards and concerns.

In this study the quality of life can be theoretically defined within the framework, as the degree of satisfaction felt by parents of children with autism spectrum disorder towards the various dimensions of life as the level of satisfaction with life, physical and mental health, and satisfaction with material and moral sides, interaction with the family and social relations, getting social support, practice of daily activities, the ability to pursue happiness and optimism resulted from the psychological readiness of the individual, and the role of others and their ability to provide support for parents to interact with the surrounding environment.

CHAPTER II LITERATURE REVIEW

This chapter reviewed literature related to the research topic under the following sub-headings: concept of autism spectrum disorder, concept of behavior of children with autism, concept of quality of life of the parents of children with autism.

2.1 Literature Review

The term 'autism' is derived from the Greek word 'autos' which means 'self'. It is a well-chosen word because people suffering from autism and Asperger Syndrome have profound difficulty in understanding and appreciating other people's ideas, beliefs and perspectives as if one's own perspective is the only true and correct view (Wearmouth, 2013). Autism as a disability and as a growing community of individuals and their families has a unique history and current context. The definition of Autism spectrum disorder (ASD) is a group of complex neurodevelopment disorders characterized by repetitive and characteristic patterns of behavior and difficulties with social communication and interaction (Boner, 2014). Children with autism spectrum disorder have difficulties in the guided participation relationship and dynamic intelligence such as anticipating, inferring, reflecting and expanding (Boner, 2014). Some children and adults with ASD are fully able to perform all activities of daily living while others require substantial support to perform basic activities. Autism is a lifelong, non-progressive neurological disorder that typically appearing before the age of three years. They develop differently from other children. Children with ASD develop at different rates in different areas of development such as motor, language, cognitive, and social skills whereas

Children without ASD develop at about the same rate in different areas of growth. The characteristics of children associated with the type of disability may influence the responsiveness and communication challenges decrease the responsiveness and mindfulness of parents (Chan & Lam, 2016). Autism spectrum disorders (ASD) are characterized by impairments in the areas of reciprocal social interaction and communication, and the presence of restricted and repetitive behaviors and interests (RRBs). Social communication deficits can be the core features of autism spectrum disorders and it consists of a broad range of verbal and nonverbal behaviors used in reciprocal social interaction. In spite of having heterogeneity of language abilities, weaknesses in social communication are universal in children with ASD across ages and ability level. They face problems in using verbal and nonverbal communication in social situations, find it hard to adapt to the communication style of the person he/she is communicating with, inability to follow basic social rules and find it hard to understand implied messages (Kim & Lord, 2013). SCD symptoms become noticeable during early childhood which becomes visible with the struggles that the child faces in their social life and their academic experience. A commonly mentioned challenge is managing anxiety, due to which the child separates him/herself from taking part in social environments. Children with ASD also face speech/language delays that are more vulnerable than communication impairment. Language delays in individuals with ASD are not compensated by other modes of communications, such as eye contact, gestures, and facial expressions, as one would expect to see in others. Problems with speech quality have been noted in individuals with ASD (e.g., unusual prosody, rhythm) as well as a tendency towards using repetitive speech patterns such as stereotyped speech or delayed echolalia

(e.g., repeating lines from a Disney movie) (Kim & Lord, 2013). Other social and communication deficits occur in different developmental milestones such as complex imaginative play, cooperative play in a group, and gestures (APA, 2000). They have find it difficult to understand other people and difficult to deal with conflict. Lack of their socialization they like to prefer solitary activities and do not try to make friends or would like to make friends but don't know how and also unable to share their feelings and emotions. There are many ASD whose verbal abilities are intact but still tend to use limited gestures that are not well integrated with other modes of communication (Kim & Lord, 2013).

Restricted and repetitive behaviors (RRBs) are considered as one of the core characteristics of autism. RRBs include a very broad category of behaviors such as obsession with one or more restricted patterns of interest, adherence to specific, nonfunctional routines, repetitive motor manners (e.g., hand flapping), and preoccupation with parts of objects (e.g. peering at the wheels of toy cars while spinning them). Some of the children with ASD shows repetitive motor behaviors often have a strong sensory component, such as spinning objects or the self. Sensory feedback is basis of physiological action which is responsible for repetitive behavior (Leekam et al, 2011). Obsession with restricted interests and nonfunctional routines or rituals, are accountable for higher level of unusual behavior. For Restrictedness is observable characteristics are in the narrowness of focus, the inflexibility and perseveration in interests and activities and insistence. (Leekam et al, 2011). Autism is the standardized form of a group of conditions, collectively called autism spectrum disorder (Christensen, 2016). They share characteristics (impairments in socialization and communication, and repetitive interests

and behaviors), but differ in developmental course, symptom pattern, and cognitive and language abilities (Chowdhury et al, 2012). According to the Diagnostic and Statistical Manual of Mental Disorders edition 4 (DSM-IV), other ASD subtypes include Childhood Disintegrative Disorder (which typically occurs later than autism and involves a more dramatic loss of skills), Pervasive Developmental Disorder (PDD-NOS; sub threshold symptoms and/or later onset) and Asperger disorder (with less severe language and cognitive deficits. About 5–15% of individuals with ASD have an identifiable genetic etiology corresponding to known chromosomal rearrangements or single gene disorders) (Devlin & Scherer, 2012). The inclination to split this group of related disorders into clinical subgroups has not revealed any replicable differences in etiology or developmental trajectory. As a result, DSM-V (May 2013) will group them under the single entity of ASD. In addition to the three core deficits, the spectrum can include anxiety/attention deficit hyperactivity disorder (ADHD), intellectual disability, and medical co-morbidities (e.g., seizure, structural brain malformations, gastrointestinal disorder) (Devlin & Scherer, 2012).

The ICF is an interactive health model that illustrates a complex relationship between health conditions, body function and structure, activities, participation, contextual factors environmental factors and personal factors (World Health Organization, 2001). Children with ASD are faced with neuro-developmental challenges that affect not only the parental and functioning but also all types of family functioning, resulting in significant stress for all family members. ICF is an early classification scheme introduced by the World Health Organization; it defines disability under three components, namely impairment, activity limitations and participation restriction. The ICF allows for individuals to be classified

according to health domains (hearing, talking and memory) as well as health related domains (education and social interaction).

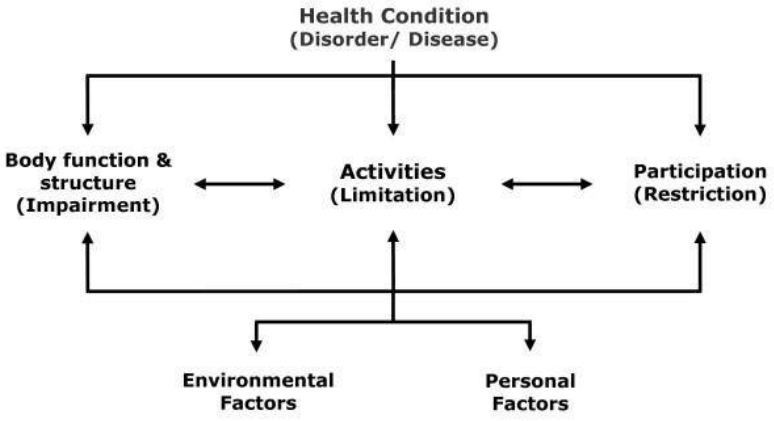


Figure 2.1.1: Interactions between the components of the ICF

In contrast, 'disability' is used as the umbrella term for impairments, activity limitations and participation restrictions (World Health Organization, 2001). The contextual factors include the complete background of an individual's life and living, which has two components: environmental factors and personal factors (World Health Organization, 2001). Environmental factors include the physical, social and attitudinal environment in which people live and conduct their lives. Personal factors are defined as the features of an individual that are not part of a health condition or health states, such as gender, age, lifestyle, social background, education, individual psychological assets and other characteristics (World Health Organization, 2001). Description of environmental and functioning aspects is needed to achieve a holistic view of a person's everyday life situation. Functioning aspect encompass how person use their individual capacity and involvement. Environmental factors add information how the context affects a persons'

functioning. The ICF-CY is the structured model that is derived from the ICF model for detailed documenting the characteristics of children and youth below the age 18 years (World Health Organization, 2007). ICF-CY provides a structural framework for collecting and organizing information that needed for assessment, intervention planning and outcome evaluation (World Health Organization, 2007). Another implication of ICF-CY is as assessment criteria for finding a person's strength and as well as weakness (World Health Organization, 2007). Autism Spectrum Disorders is characterized by deficits in speech, sociability, sensory perception, cognitive awareness, health, and physical behavior and also interactions as well as restricted and repetitive forms of behavior (Coben & Myers, 2010). These symptoms impair everyday functioning in 62.5% of the approximately 10, 000 6 to 12 year old children in Australia. Such characteristics have been found to be great sources of stress for parents of children with this disorder. The behavioral characteristics of Autism Spectrum Disorders (ASD) that significantly relate to parental stress levels include child awareness, behavior, repetitive behaviors and extra care needs. The ICF-CY provides a comprehensive overview of functioning and constitutes a universal language for interdisciplinary work with children. (Gan et al, 2013).

The literature suggests that children with autism typically are insensitive to verbal initiations from others in community settings, and that such insensitivity can lead to problematic social interactions and severely disruptive behavior (Kim et al, 2013). According to Kim & Lord (2013), ASD is restricted and repetitive behaviors and interests (RRBs), it is derived from the proposed "DSM-5 criteria of ASD (APA, 2010), RRBs include a very broad category of behaviors such as intense preoccupations and interests,

adherence to specific, nonfunctional routines, repetitive motor manners and preoccupation with parts of objects. Anxiety-related symptoms are the most common in psychiatric concern among individuals with ASD, and are more likely to occur in adolescence and adulthood. The evidence shows that there has association between social impairment and anxiety in people with ASD, physiological hyper arousal and social deficits may interact to predict the development of social anxiety in children with ASD, implicating possible biological as well as psychosocial underpinnings in the relationship between anxiety and ASD-related social deficits (Sterling et al, 2008). Parents of children with autism spectrum disorders have been shown to experience increases in stress, depression and anxiety and decreased parenting self-efficacy are associated with child behavior problems (Wood et al, 2009). Behavior problems in children with autism spectrum disorders also predict the level of maternal anxiety and stress experienced as well as maternal mood disorders and depression. The child's behavioral problems produce negative effects on the parents' psychological well-being (Rezendes & Scarpa, 2011). Children with ASD show aggressive behavior and more frustration trying to communicate with others who have limited language abilities (Hill et al, 2014). Autism spectrum disorders (ASD) in children could be noticed by language delay or impairment (Luyster, 2008). The children not only have impaired or delayed language skills but also have limitation to acquire the communicative rules and the proper manner of communication along with challenging behavior and impaired social skills (Bosseler & Massaro 2003). Partially of all the autistic population is affected by one type of language impairment or other. This language impairment covers almost every aspect of language, for example pragmatic, syntactic, lexical, phonological, morphological, phonetics and so

on (Hulme & Snowling, 2013). As it is difficult to convey the thoughts and emotions, children with autism find it difficult to regulate and control these emotions. They also lead to self-injurious behaviors such as head banging, hair pulling or biting (Boner, 2014). Children with autism have problem in awareness of one's own role in social situations and assumption of responsibility for negative events contributes to lower self-esteem and discouragement, which may raise the risk for depression. Sterling et al, 2008 investigated whether higher intellectual ability or increased social awareness are associated with higher rates of depressive symptoms in adults with ASD.

According to the World Health Organization, the Quality of Life (QoL) has been defined as individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (Nedjat et al, 2008). The significant features of the environment include the person's physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship. QoL cannot be simply associated with the terms such as health status, life style, life satisfaction, mental state, or well-being; rather, it is a multidimensional concept incorporating the individual's perception of these and other aspects of life (Nedjat et al, 2008). Parenting children with ASD can be emotionally, socially, financially, and physically challenging. The children with autism face multidimensional problem as well as their family members also face difficulty in higher level of stress and also suffer mobilizations, ranging from financial strains to aspects related to physical, psychological and social quality of life (Vieira & Fernandes, 2013).

A large number of studies have confirmed that parents of children with autism have higher levels of stress than parents of typically developing children or children with other

disabilities. Parental adjustment and functioning is an important issue, not only because it is of interest to improve parental quality of life, but also because it is associated with parental ability to care for and teach their children with autism (Hornstein, 2011). When parents initially approach their pediatrician or another medical professional with concerns about their child's development and their worries about a possible diagnosis of autism, many parents are acutely aware of the history of doctors blaming parents for causing the child's autism and dismissing parent's beliefs about their child if they conflict with current theories. While the theory that autism is caused by cold, unresponsive parents has been debunked, mothers still feel that they are viewed as responsible for their child's behavior. If the child's behavior is atypical, it threatens the perception of the mother's competence (Gray, 2003). Diagnosis is the first source of stress for parents because of the uncertainty and frustration of the process produces extra tension in the family and high costs, the treatment phase is also stressful and frustrating because of the amount of therapy needed for the different developmental and physical challenges associated with autism. And also the repeated sessions over long periods of time can be stressful. The emotional stress from diagnosis and treatment can strain parents frequently as a result parents experience anger and depression but coping with these stressors can create stronger marriages and families, it takes a great deal of work and an excellent support system (Nahar, 2015). A study conducted with 40 autistic children reported that parents or caregivers of children included the autism spectrum disorder may face tensions and numerous barriers from pre-diagnosis, the diagnosis itself, dealing with professionals, to navigating treatment options and interventions for their children (Vieira & Fernandes, 2013). The presence of a disabled child in the family in general and children with autism

spectrum disorder in particular, could result in many of the psychological stress, problems and challenges requiring them to challenge with all conditions and circumstances that occur in the family as a result of the presence of a disabled child among them. Another study conducted by Bashir, Khurshid & Qadri, (2014) they showed that autism create greater parental anxiety and tension than parents of non-disabled children than parents of children with other physical or learning disabilities or parents with children with other developmental disabilities. Gray (2003) described nearly every parent with ASD has felt stigmatized in public situations and that parents of younger and more severely disabled children felt more stigmatized. Mugno et a, 2007 explained that parents of children with developmental disabilities experience heightened stress, impaired mental health, sense of devaluation and self-accusation, impaired physical functioning, tiredness or exhaustion. This study also find out the level of impairment in quality of life within families of children with these severe chronic conditions is likely to be moderated by a complex matrix of environmental as well as genetically-based variables such as socio-economic status, social support, parental and child characteristics and coping strategies. The level of parental stress has been found to be related to the level of severity and disability of the children's diagnoses and to coexisting behavioral problems. This study noticed that mothers of children with pervasive developmental disorders **(**PDDs) showed higher levels of stress and demoralization than fathers. So that in this study the research has indicated that maternal stress in families with children with autism is predicted by their children's co-existent behavior problems and also by their partner's depression. It has been suggested that co-existent behavior problems in the child predict parental stress to a higher extent than the severity of the autistic symptoms.

On the other hand parents indicated that they refrained from participating in activities outside the home because their attention was constantly on their children with autism and because they felt that others did not understand their child's behavior problems (Fox et al. 2002). Thus Quality of Life of the families of children with Autism spectrum disorder is influenced by its varying degrees of behavioral problems (Perumal et al, 2014). Parents struggling with their own emotional difficulties may have fewer coping resources and feel more stressed by their children's challenging behaviors. Davis & Carter (2008) reported that mothers of children with ASD typically report higher levels of depression than fathers. So it's important to differentiate between the contributions to parental stress made by parental depression from those made by child-related factors. As depression may have a strong influence on parents' self-ratings of stress, and parental depression has been associated with more severe parent-rated child problem behaviors. According to Brown et al, (2006), parents of children with ASD were less satisfied with their family quality of life than parents of children with Down's syndrome in eight out of nine observed domains. Less satisfaction was present in: Health, Financial wellbeing, Family relations, Support from other people, Support from disability related services, carers and preparation for carers, Leisure and enjoyment of life and Community and civic involvement, while the only domain where parents of children with ASD were more satisfied was Spiritual and cultural beliefs (Benjak, 2011).

Eapen (2016) suggested that caring for a child with ASD impacts significantly on the parent or care giver's QoL. Parents of children with ASD have poorer QoL than parents of typically developing children due to the emotional, physical, social and financial stresses of caring for a child with a disability. There are some features of ASD which

causes for creating more parental distress, such as social deficits and repetitive behaviors. The study reported that parents of children with various developmental disabilities experience finely tuned stress, overburden and marginalization in society sense of self blame, tiredness or exhaustion (Malhotra, Khan & Bhatia, 2012).

Gardiner (2014) investigated the impact of disability severity, rated from mild to very severe, on family quality of life (FQOL), and found that, disability severity demonstrated in differing relationship with family quality of life satisfaction, indicating that as disability severity aggravated and this finding was also simulated in cross-cultural research conducted by Hu et al, (2012) with the same rating scale, who examined FQOL in Chinese families living in Beijing. Another study showed that the psychological adaptation of parents rearing children with PDDs has been recognized as being partly determined by the symptoms behavior problem, cognitive impairment, self-harm, sleep problems and so on of the children, and partly determined by psychosocial factors. This study also showed that the parents of children with autism report a lower QoL and a greater level of child caring burden than the parents of children with attention deficit/hyperactivity disorders (ADHD) (Yamada et al, 2012).

One of the study showed that the parents of autistic children endure a great deal of stress as a function of their children's disturbed sleep, agitation and cries, stereotypy and self-injury, difficulties in feeding and toilet training, epileptic seizures, lack of social or emotional reciprocity and other unusual behaviors (Cappe et al, 2011). Parents of children with an ASD are unique given their notable high stress levels, increased daily burdens, and lower quality of life when compared to mothers of typically developing children and children with other developmental disabilities. Another study showed that

parents raising a child with autism may struggle in personal relationships, with parents reporting lower partnership relationship satisfaction (Zablotsky, Anderson & Law, 2013). Autistic Disorder needs the collaborative partnerships with professionals which is often associated with positive outcomes for both the child and the family QoL (Dardas, 2014).

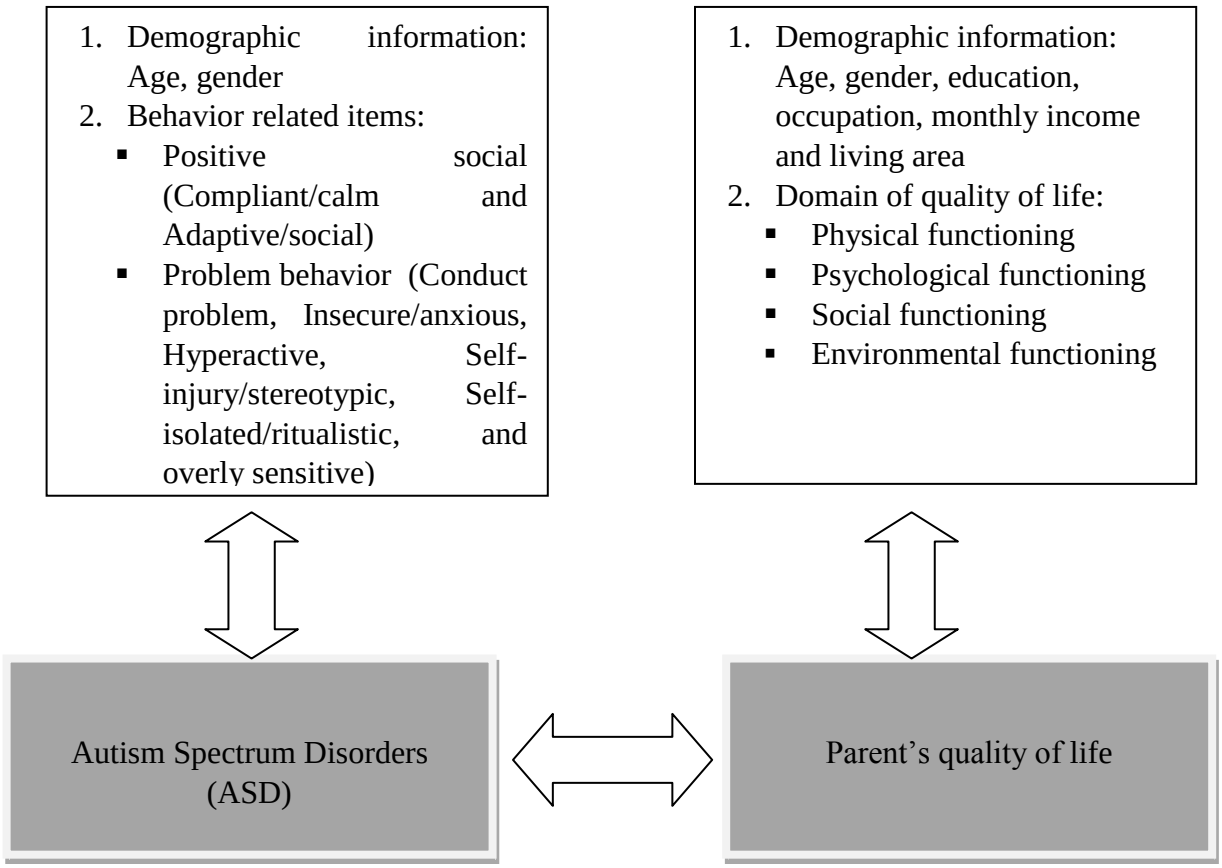
Meadan et al. 2010 found that lower levels of support in mothers of children with Autism Spectrum Disorders (ASDs) were associated with significant psychological distress and also single parents, living in poor housing or were parenting a boy with Autism Spectrum Disorders (ASDs). Maternal stress and well-being were found to be related to children's challenging behavior and severity of the behavioral symptoms. More specifically mothers of children with Autism Spectrum Disorders (ASDs) reported the greatest stress when their children were more irritable, socially withdrawn, hyperactive, unable to take care of themselves and unable to communicate or interact with others and also explored that cultural differences in the relationship between stress and parenting a child with Autism Spectrum Disorders (ASDs) (Phetrasuwan & Miles, 2009). African and American mothers of children with Autism Spectrum Disorders (ASDs) reported lower levels of perceived negative impact of having a child with ASD than Caucasian mothers. Interestingly that mother of children with ASD reported more stress than the other groups, regardless of their cultural background (Willis, 2016).

In addition, Tsao (2009) found that the strong association between parenting stress and behavior problems in children with autistic spectrum disorders focused on very young children and employed a wider range of child ages (2:6-4:0 years) and autism spectrum disorders severity related most strongly to parenting stress. Additionally, there's the stress of complicated therapy schedules, following through on treatment at home, family

commitments with job responsibilities and many other issues. Autism severity was found to be negatively associated with related variables of parenting stress, such as parental quality of life and parental satisfaction during the diagnostic process (Auger, 2013). According to the World Health Organization's world report of disability (WHO, 2011), one of the main obstacles that hinder the establishment of efficient support programs for parents of children with autism spectrum disorder in the developing countries is the lack of research studies that can inform about the psychosocial impacts of raising children with Autistic Disorder on their parents (Dardas, 2014).

CHAPTER III RESEARCH METHODOLOGY

3.1 Conceptual Framework



3.2 Study Objective

3.2.1 General Objective

To identify the quality of life among the parents of children with autism spectrum disorder and behavioural aspects of children with autism spectrum disorder.

3.2.2 Specific Objectives

1. To find out the socio-demographic status.
2. To determine the association between children with ASD's social behavior with parents physical health.
3. To determine the association between children with ASD's social behavior with parents psychological health.
4. To identify the association between children with ASD's social behavior with parents social relationships.
5. To identify the association between children with ASD's social behavior with parents environment.
6. To find out the association between children with ASD's problem behavior with parents physical health.
7. To determine the association between children with ASD's problem behavior with parents psychological health.
8. To identify the association between children with ASD's problem behavior with parents social relationships.
9. To explore the association between children with ASD's problem behavior with parents environment.

10. To find out correlation among the parents four domain of quality of life with social behavior of children with ASD.
11. To find out correlation among the parents four domain of quality of life with problem behavior of children with ASD.

3.3 Study Design

Quantitative research method have been chosen by the investigator because in this way investigator was able to use a large number of participants and therefore collected the data objectively through this way data was reduced to numbers for statistical analysis in order to draw conclusion (Hicks, 2000). The researcher required to gather information from a large number of parents of children with Autism Spectrum Disorders (ASD) at the time of data collection. Levin (2006) suggested that cross-sectional studies are carried out at one time point to or over a short period. Researcher usually conducted to estimate the rate of the outcome of interest for a given population and data can also be collected on individual characteristics. In this way cross sectional studies provide a snapshot of the outcome and the characteristics associated with it, at a specific point in time. On the other hand, the cross- sectional design is one of the most commonly used survey research designs. And also the focus in a cross-sectional design is description describing the characteristics of a population or the differences among two or more populations at a particular point in time (Shaughnessy et al, 2003). So this study was used cross-sectional study design for the research under quantitative methods.

3.4 Study Population

The parents of children with autism in Centre for the Rehabilitation of the Paralyzed (CRP), Head office at Savar, and all other divisional branches.

3.4.1 Inclusion Criteria

a) Parents of children who were diagnosed medically with Autism Spectrum Disorder by neurologist and confirmed by speech and language therapist or occupational therapist.

b) The children with Autism Spectrum Disorder ASD need to take at least one session of occupational therapy or speech and language therapy.

3.4.2 Exclusion Criteria

a) Other conditional children were excluded from the study.

b) Parents who don't wish to participate in the study (no informed consent)

3.5 Study Area

The study area was Bangladesh Health Professions Institute (BHPI). The study sample has been collected from the Centre for the Rehabilitation of the Paralyzed (CRP), Head office at Savar, and all other divisional branches of it situated in Mirpur-Dhaka, Rajshahi, Barishal, Sylhet and Chittagong.

3.6 Participants Selection Procedure

In this study had used comprehensive sampling procedure to identify the participants. From population who meet the inclusion criteria all of them were included in the study as participants to fulfill the objectives. 153 parents of children with autism were identified between January, 2018 to March, 2018 data collection period in the selected study area.

3.7 Study Period

The study was conducted from March 2017 to April 2018, including data collection, data analysis and write up. Particularly data collection was collected from January 2018 to March 2018.

3.8 Data Collection Procedure

After getting final approval of proposal researcher was taken permission from Savar head office and sub-centre of Centre for the Rehabilitation of the Paralysed (CRP) for data collection. At first participants were informed about the aim of the study and also informed in details about consent form. A consent form was developed based on inclusion and exclusion criteria for each participant. Form the CPR Savar the researcher collect data and other sub-center of the CRP the researcher had selected data collector for data collection. The researcher trained them how to collect data. The researcher and data collector asked the participants about the information. Interview was conducted in Bengali so that participants can understand easily. After completing of data collection researcher gave thanks to the participants.

3.9 Data Collection Tools and Materials

The investigator used two checklists e.g. “WHOQOL BREF” and “THE NISONGER CHILD BEHAVIOR RATING FORM”. Also papers, pen, pen drive, clip board and consent forms were used for data gathering.

3.9.1 WHOQOL BREF

The full name of WHOQOL-BREF is "The World Health Organization Quality of Life Assessment-Bref". The WHOQOL-BREF, an abbreviated version of the WHOQoL-100, is a self-administered questionnaire. The QOL information was obtained using a structured questionnaire containing questions on (i) socio-demographic characteristics such as age, years of education, literacy, and family income, and (ii) the WHOQOL-BREF. It contains of 26 questions into four broad domains: physical health, psychological, social relationships and environment. The items are rated on a 5- point scale (WHO, 1996).

Table 3.9.1.1: WHOQOL-BREF Domains

Domain	Facets incorporated within domains
1. Physical health	Activities of daily living Dependence on medicinal substances and medical aids Energy and fatigue Mobility Pain and discomfort Sleep and rest Work Capacity
2. Psychological	Bodily image and appearance Negative feelings Positive feelings Self-esteem

	Spirituality / Religion / Personal beliefs Thinking, learning, memory and concentration
3. Social relationships	Personal relationships Social support Sexual activity
4. Environment	Financial resources Freedom, physical safety and security Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation / leisure activities Physical environment (pollution / noise / traffic / climate) Transport

3.9.2 The Nisonger Child Behavior Rating Form

The Nisonger Child Behavior Rating Form (NCBRF) is a rating scale designed to assess social competence and behavior problems in children and adolescents with developmental disabilities. There are parent and teacher versions of the instrument. Both versions are identical in terms of content, but have slightly different factor structures. The 10 social competence items are rated on a four-point Likert scale ranging 0 (= not true) to 3 (= completely or always true) and distributed on two sub-scales: compliant/calm and adaptive/social. The 66 problem behavior items are also rated on a four-point Likert scale

ranging from did not occur or was not a problem to occurred a lot or was a serious problem and make up six sub-scales: conduct problem (13 items), insecure/anxious (15 items), hyperactive (8 items), self injury/stereotypic (9 items), self-isolated/ritualistic (11items) and overly sensitive (6 items) (Rojahn et al. 2012). There are 60 items from the parent version and items from the teacher version that are distributed among six sub-scales: conduct problem, insecure/anxious, hyperactive, self-injury/stereotypic, self-isolated/ritualistic, and overly sensitive (parent version) or irritable (teacher version). With the exception of the overly sensitive/irritable subscales, both versions share very similar subscale content (Rojahn et al. 2012). The NCBRF has proven to have good construct validity in an ASD population; factor loadings and internal consistencies were acceptable for social competence and problem behavior sub-scales of both parent and teacher forms (Lecavalier, Leone & Wiltz, 2006). In this study the researcher used only parent version form of NCBRF.

3.10 Data Analysis

The researcher had a detail planning for data analysis - accumulates the resources for data collection, data entry and data processing. All eligible respondents were being selected for the interview from all different divisional branches of CRP within the data collection time. The data were collected from a 25-30 minutes face to face interview with in the CRP premises. Developed a coding system for identification due to reduce overlap and missing data. All data are incorporated in the data view in statistical software after completing the variable view for analysis.

Results were analyzed using SPSS the statistical software for Windows, version 16.0. Descriptive analysis of all relevant variables has done using measures of frequency; association within/ between variables were tested using chi square ($\chi 2$) tests. The significance threshold was set to $p<0.05$. Spearman's rank correlation coefficient was used to measure the correlation between variable.

3.11 Quality Control and Quality Assurance

The researcher completed a field test with 6 participants before initiating the data collection to ensure that questions are understandable by the participants. Researcher carried out a field test before collecting the final data because it helps the researcher to refine the data collection plan and find out the limitation. Then the researcher will get chance to rearrange the questionnaires to make it more understandable, clear and enough for the participants and the study. In the demographic question researcher add several points based on the field test analysis- included the educational background, occupation, monthly income of the participant. There were no changes in the WHOQOL-BREF. Well trained-up and provide proper feedback the data collector in theoretically and practically about the question which is used as data collection tool, procedure of data collection, ethical consideration of the thesis to maintain quality.

3.12 Validity

The data was analyzed by using the Statistical Package for Social Science (SPSS), Inc. version 16, according to the category to reduce statistical error which is valid software. The questionnaire WHOQOL-BREF is a valid assessment tool to measure the quality of life. Quality of life refers to an individual's general wellbeing, including emotional,

social, and physical aspects of the individual's life questionnaire. A field test was completed to ensure appropriateness of questionnaire and language. The WHOQOL-BREF is available in 19 different languages. The appropriate language version, and permission for using it, can be obtained from The WHOQOL Group, Program on Mental Health, World Health Organization, CH-1211 Geneva 27, and Switzerland. Under no circumstances should the WHOQOL-BREF be used without consultation with The WHOQOL Group. In Bangladesh, Tsutsumi et al, 2006 developed the Bengali version of the WHOQOL-BREF, showing it to be a valid and reliable assessment tool of QOL in an adolescent population. The components of the original English language questionnaire for socioeconomic characteristics were translated into Bengali by two independent bilingual translators, and back-translations were made by a further two independent bilingual translators. The Nisonger child behavior rating form (NCBRF) scales complement other assessment modalities, allow for the standardized measurement of behaviors, and save time and money. Professionals in the field of developmental disabilities probably rely more on rating scales than those in many areas of psychology and psychiatry because of the nature of the clinical populations. Rating scales are used in the diagnostic process and to measure social and problem behavior (Lecavalier, 2004). The components of the original English language questionnaire were translated into Bengali by two independent bilingual translators, and back-translations were made by a further two independent bilingual translators.

3.13 Ethical Consideration

Study was conducted following the standard guidelines for ethical consideration. The investigator was maintained the Bangladesh Medical Research Council (BMRC) rules. Ethics approved was granted by the Institutional Review Board (IRB) of Bangladesh Health Professions Institute, CRP conduct the thesis in the selected topic. After completion the IRB permission took permission from the head of the selected area where the researcher collected data o fulfill the objectives. Permission were attained the patient records for participant contact address. A written information sheet were provided to participants informing them about the aims and significance of the study and the participants agreement to participate in the study then his or her consent have taken with written signatory/ finger print. Participants were also free to decline or withdraw in participating in the study. It was adhered to that data will be only accessed by the researcher and the supervisor of this study. Confidentiality was maintained strictly during the course of study and during every step of the research. No patients name and address was identified to the public domain and the entire document kept confidential. All data and relevant document was stored in a secured file cabinet. The following variables were considered at the time of preparing data collection instrument.

CHAPTER IV RESULT

4.1 Demographics Status

In terms of the demographic characteristics of parents with ASD children, out of total respondents there is a predominance of mother respondents 58.2% having mean age 35.37 years and standard deviation 6.828. The majority respondent's age category is 22 years to 36 years (56.9%).

Table 4.1.1: Demographic Information of parents of children with ASD

Parents of Children with ASD (Respondent)	**n (%)**
Age, years	35.37±6.828
Age Category	
22 Years-36 Years	87 (56.9)
37 Years-51 Years	66 (43.1)
Relation with ASD children	
Father	64 (41.8)
Mother	89 (58.2)

4.2 Distribution of the Respondents by Educational Qualification

In this study among the participants, about illiterate 14.4% (n=22), primary education completed 11.8% (n=18), secondary education completed 17.0% (n=26), higher secondary education completed 23.5% (n=36), graduation completed 23.5% (n=36) and post-graduation completed 9.8% (n=15). So that most of the respondent's education qualifications are higher secondary and graduated

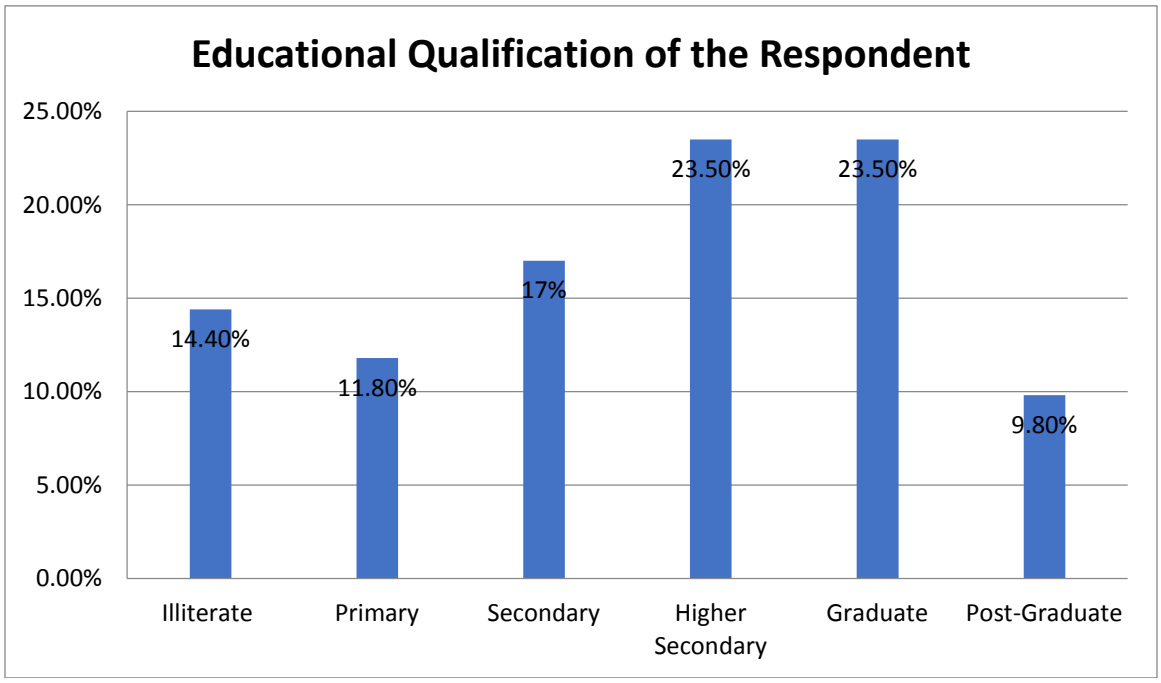


Figure 4.2.1: Distribution of the Respondents by Educational Qualification

4.3 Distribution of the Respondents by Monthly Income Group

Monthly income among the respondent's, 48% are middle income group, 37% are bottom income group and 15% are top income group.

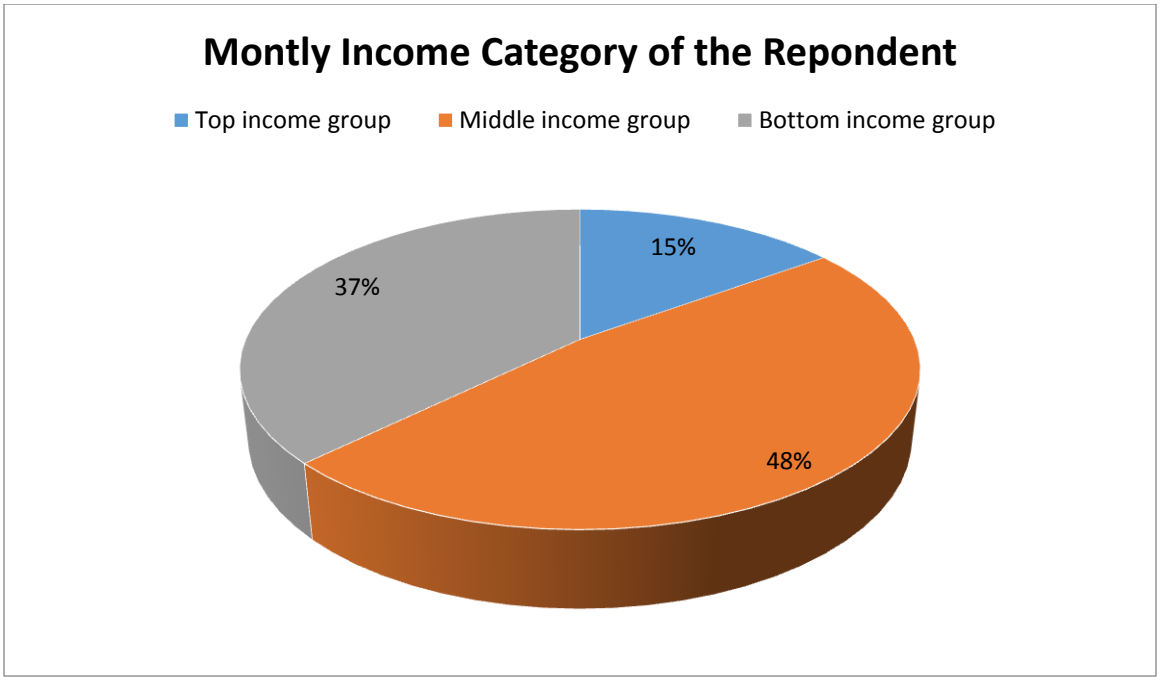


Figure 4.3.1: Distribution of the Respondents by Monthly Income Group

4.4 Frequencies of Respondents' Age Category and Occupation

The correspondent table shows that, among the participants, about 22-36 years of age showing day labor/worker are 0.7% (n=1), house wife are 8.5% (n=13), business are 34.6% (n=53), service holder are 3.9% (n=6) and others are 9.2% (n=14). 37-51years of age showing day labor/worker are 0.7% (n=1), house wife are 3.3% (n=18), business are 9.8% (n=15), service holder are 8.5% (n=13) and others are 20.9% (n=32). According to the distribution most of the respondents are business person.

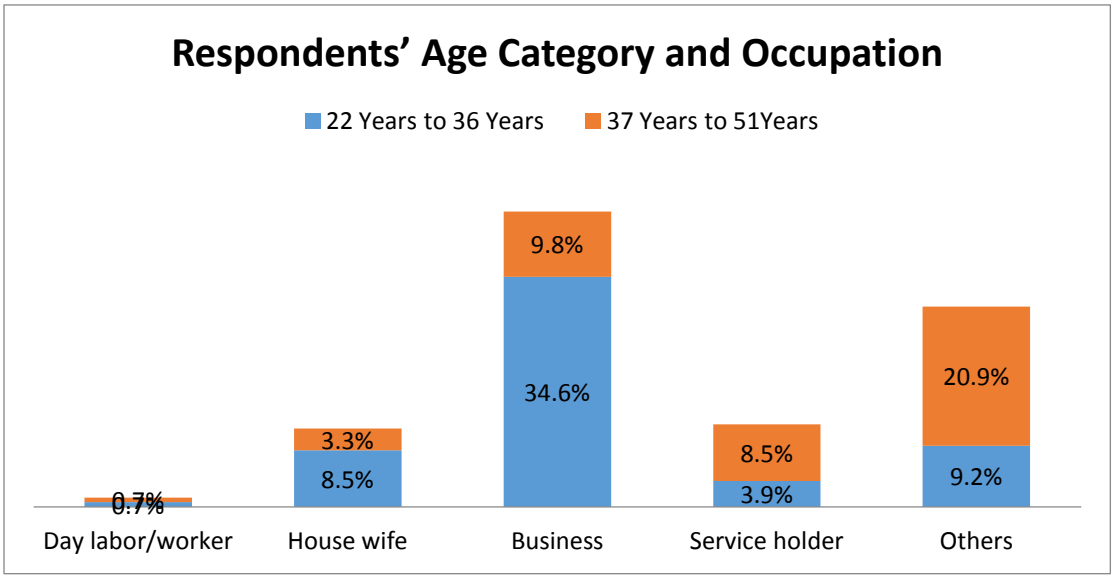


Figure 4.4.1: Frequencies of Respondents' Age Category and Occupation

4.5 Distribution of the Respondents by Living Area

In this figure shows that, most of the respondent come from the living area Savar (41.2%). Then Mirpur (15.7%), Barishal (13.7%), Rajshahi (11.1%), Chittagong (10.5%), Sylhet (7.8%).

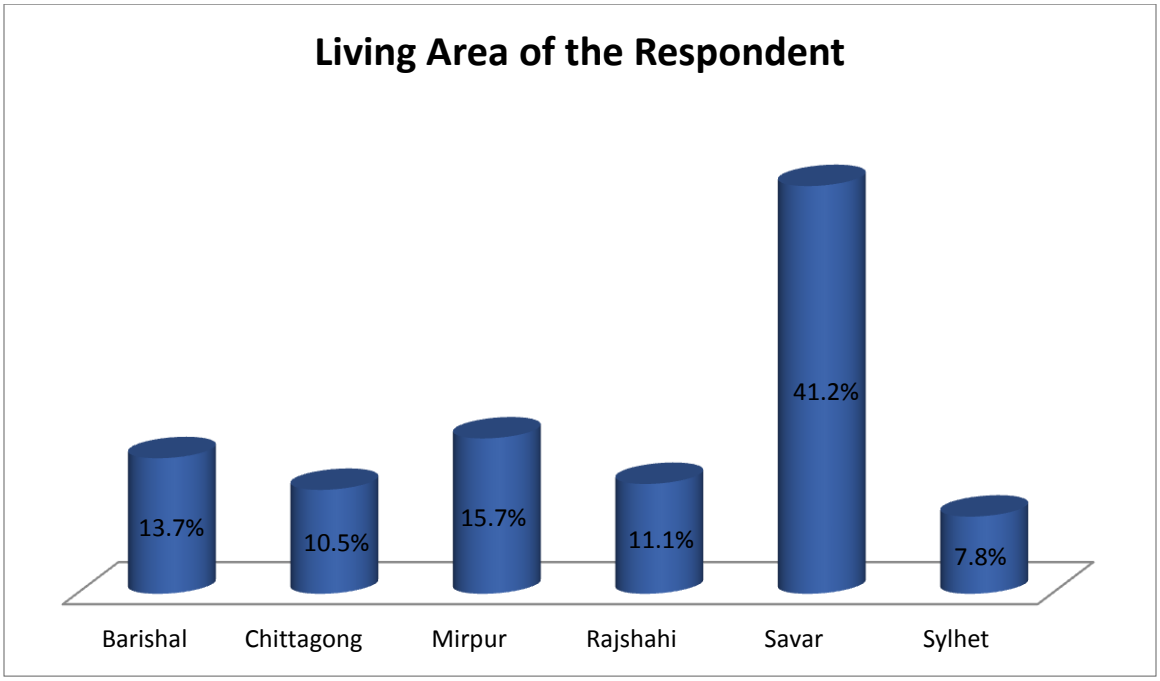


Figure 4.5.1: Distribution of the Respondents by Living Area

4.6 Distributions of the Respondents According to their Living Area and Monthly Income

The correspondent table shows that, among the participants, about top income group showing in living area Barishal is 0.7% (n=1), Chittagong is 2.0% (n=3), Mirpur is 3.3% (n=5), Rajshahi is 2.6% (n=4), Savar is 5.9% (n=9) and Sylhet is 0.7% (n=1). From middle income group showing in living area Barishal is 7.8% (n=12), Chittagong is 3.9% (n=6), Mirpur is 9.2% (n=14), Rajshahi is 3.9% (n=6), Savar is 21.6% (n=33) and Sylhet is 1.3% (n=2). From bottom income group showing in living area Barishal is 5.2% (n=8), Chittagong is 4.6% (n=7), Mirpur is 3.3% (n=5), Rajshahi is 4.6% (n=7), Savar is 13.7% (n=21) and Sylhet is 5.9% (n=9). According to the distribution most of the respondents are from Savar.

Table 4.6.1: Distributions of the Respondents According to their Living Area and Monthly Income

Living Area	Monthly Income of Parent							
	Top Income Group		Middle Income Group		Bottom Income Group		Total	
	N	%	N	%	N	%	N	%
Barishal	1	0.7	12	7.8	8	5.2	21	13.7
Chittagong	3	2.0	6	3.9	7	4.6	16	10.5
Mirpur	5	3.3	14	9.2	5	3.3	24	15.7
Rajshahi	4	2.6	6	3.9	7	4.6	17	11.1
Savar	9	5.9	33	21.6	21	13.7	63	41.2
Sylhet	1	0.7	2	1.3	9	5.9	12	7.8
Total	23	15.0	73	47.7	57	37.3	153	100.0

4.7 Demographic Information of Children with Autism Spectrum Disorder (ASD)

Table show the demographic information of the children with ASD. Study group children had a mean age of 6.44 years and a standard deviation of 2.042, and their age range from 3 to 10 years with male predominate 56.9%. 78 (51.0%) children with ASD lie between 3 and 6 years age group.

Table 4.7.1: Demographic Information of Children with Autism Spectrum Disorder (ASD)

Children with Autism Spectrum Disorder (ASD)	n (%)
Age (years)	6.44 ±2.042 (3-10)
Age category of children with ASD	
3 Years to 6Years	78 (51.0)
7 Years to10 Years	75 (49.0)
Gender of the children with ASD	
Male	87 (56.9)
Female	66 (43.1)

4.8 Distribution of children with ASD according to their gender and living area

In this figure shows that, most of the ASD children both male and female come from the living area Savar. 20.9% male ASD children & 20.3% female ASD children come from the Savar region.

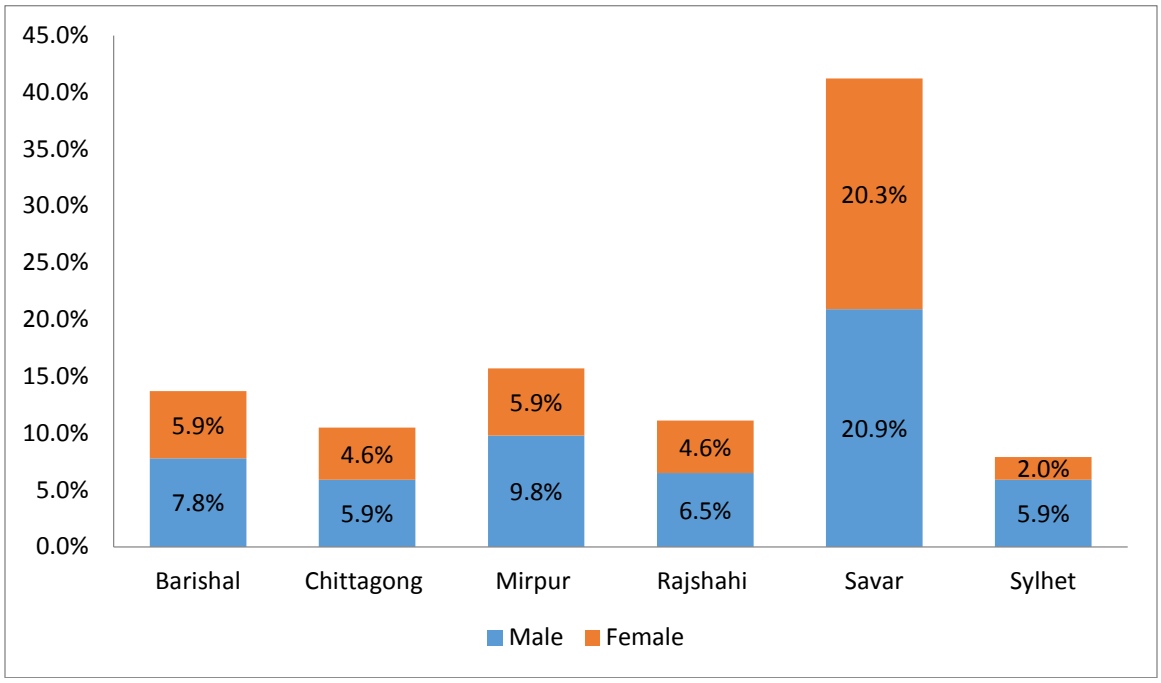


Figure 4.8.1: Distribution of children with ASD according to their gender and living area

4.9 Descriptive Statistics of Respondents Physical Health by WHOQOL-BREF

From the total participant 153 for physical health of pain and discomfort showed that medium level 46% (n=71), poor level 12.4% (n=19), good level 0.7% (n=1). For energy and fatigue showed that medium level 78% (n=78), poor level 1.3% (n=2), good level 2.6% (n=4). For sleep and rest showed that medium level 30.1% (n=46), poor level 6.5% (n=10), good level 4.6% (n=7). In dependence on medication showed that medium level 52.3% (n=80), poor level 3.3% (n=5), good level 5.2% (n=8). The mobility showed that medium level 45.1% (n=69), poor level 3.9% (n=3), good level 3.9% (n=6). For the activities of daily living showed that medium level 38.6% (n=59), poor level 3.9% (n=6), good level 5.2% (n=8). And working capacity foe the participant showed that medium level 37.9% (n=58), poor level 5.9% (n=8), good level 3.9% (n=6).

Table 4.9.1: Descriptive Statistics of Respondents Physical Health by WHOQOL-BREF

Physical Health	1 Poor QOL	2	3 Medium QOL	4	5 Good QOL	Total
Pain and discomfort	19(12.4)	39 (25.5)	71(46.4)	23(15.0)	1(0.7)	153(100)
Energy and fatigue	2(1.3)	35(22.9)	78(51.0)	34(22.2)	4(2.6)	153(100)
Sleep and rest	10(6.5)	48(31.4)	46(30.1)	42(27.5)	7(4.6)	153(100)
Dependence on medication	5(3.3)	34(22.2)	80(52.3)	26(17.0)	8(5.2)	153(100)
Mobility	6(3.9)	23(15.0)	69(45.1)	49(32.0)	6(3.9)	153(100)
Activities of daily living	6(3.9)	32(20.9)	59(38.6)	48(31.4)	8(5.2)	153(100)
Working capacity	8(5.9)	23(15.0)	58(37.9)	57(37.3)	6(3.9)	153(100)

4.10 Descriptive Statistics of Respondents Psychological Domain by WHOQOL-BREF

This table indicated that the respondent psychological health, for the positive feeling is showed good levels 1.3% (n=2), medium level are 49% (n=75) and poor level 0.7% (n=1). For the negative feelings showed that good levels are 19.6% (n=30), medium level are 37.3% (n=57). On the other hand self-esteem showed that good levels are 7.2% (n=11), medium level 39.2% (n=60) and poor levels are 5.2% (n=8). For the thinking learning, memory and concentration showed that good levels are 0.7% (n=1), medium level 45.8% (n=70) and poor levels are 0.7% (n=1). In the body image showed that good levels are 3.9% (n=6), medium level 51.6% (n=79) and poor levels are 2% (n=3).

Table 4.10.1: Descriptive Statistics of Respondents Psychological Domain by WHOQOL-BREF

Psychological	1 Poor QOL	2	3 Medium QOL	4	5 Good QOL	Total
Positive feelings	1(0.7)	48(31.4)	75(49.0)	27(17.6)	2(1.3)	153(100)
Negative feelings	0(0)	13(8.5)	57(37.3)	53(34.6)	30(19.6)	153(100)
Self-esteem	8(5.2)	28(18.3)	60(39.2)	46(30.1)	11(7.2)	153(100)
Thinking learning, memory and concentration	1(0.7)	42(27.5)	70(45.8)	39(25.5)	1(0.7)	153(100)
Body image	3(2.0)	21(13.7)	79(51.6)	44(28.8)	6(3.9)	153(100)

4.11 Descriptive Statistics of Respondents Social relationships Domain by WHOQOL-BREF

In this table showed that the descriptive statistics of respondents social relationship. For the personal relations showed that good levels are 7.8% (n=12), medium level 31.4% (n=48) and poor levels are 4.6% (n=7). On the other hand sex showed that good levels are 7.2% (n=11), medium level 29.4% (n=45), and poor levels are 1.3% (n=2). For the practical social support showed that good levels are 3.3% (n=5), medium level 32% (n=49) and poor levels are 5.2% (n=8).

Table 4.11.1: Descriptive Statistics of Respondents Social Relationships Domain by WHOQOL-BREF

Social relationships	1 Poor QOL	2	3 Medium QOL	4	5 Good QOL	Total
Personal relations	7(4.6)	35(22.9)	48(31.4)	51(33.3)	12(7.8)	153(100)
Sex	2(1.3)	24(15.7)	45(29.4)	71(46.4)	11(7.2)	153(100)
Practical social support	8(5.2)	39(25.5)	49(32.0)	52(34.0)	5(3.3)	153(100)

4.12 Descriptive Statistics of Respondents Environment Domain by WHOQOL-BREF

The table showed that the descriptive statistics of respondent environment domain. For the financial resources showed that good levels are 3.9% (n=6), medium level 46.4% (n=71) and poor levels are 13.1% (n=20). Information and skills showed that good levels are 5.9% (n=9), medium level 45.8% (n=70) and poor levels are 4.6% (n=7). Recreation and leisure showed that good levels are 5.9% (n=9), medium level 34% (n=52) and poor levels are 9.2% (n=14). Home environment showed that good levels are 3.9% (n=6), medium level 31.4% (n=48) and poor levels are 4.6% (n=7). Access to health and social care showed that good levels are 4.6% (n=7), medium level 29.4% (n=45) and poor levels are 5.2% (n=8). On the other hand physical safety and security that good levels are 2% (n=3), medium level 46.4% (n=41) and poor levels are 2% (n=3). For the physical environment showed that good levels are 2.6% (n=4), medium level 42.5% (n=65) and poor levels are 4.6% (n=7). Otherwise transport showed that good levels are 1.3% (n=2), medium level 27.5% (n=42) and poor levels are 9.8% (n=15).

Table 4.12.1: Descriptive Statistics of Respondents Environment Domain by WHOQOL-BREF

Environment	1 Poor QOL	2	3 Medium QOL	4	5 Good QOL	Total
Financial resources	20(13.1)	27(17.6)	71(46.4)	29(19.0)	6(3.9)	153(100)
Information and skills	7(4.6)	41(26.8)	70(45.8)	26(17.0)	9(5.9)	153(100)
Recreation and leisure	14(9.2)	54(35.3)	52(34.0)	24(15.7)	9(5.9)	153(100)
Home environment	7(4.6)	37(24.2)	48(31.4)	5(35.9)	6(3.9)	153(100)
Access to health and social care	8(5.2)	39(25.5)	45(29.4)	54(35.3)	7(4.6)	153(100)
Physical safety and security	3(2.0)	47(30.7)	41(46.4)	29(19.0)	3(2.0)	153(100)
Physical environment	7(4.6)	45(29.4)	65(42.5)	32(20.9)	4(2.6)	153(100)
Transport	15(9.8)	37(24.2)	42(27.5)	57(37.3)	2(1.3)	153(100)

4.13 Association between Children with ASD's Social Behaviors with Respondents Physical Health

According to the association between children with ASD's complaint behavior with respondent physical health the p- value is 0.239, which is more than 0.05, and it was not significant. On the other hand association between children with ASD adaptive social with respondent physical health the p- value is 0.038, which is less than 0.05, and it was significant. So we can conclude that there was no association ASD children's complaint behavior with parent's physical health.

Table 4.13.1: Association between Children with ASD's Social Behaviors with Respondent Physical Health

	Physical Health		
Social behavior	**Chi-square test value**	**df**	**P value**
Complaint/calm	1.411	1	0.239
Adaptive social	1.039	1	0.038

4.14 Association between Children with ASD's problem Behaviors with Respondents Physical Health

In this table shows that all the characteristics of children with ASD problem behavior like conduct problem, anxious, hyperactive, stereotypic and self isolated are highly significant with respondent physical health (significant & p value less than 0.05). This means children with ASDs problem behavior with parents physical health has higher significant association.

Table 4.14.1: Association between Children with ASD's problem Behaviors with Respondents Physical Health

	Physical Health		
Problem Behavior	**Chi-square test value**	**df**	**P value**
Conduct Problem	5.381	1	0.000**
Insecure /Anxious	4.729	1	0.000**
Hyperactive	3.760	1	0.000**
Self-Injury/Stereotypic	3.188	1	0.000**
Self-Isolated /Ritualistic	3.182	1	0.000**
Overly Sensitive	1.934	1	0.010

4.15 Association between Children with ASD's Social Behaviors with Respondents Psychological Health

The association between Children with ASD complaint behaviors with respondent psychological health the p- value was 0.589 which was more than 0.05, and it was not significant. On the other hand association between Children with ASD adaptive social with respondent psychological health the p- value is 0.005 which is less than 0.05, and it was significant.

Table 4.15.1: Association between Children with ASD's Social Behaviors with Respondents Psychological Health

	Psychological Health		
Social Behaviors	**Chi-square test value**	**df**	**P value**
Complaint/calm	1.258	1	0.589
Adaptive social	1.169	1	0.005

4.16 Association between Children with ASD problem Behaviors with Respondents Psychological Health

The sub-tasks of problem behavior for children with ASD's are conduct problem, anxious, and self isolated which are highly significant with respondent psychological health because all the p values are 0.000**. But self-injury and overly sensitive (p>0.05) are not significant with the respondent psychological health.

Table 4.16.1: Association between Children with ASD problem Behaviors with Respondents Psychological Health

	Psychological Health		
Problem behavior	**Chi-square test value**	**df**	**P value**
Conduct Problem	5.153	1	0.000**
Insecure /Anxious	5.243	1	0.000**
Hyperactive	3.105	1	0.001
Self-Injury/Stereotypic	2.270	1	0.092
Self-Isolated /Ritualistic	2.905	1	0.000**
Overly Sensitive	1.721	1	0.104

4.17 Association between Children with ASD's Social Behaviors with Respondents Social Relationships

The chi-test result showed that adaptive social behaviors is associated significantly ($p<0.05$) with respondent's social relationships. On the other hand there was no impact on the complaint behavior with the respondent's social relationships.

Table 4.17.1: Association between Children with ASD's Social Behaviors with Respondents Social Relationships

	Social Relationships		
Social behaviors	**Chi-square test value**	**df**	**p-value**
Complaint/calm	1.614	1	0.139
Adaptive social	1.363	1	0.001

4.18 Association between Children with ASD's problem Behaviors with Respondents Social Relationships

Table showed that children with ASD's problem behaviors all sub-tasks were significantly associated with respondent social relationships. All those p values were less than 0.05. So we can conclude that children with ASD's problem behavior with parents' social behavior have significant association.

Table 4.18.1: Association between Children with ASD's problem Behaviors with Respondents Social Relationships

	Social Relationships		
Problem behavior	**Chi-square test value**	**df**	**p-value**
Conduct Problem	5.827	1	0.000**
Insecure /Anxious	5.614	1	0.000**
Hyperactive	3.282	1	0.004
Self-Injury/Stereotypic	2.690	1	0.014
Self-Isolated /Ritualistic	2.783	1	0.002
Overly Sensitive	2.271	1	0.001

4.19 Association between Children with ASD's Social Behaviors with Respondents Environment

The chi-test result showed that adaptive social behaviors was associated significantly ($p<0.05$) with respondent's environment. On the other hand there were there is no impact on the complaint behavior with the respondents environment.

Table 4.19.1: Association between Children with ASD's Social Behaviors with Respondents Environment

Environment

Social behavior	Chi-square test value	df	p-value
Complaint/calm	2.008	1	0.162
Adaptive social	1.402	1	0.037

4.20 Association between Children with ASD's Problem Behaviors with Respondents Environment

The table showed that most of the association between children with ASD problem behaviors with respondent environment was highly significant because the p value is 0.000**. Only the self-injury (p>0.05) is not significant. We may conclude that there were no impact associations on the parent's environment domain with children's self-injury behavior.

Table 4.20.1: Association between Children with ASD's Problem Behaviors with Respondents Environment

	Environment		
Problem behavior	**Chi-square test value**	**df**	**p-value**
Conduct Problem	7.040	1	0.000**
Insecure /Anxious	6.170	1	0.000**
Hyperactive	4.481	1	0.000**
Self-Injury/Stereotypic	3.117	1	0.093
Self-Isolated /Ritualistic	3.749	1	0.000**
Overly Sensitive	3.165	1	0.000**

4.21 Correlation between Children with ASD's Social Behaviors with Respondents Physical Health

This table shows that there is a negative weak correlation between age category from 22 years to 36 years of male (father) respondent and the children with ASD's complaint/physical health (r_s = - 0.033). Children with ASD's adaptive social/physical health have the positive weak correlation with male respondents age category (22 years to 36 years) as because (r_s = 0.037). Besides this there is a positive weak correlation with the age category (22 years to 36 years) of the female (mother) respondents and ASD's both the complaint/physical health (r_s =0 .028) and adaptive social behavior (r_s = 0.065) as because both of these r_s value is <0.25. In between the age category 37 years to 51 years of male (father) respondent, there is a positive weak correlation with ASD's complaint/physical health (r_s<0.25) also have the positive intermediate correlation with ASD's adaptive social/physical health (r_s>0.25). On the other hand age category from 37 years to 51 years of female (mother) respondents; there is a negative weak correlation with ASD's complaint/physical health (r_s = -0.101) and also have the positive weak correlation with the ASD's adaptive social/physical health (r_s = 0.057).

Table 4.21.1: Correlation between Children with ASD's Social Behaviors with Respondents Physical Health

Age category	Gender	Spearman Rank Correlation	Complaint/Physical Health	Adaptive social/Physical Health
22 years to 36 years	Male (Father)	Correlation Coefficient	-.033	.037
		Sig. (2-tailed)	.890	.876
		N	20	20
	Female (Mother)	Correlation Coefficient	.028	.065
		Sig. (2-tailed)	.820	.602
		N	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.127	.352
		Sig. (2-tailed)	.412	.019
		N	44	44
	Female (Mother)	Correlation Coefficient	-.101	.057
		Sig. (2-tailed)	.653	.803
		N	22	22
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

4.22 Correlation between Children with ASD's Social Behaviors with Respondents Psychological Health

In this table, both the age category 22 years to 36 years and 37 years to 51 years of male (father) respondent's psychological health have positive intermediate correlation with ASD children's social behavior except adaptive social/psychological health in between the age limit 22 years to 36 years, here positive weak correlation since $r_s = 0.168$. All others r_s value is greater than 0.25. Such as complaint/psychological health where $r_s = 0.350$ and $r_s = 0.371$ respectively with the age category 22 years to 36 years and 37 years to 51 years.

From 37 years to 51 years of male (father) respondent's psychological health have positive intermediate correlation with adaptive social/psychological health ($r_s = 0.441$). On the other hand both the age category 22 years to 36 years and 37 years to 51 years of female (mother) respondent's psychological health have negative weak correlation with Children with ASD's both complaint/psychological health and adaptive social/physical health ($r_s<-0.25$).

Table 4.22.1: Correlation between Children with ASD's Social Behaviors with Respondents Psychological Health

Age category	Gender	Spearman Rank Correlation	Complaint/Psychological Health	Adaptive social/Psychological Health
22 years to 36 years	Male (Father)	Correlation Coefficient	.350	.168
		Sig. (2-tailed)	.130	.480
		N	20	20
	Female (Mother)	Correlation Coefficient	-.011	-.038
		Sig. (2-tailed)	.929	.760
		N	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.371	.441
		Sig. (2-tailed)	.013	.003
		N	44	44
	Female (Mother)	Correlation Coefficient	-.248	-.220
		Sig. (2-tailed)	.265	.325
		N	22	22
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

4.23 Correlation between Children with ASD's Social Behaviors with Respondents Social Domain

The table shows that age category 22 years to 36 years of male (father) respondent's social domain has positive intermediate correlation with ASD children's social behavior because both the r_s value is greater than 0.25. Here complaint/social domain's $r_s = 0.380$ and adaptive social/social domain's $r_s = 0.361$.

For mother (female) respondents in between the age category 22 years to 36 years; there is a positive weak correlation and another negative weak correlation with ASD's social behavior respectively with the complaint/social domain ($r_s = 0.044$) and adaptive social/social domain ($r_s = -0.059$).

In between the age category 37 years to 51 years male (father) respondents have the positive weak correlation with the children with ASD's complaint/social domain ($r_s=0.220$) and adaptive social/social domain ($r_s=0.235$).

On the other side there is negative weak correlation with the female (mother) respondent as because both of the $r_s<-0.235$.

Table 4.23.1: Correlation between Children with ASD's Social Behaviors with Respondents Social Domain

Age category	Gender	Spearman Rank Correlation	Complaint/Social domain	Adaptive social/ Social domain
22 years to 36 years	Male (Father)	Correlation Coefficient	.380	.361
		Sig. (2-tailed)	.099	.118
		N	20	20
	Female (Mother)	Correlation Coefficient	.044	-.059
		Sig. (2-tailed)	.722	.636
		N	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.220	.235
		Sig. (2-tailed)	.151	.125
		N	44	44
	Female (Mother)	Correlation Coefficient	-.213	-.138
		Sig. (2-tailed)	.342	.540
		N	22	22
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

4.24 Correlation between Children with ASD's Social Behaviors with Respondents Environment Domain

From this table in between the age category 22 years to 36 years of male (father) respondent's environment domain have the negative weak correlation with the children with ASD's social behavior. Here complaint/environment domain r_s =- 0.080 and adaptive social/environment domain r_s =- 0.057. For female in this age category there is positive weak correlation with ASD children's social behavior because both the r_s value is less than 0.25. Here complaint/environment domain r_s = 0.040 and adaptive social/environment domain r_s =0.025.

For the age category 37 years to 51 years male (father) respondents there is a positive weak correlation and another positive intermediate correlation with ASD's social behavior respectively with the complaint/environment domain r_s = 0.194 and adaptive social/environment domain r_s =0.405.

This table for female respondent showed negative intermediate correlation with ASD children's social behavior. Here complaint/environment domain r_s = -0.444 and adaptive social/environment domain r_s = -0.378.

We can conclude that age category 22 years to 36 years of male and female respondent's environment domain has been reversed with the 37 years to 51 years of male and female respondent.

Table 4.24.1: Correlation between Children with ASD's Social Behavior with Respondent Environment Domain

Age category	Gender	Spearman Rank Correlation	Complaint/Environment domain	Adaptive social/ Environment domain
22 years to 36 years	Male (Father)	Correlation Coefficient	-.080	-.057
		Sig. (2-tailed)	.736	.813
		N	20	20
	Female (Mother)	Correlation Coefficient	.040	.025
		Sig. (2-tailed)	.748	.839
		N	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.194	.405
		Sig. (2-tailed)	.207	.006
		N	44	44
	Female (Mother)	Correlation Coefficient	-.444	-.378
		Sig. (2-tailed)	.038	.083
		N	22	22
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

4.25 Correlation between Children with ASD's Problem Behaviors with Respondents Physical Health

Spearman's rank correlation is used to examine the correlation among the children with ASD's problem behavior and respondent physical health with age categories and gender. In this table the age category of male (father) from 22 years to 36 years; there are positive intermediate correlation with conduct problem/physical health (r_s=0.546) and insecure /physical health (r_s=0.614). Others problem behaviors are positive weak correlation with male respondent's physical health like hyperactive/physical health r_s=0.233, self-injury/physical health r_s=0.062, self-isolated/physical health r_s=0.173 and overly sensitive/physical health r_s=0.142.

For female 22-36 years age category, there are weak correlation with conduct problem/physical health (r_s=0.172), insecure /physical health (r_s=0.212), hyperactive/physical health (r_s=0.044) and overly sensitive/physical health (r_s=0.150). There are negative weak correlation with the self-injury/physical health (r_s=-0.060) and self-isolated/physical health (r_s=-0.052).

In between the age category 37 years to 51 years male (father) respondent have positive weak correlation with the conduct problem/physical health (r_s=0.084), insecure/physical health (r_s=0.126), hyperactive/physical health (r_s=0.084) and self-injury/physical health (r_s=0.031). Self-isolated/physical health (r_s=-0.058) and overly sensitive/physical health (r_s=-0.037); those two component are negative weak correlation with ASD children's problem behavior.

For female 37-51 years age category there are positive weak correlation with conduct problem/physical health (r_s=0.051), insecure/physical health (r_s=0.198), hyperactive/physical health (r_s=0.027) and positive intermediate correlation with self-injury/physical health (r_s=0.280). Both self-isolated/physical health (r_s=-0.004) and overly sensitive/physical health (r_s=-0.121); those two component are negative weak correlation with ASD children's problem behavior.

Table 4.25.1: Correlation between Children with ASD's Problem Behaviors with Respondents Physical Health

Age category	Gender	Spearman Rank Correlation	Conduct Problem/Physical Health	Insecure /Physical Health	Hyperactive /Physical Health	Self-Injury/Physical Health	Self-Isolated /Physical Health	Overly Sensitive/Physical Health
22 years to 36 years	Male (Father)	Correlation Coefficient	.546	.614	.233	.062	.173	.142
		Sig. (2-tailed)	.013	.004	.323	.797	.466	.550
		N	20	20	20	20	20	20
	Female (Mother)	Correlation Coefficient	.172	.212	.044	-.060	-.052	.150
		Sig. (2-tailed)	.164	.085	.724	.628	.674	.227
		N	67	67	67	67	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.084	.126	.084	.031	-.058	-.037
		Sig. (2-tailed)	.586	.415	.588	.843	.709	.812
		N	44	44	44	44	44	44
	Female (Mother)	Correlation Coefficient	.051	.198	.027	.280	-.004	-.121
		Sig. (2-tailed)	.821	.378	.906	.207	.986	.593
		N	22	22	22	22	22	22
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

4.26 Correlation between Children with ASD's Problem Behaviors with Respondents Psychological Health

Spearman's rank correlation is used to examine the correlation among the children with ASD's problem behavior and respondent psychological health with age categories and gender. In this table the age category of male (father) from 22-36 years; there are positive intermediate correlation with conduct problem/psychological health (r_s=0.336) and insecure/psychological health (r_s=0.534).

Others problem behaviors are negative weak correlation with male respondent's psychological health like hyperactive/psychological health (r_s=-0.203), self-injury/psychological health (r_s=-0.215), self-isolated/psychological health (r_s=-0.122) and overly sensitive/psychological health (r_s=-0.114).

For female 22-36 years age category, there are positive weak correlation with conduct problem/psychological health (r_s=0.185), hyperactive/psychological health (r_s=0.037), self-injury/psychological health (r_s=0.000) and overly sensitive/psychological health (r_s=0.151). There are negative weak correlation with self-isolated/ psychological health (r_s=-0.011). Also have the positive intermediate correlation with insecure/psychological health (r_s=0.261).

In between the age category 37 years to 51 years male (father) respondent have positive intermediate correlation with ASD children's problem behavior like the conduct problem/psychological health (r_s=0.262), insecure/psychological health (r_s=0.358).

There are positive weak correlation with hyperactive/psychological health (r_s=0.028), self-injury/psychological health (r_s=0.028), self-isolated/ psychological health (r_s=0.026) and overly sensitive/psychological health (r_s=0.023).

From 37-51 years of age category female psychological health; all those component's values are less than 0.25 and all are negative. So there are negative intermediate correlations with ASD children's problem behavior.

Table 4.26.1: Correlation between Children with ASD's Problem Behaviors with Respondents Psychological Health

Age category	Gender	Spearman Rank Correlation	Conduct Problem/Psychological Health	Insecure / Psychological Health	Hyperactive /Psychological Health	Self-Injury/ Psychological Health	Self-Isolated/ Psychological Health	Overly Sensitive/ Psychological Health
22 years to 36 years	Male (Father)	Correlation Coefficient	.336	.534	-.203	-.215	-.122	-.114
		Sig. (2-tailed)	.147	.015	.391	.362	.610	.634
		N	20	20	20	20	20	20
	Female (Mother)	Correlation Coefficient	.185	.261	.037	.000	-.011	.151
		Sig. (2-tailed)	.133	.033	.766	.994	.928	.223
		N	67	67	67	67	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.262	.358	.028	.028	.026	.023
		Sig. (2-tailed)	.086	.017	.855	.855	.869	.885
		N	44	44	44	44	44	44
	Female (Mother)	Correlation Coefficient	-.295	-.271	-.479*	-.319	-.424	-.414
		Sig. (2-tailed)	.183	.222	.024	.148	.049	.055
		N	22	22	22	22	22	22
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

4.27 Correlation between Children with ASD's Problem Behaviors with Respondents Social Domain

Spearman's rank correlation is used to examine the correlation among the children with ASD's problem behavior and respondent social domain with age categories and gender. In this table the age category of male (father) from 22-36 years; there are positive intermediate correlation with conduct problem/ social domain (r_s=0.591), insecure/ social domain (r_s=0.712) and hyperactive/social domain (r_s=0.293). Negative weak correlation with male respondent's self-injury/social domain (r_s=-0.002). Positive weak correlation with self-isolated/social domain (r_s=0.053) and overly sensitive/social domain (r_s=0.151).

For female in this age category; there are positive intermediate correlation with conduct problem/ social domain (r_s=0.311) and insecure/ social domain (r_s=0.330). Without those two domains all others have the positive weak correlation with ASD children's problem behavior. Such as hyperactive/social domain (r_s=0.168), self-injury/social domain (r_s=0.169), self-isolated/social domain (r_s=0.100) and overly sensitive/social domain (r_s=0.243).

From the age category 22-36 years for male respondent social domain have the positive weak correlation with ASD children's problem behavior, as because all these domain's r_s values are less than 0.25. On other hand in this age category for female respondent; positive weak correlation with ASD children's problem behavior. Such as conduct problem/ social domain (r_s=0.206), hyperactive/social domain (r_s=0.062) and overly sensitive/social domain (r_s=0.049).

Positive intermediate correlation with insecure/ social domain (r_s=0.286) and self-injury/social domain (r_s=0.352). There also have a negative weak correlation with self-isolated/social domain (r_s=-0.018).

Table 4.27.1: Correlation between Children with ASD's Problem Behaviors with Respondents Social Domain

Age category	Gender	Spearman Rank Correlation	Conduct Problem/Social Domain	Insecure / Social Domain	Hyperactive / Social Domain	Self-Injury/ Social Domain	Self-Isolated/ Social Domain	Overly Sensitive/ Social Domain
22 years to 36 years	Male (Father)	Correlation Coefficient	.591	.712	.293	-.002	.053	.154
		Sig. (2-tailed)	.006	.000	.209	.995	.825	.516
		N	20	20	20	20	20	20
	Female (Mother)	Correlation Coefficient	.311	.330	.168	.169	.100	.243
		Sig. (2-tailed)	.011	.006	.175	.173	.419	.047
		N	67	67	67	67	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.050	.158	.006	.065	.015	.020
		Sig. (2-tailed)	.746	.305	.968	.676	.922	.900
		N	44	44	44	44	44	44
	Female (Mother)	Correlation Coefficient	.206	.286	.062	.352	-.018	.049
		Sig. (2-tailed)	.357	.198	.785	.108	.937	.828
		N	22	22	22	22	22	22
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

4.28 Correlation between Children with ASD's Problem Behaviors with Respondents Environment Domain

Spearman's rank correlation is used to examine the correlation among the children with ASD's problem behavior and respondent environment domain with age categories and gender. In this table the age category of male (father) from 22-36 years; there are positive intermediate correlation with conduct problem/environment domain (r_s=0.349), insecure/environment domain (r_s=0.435). All other component is negative correlation with ASD's problem behavior because r_s are negative value.

In this age limit (22-36) for female there are positive weak correlation between the conduct problem/environment domain (r_s=0.184), insecure/environment domain (r_s=0.189), hyperactive/environment domain (r_s=0.045) and overly sensitive/environment domain (r_s=0.121). Self-injury/environment domain (r_s=-0.044) and self-isolated/environment domain (r_s=-0.041) have the negative correlation.

In between the age category 37-51 years male respondents all domains are positively correlated with the ASD children's problem behavior.

On other hand for female age category 37-51 years; all the domain value is negative except conduct problem/environment domain (r_s=0.037). So there is negative correlation with ASD children's problem behavior (as r_s negative value) except conduct problem/environment domain.

Table 4.28.1: Correlation between Children with ASD's Problem Behaviors with Respondents Environment Domain

Age category	Gender	Spearman Rank Correlation	Conduct Problem/Environment Domain	Insecure / Environment Domain	Hyperactive /Environment Domain	Self-Injury/ Environment Domain	Self-Isolated/ Environment Domain	Overly Sensitive/ Environment Domain
22 years to 36 years	Male (Father)	Correlation Coefficient	.349	.435	-.031	-.310	-.159	-.095
		Sig. (2-tailed)	.131	.055	.896	.184	.504	.690
		N	20	20	20	20	20	20
	Female (Mother)	Correlation Coefficient	.184	.189	.045	-.044	-.041	.121
		Sig. (2-tailed)	.136	.126	.718	.722	.743	.328
		N	67	67	67	67	67	67
37 years to 51 years	Male (Father)	Correlation Coefficient	.374*	.436**	.240	.320*	.124	.297
		Sig. (2-tailed)	.012	.003	.117	.034	.424	.050
		N	44	44	44	44	44	44
	Female (Mother)	Correlation Coefficient	.037	-.077	-.438*	-.253	-.267	-.255
		Sig. (2-tailed)	.871	.734	.041	.256	.230	.252
		N	22	22	22	22	22	22
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

CHAPTER V DISCUSSION

5.1 Discussion

This study shows that total 153 parents of children with autism spectrum disorders respondents participated in this study in which 56.9% parents of 22-36 years age, 43.1% of 37-51years age and also mean ± SD (35.37±6.828). From the patents 41.8% are father and 58.2% are mother. Here 41.8% parents are illiterate, 11.8% completed primary education, 17.0% S.S.C, 25.3% H.S.C and graduate, and post graduate completed 9.8%. Most of the parents (44.4%) are housewife and 30.1% service holder, 12.4% business man, 11.8% day labor/worker and 1.3% others. Most of the parents are middle income group (47.7%), 37.3% bottom income group and 15.0% top income group. The average age and standard deviation of children with ASD is (6.44 ±2.042) and from these age male child are 56.9% and 43.1 are female. The age category of the children with ASD 3 years to 6 years is 51.0% and 7 years to 10 years is 49.0%.

Perumal et al, 2014 showed that parents of autism spectrum disorder had shown significant impairment ($p<0.001$) than the other two groups. Children with autism spectrum disorder have problem in social interaction including expressing affection towards parents and often these parents are denied of the fundamental rewards of parenthood. Many parents of children with autism spectrum disorder tried to avoid social situations like meeting friends and relatives to avoid embarrassments, and some felt stigmatized in public situations due to the challenging behaviour shown by their children, in addition to this some parents also found lack of or absence of spouse support. Parent of

children with autism spectrum disorder showed significant impairment in this domain ($p<0.001$) compared to control group and physically disabled group.

In the study of America, Snyder, et al. (2002) stated that, although the NCBRF are changes on the Conduct Problem subscale were highly significant at end point and there was a significant effect from the first week onward ($p < .001$). The decline in symptom ratings from baseline for the placebo group was 6.8 (20.9%), whereas the reduction for the risperidone group was 15.8 (47.3%). In addition, the Adaptive Social subscale from the Social Competence section showed significant improvement, and all except the Self-Injury and Overly Sensitive subscales showed a statistically significant advantage for the risperidone-treated group.

In this study found that parents of children with autism are present in significant association between all the four domains of quality of life- physical domain, psychological domain, social domain and environment domain with all the characteristics of children with ASDs problem behavior as conduct problem, anxious, hyperactive, stereotypic, self isolated and overly sensitive ($p<0.05$). There is no association between the children with ASDs social competence with four domain of quality of life. According to the Perumal et al. 2014 investigated that a study which results suggests of highly significant impairment ($p<0.001$) in the quality of life of parent s of children with autism spectrum disorder than of physical disability or of normal healthy children. The quality of life impairment could be because parents of autism spectrum disorder children experience greater anxiety and tension than parents of non-disabled children. In the present study, it has been found that parents of children with autism showed a significant impairment of

QoL. Forty three percent of the total sample met screening cut-off criteria for at least one anxiety disorder. Higher levels of anxiety on the 20-item CASI scale were associated with higher IQ, the presence of functional language use, and with higher levels of stereotyped behaviors. In children with higher IQ, anxiety was also associated with greater impairment in social reciprocity (Sukhodolsky et al, 2008).

In the other hand another study of Australia, there were showed that the parents/caregivers of a child with an autism spectrum disorder (ASD) was conducted to examine the relationship between ASD characteristics, family functioning and coping strategies, including a child with ASD places considerable stress on the family. In this study also found that these caregivers had healthy self-esteem, although they reported somewhat lower marital happiness, family cohesion and family adaptability than did norm groups. Coping strategies were not significant predictors of these outcome variables which highlight the need for support programmes to target family and relationship variables as well as ASD children and their behaviors', in order to sustain the family unit and improve quality of life for parents and caregivers as well as those children (Higgins, et al, 2005). In contrast with these literatures, along with the current study findings about the relationship among parents of children with autism and behavior disorders experienced statistically and clinically higher levels of parenting stress than parents in the other two groups (Down syndrome and behavior disorder). In this study also found that parents of children with behavior disorders reported that their children presented behavioral difficulties that were statistically and clinically more passionate and numerous than those of all other children. Mothers of children with autism and behavior disorders experienced statistically and clinically higher levels of dysphoria than mothers in the

other two groups, which appeared to be specifically related to the stresses of parenting exceptional children rather than to personal dysfunction.

Spearman's rank correlation is used to examine the correlation among the respondent quality of life with age categories and gender. The age category of male (father) from 22 years to 36 years; there were positive intermediate correlation with physical/social ($r_{s=}0.469$), physical/environment ($r_{s=}0.749$), psychological/social ($r_{s=}0.592$), psychological/environment ($r_{s=}0.413$), social/environment ($r_{s=}0.503$) and also have the positive weak correlation with physical/psychological hence $r_{s=}0.211$ which r_s value is lower than 0.25. On the other hand age category of female (mother) from age 22 years to 36 years; there be a positive strong correlation with the entire component of mother's quality of life. In between the age category 37 years to 51 years male (father) respondents have the positive weak correlation with physical /psychological ($r_{s=}0.216$) and physical /environment ($r_{s=}0.233$). Except these two components all others have the positive intermediate correlation in between male (father) respondent's age category with respondent's quality of life. Besides age category 37 years to 51 years female (mother) respondents have the positive intermediate correlation with the entire component of mother's quality of life. For the female (mother) respondents of physical health showed positive intermediate correlation with social behavior of children with ASD and otherwise male (father) respondents showed that inverse weak correlation.

Both mother and father were showed that the positive correlation between physical health with children's problem behaviors (conduct problem, insecure, hyperactive) on the other hand inverse weak correlation has been showed with self-injury, self isolated and overly

sensitive. According to Donnelly (2015) reported that the parenting context for parents of children with Autism Spectrum Disorders is extremely stressful and is one that creates unique parenting challenges and also indicates that there is a strong correlation between the quality of parenting and children's distress and behavior problems.

22 years to 36 years of ages male respondents showed that the inverse weak correlation between ASDs problem behavior (hyperactive, self-injury, self isolated and overly sensitive) with psychological health another things that positive intermediate correlation has been showed with problem behavior (conduct problem and insecure). For female in this age category showed that positive weak correlation with problem behavior except self-isolated. The age category of 37 years to 51years of the female respondent showed that the inverse intermediate correlation between ASD children's problem behavior with psychological health, whereas male respondents were showed that the positive weak correlation. For the social relationship of both parent showed the positive correlation with problem behavior (conduct problem, insecure, hyperactive and overly sensitive) except self-injury and self –isolated.

About the female respondent of environment domain showed that the inverse correlation among the problem behaviour (hyperactive, insecure, self-injury, self-isolated and overly sensitive) except conduct problem. For the male respondent showed the positive weak correlation with the ASD's problem behavior. One of the study in Riyadh, showed statistically significant differences in the level of quality of life and its domains among the participants due to the impact of severity of disability, where differences were in favor of the mild group. This study also justified in light of the presence of a disabled

child in the family of severe and moderate disability is a source of pressure for the family and preventing them from practicing their activities of daily life, where their care and requirements are different compared to those of mild disability. As well as the needs of the various requirements of the different devices representing a source of psychological pressures, which are reflected at the level of psychological and physical health of the parents, in addition to the extra-financial burden (Asi, 2016). In the other hand another study of Australia, used the Spearman correlations between the four WHOQOL-Bref domains were Physical/Psychological rs=0.64, physical/social rs=0.37, physical/environment rs=0.50; psychological/social rs=0.53, psychological/environment rs=0.59; and social/environment rs=0.45 by examination of the impacts of health conditions or health interventions in different societies and cultures (Hawthorne, et al. 2006).

Lecavalier, et al, (2004) have done a study about the relationship among behavior of ASD and other group and in this study showed that the ASD children had less positive and more problematic behaviors on all subscales. Also showed that only subscale for which there was no significant difference for both parent and teacher ratings were self-injury/stereotypic. At the study conducted by Donnelly, (2015) suggested that parents of children with ASD are at greater risk for a variety mental health and social problems, including: low levels of psychosocial wellbeing, depression, social isolation, vocational problems, difficulties with one's family life. In addition, problem behaviors of the child with ASD and a strained parent-child relationship may have an impact on the entire family system. Through this study, it was concluded that if ASD's problems behavior is increased then respondent quality of life will be decreased.

5.2 Limitations

During the research work it is observed that there has a validation and generalizability related limitation that are given below as-

a. Although used the WHOQOL-BREFF and NCBRF scale to fulfill the purpose of the study but no validation test of NCBRF scale was done focused on Bangladeshi population.
b. The participants was taken from selected area which not generalizable for country perspective.
c. Evaluate the parents quality of life based on their current and temporary living area that is not representing permanent community environment.
d. Also some related article was found but they were from different countries. So it was so difficult to present any information in the context of Bangladesh and also no significant statistics result was included in this study in the basis of Bangladeshi culture.

CHAPTER VI CONCLUSION AND RECOMONDATION

6.1 Conclusion

This study was conducted with the purpose of finding the quality of life of parents of children with autism spectrum disorder and behavioural aspects of children with autism spectrum disorders. The results showed that the level of quality of life among the participants was medium, and the results showed statistically significant of quality of life domain among the participants due to the problem behavior of children with autism spectrum disorder. So in this study has concluded that the children with ASD's behavioral aspects were correlated to the parent's physical health, psychological, social relationships and environmental domain. The quality of life impairment parents of autism spectrum disorder children experience greater anxiety and hyperactivity, insecure and self-injury behavior.

6.2 Recommendations

Despite these limitations, this study contributes an understanding of the levels of quality of life of parents and behavioral aspects of children with ASD. Based on the given limitation of the study here focused on the possible recommendation and further studies regarding the children with ASD are incorporate below—

a. There are many factors that may influence the parent quality of life of children with ASD; however, this study primarily focused on child and behavior (social and problem) related influential factors. Future studies may be focused on identifying other influential factors with its effect on parent quality of children with ASD as well as other disabling condition.
b. The number of the respondent could be increased, the randomization of the sample also need to be considered in future.
c. In further study, living area and nature of challenges or influencing factor should be identified. However according to the different centre of service the nature of influencing factors could be identified.
d. The study could be a mixed type of study, where the therapist and family members have got the chance to express in a qualitative manner.
e. In this study also recommend finding the effectiveness of various social support programs for the parents and their influence on their perception about quality of life.
f. Conducting comparative studies between parents of children with autism spectrum disorder and normal children.

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APPENDIX A

A.01 (Permission Letter of Institutional Review Board)

BANGLADESH HEALTH PROFESSIONS INSTITUTE

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

Ref.

Date: 08/02/2018

CRP-BHPI/IRB/02/18/193

To
Nure Naznin
M.Sc in Rehabilitation Science
Session: 2016-2017, Student ID: 181160058
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of thesis proposal "Quality of life of parents and behavioural aspects of children with ASD" by ethics committee.

Dear Nure Naznin,

Congratulations!
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 22/01/2018 to conduct the above mentioned dissertation with yourself, as the Principal investigator. The Following documents have been reviewed and approved:

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

Since the study involves exploring the quality of life of parents and behavioural aspects of children with ASD and data will be collected from the CRP Savar, Mirpur, Sylhet, Barisal and Chittagong (Pediatric outpatient) through interviewer administered "WHOQOL BREF" and "**THE NISONGER CHILD BEHAVIOR RATING FORM**" that takes 25 to 30 minutes and have no likelihood of any harm to the participants, the members of the ethics committee have approved the study to be conducted in the presented form at the meeting held at 9:00 AM on October 08, 2017 at BHPI.

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,

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

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন ঃ ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স ঃ ৭৭৪৫০৬৯
CRP-Chapain, Savar, Dhaka-1343, Tel : 7745464-5, 7741404, Fax : 7745069, E-mail : contact@crp-bangladesh.org, www.crp-bangladesh.org

A.02 (Application for Review and Ethical Approval from Supervisor**)**

Date: 8th February 2018

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

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

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Professions Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Master's program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, "Quality of life of parents and behavioural aspects of children with ASD" under honorable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar. The purpose of the study is to explore the relationship of quality of life of parents and behavioural aspects of children with ASD (any **instruments / Questionnaire / tests etc**) will be used that will take about 25 to 30 minutes followed by measurements of **THE NISONGER CHILD BEHAVIOR RATING FORM** and Bangla WHOQOL BREF. Related information will be collected from the 10th Feb, 2018. Data collectors will receive informed consents from all participants. Any data collected will be kept confidential.

Therefore I look forward to having your kind approval for the thesis proposal and to start data collection. I also assure you that I will maintain all the requirements for study.

Sincerely yours,

Nure Naznin 08/02/2018
Session: 2016-2017
Student ID: 181160058
Student of M.Sc. in Rehabilitation Science (MRS)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Recommendation from the thesis supervisor:

08/02/18
Md. Obaidul Haque,
Associate Professor and Head of Department of Physiotherapy

Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
BHPI, CRP, Savar

BHPI, CRP, Savar

Attachment: Thesis Proposal including measurement tools and process and procedure for maintaining confidentiality, Questionnaire (English and Bengali version), Information sheet & consent.

A.03 (Permission Letter for Data Collection from Occupational Therapy Dept. CRP, Savar**)**

Permission Letter

Date: 10th February, 2018

To

Head of Department,

Occupational Therapy Dept.

CRP, Savar, Dhaka.

Subject: Application for the permission of data collection for master's thesis at CRP.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, "**Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Occupational Therapy pediatric outpatients of your department. Data will be collected by trained volunteer data collector for 6 weeks from 10th February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Naznin

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

She may allow to collect the data.

11.02.18

Md. Julker Nayan
Junior Consultant & Head
Occupational Therapy Department
CRP, Savar, Dhaka-1343

Copy to: Pediatric Unit, CRP-Savar

A.04 (Permission Letter for Data Collection from Speech & Language Therapy Dept. CRP, Mirpur)

Permission Letter

Date: 05.02.2018

To

Geetashree Das

Incharge,

Department of Speech & Language Therapy

CPR- Mirpur

Mirpur-14, Dhaka

Subject: Application for the permission of data collection for master's thesis at SLT Dept. and paediatric unit, CRP Mirpur Centre.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, **"Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Occupational Therapy pediatric outpatients of your department. Data will be collected by trained volunteer data collector for 6 weeks from 10th February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Nazni

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

Allowed for data collection
Geeta
05.02.2018

A.05 (Permission Letter for Data Collection from CRP Sylhet)

Permission Letter

Date: 08.02.2018

To

Center Manager,

CRP Moulvbazar,

Sylhet

Subject: Application for the permission of data collection for master's thesis at CRP Sub Centre, Moulvbazar.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, **"Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Occupational Therapy pediatric outpatients of your department. Data will be collected by trained volunteer data collector for 6 weeks from 10th February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Naznin

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

Approved

08.02.2018

A.06 (Permission Letter for Data Collection from Afsar Hossain CRP, Rajshahi)

Permission Letter

Date: 08.02.2018

To

Center Manager,

Afsar Hossain CRP,

Rajshahi

Subject: Application for the permission of data collection for master's thesis at CRP Sub Centre, Rajshahi.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, **"Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Occupational Therapy pediatric outpatients of your department. Data will be collected by trained volunteer data collector for 6 weeks from 10th February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Naznin

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

Permission has given for data collection

08.02.2018

A.07 (Permission Letter for Data Collection from AK Khan CRP, Chittagong)

Permission Letter

Date: 28th January, 2018

To

In-charge,

Department of Speech & Language Therapy

AK Khan CRP.

Chittagong.

Subject: Application for the permission of data collection for master's thesis at CRP Sub Centre.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, **"Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Speech & Language Therapy pediatric outpatients of your centre department. Data will be collected by trained volunteer data collector for 6 weeks from 3rd February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Naznin

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

Approved
Marked
07.02.2018

A.08 (Permission Letter for Data Collection from CRP Barishal)

Permission Letter

Date: 7th February, 2018

To

In-charge

Department of Speech & Language Therapy

Barishal.

Subject: Application for the permission of data collection for master's thesis at CRP Sub Centre.

Sir,

With due respect I would like to draw your kind attention that I am a student of M.Sc. in Rehabilitation Science program at Bangladesh Health Profession Institute (BHPI)- an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-year full-time course under the project of "Regional Inter-professional Masters program in Rehabilitation Science" funded by SAARC Development Fund (SDF). I have to conduct a thesis entitled, **"Quality of life of parents and behavioural aspects of children with ASD"** under honourable supervisor, Md. Obaidul Haque, Associate Professor and head of Department of Physiotherapy, BHPI, CRP, Savar.

Data collection will require the Occupational Therapy pediatric outpatients of your department. Data will be collected by trained volunteer data collector for 6 weeks from 10th February 2018 to 15th March 2018. Data collection tool will be used that will take about 25-30 minutes. Data collectors will receive informed consents from all participants. Any data will be kept confidential. Ethical approval is received from the Institutional Review Board (IBR) of Bangladesh Health Professions Institute (BHPI).

Therefore I look forward to having your permission for data collection at your sub centre. I am anticipating your kind cooperation in this regard.

Sincerely yours,

Nure Naznin

Student of M.Sc. in Rehabilitation Science (3rd Batch)

Bangladesh Health Profession Institute (BHPI),

CRP, Savar, Dhaka-1343, Bangladesh.

Cell: 01718416292, email- nipaslt@gmail.com

Permission given for data collection.
Sultana (CSLT)
Barisal, CRP

A.09 (Research Information Sheet)

Research Information Sheet

Title: Quality of life of parents and behavioural aspects of children with ASD.

My name is Nure Naznin, I am a lecturer of speech and language therapy department, currently studying towards a Masters degree in Rehabilitation Science program at Bangladesh Health Professions Institute (BHPI) - an academic institute of CRP under Faculty of Medicine of University of Dhaka (DU). This is a 2-years full-time course under the project of "Regional Inter professional Master's program in Rehabilitation Science" funded by SAARC Development Fund (SDF).

I am asking for permission for your child to participate in a research study. I am researching participation of ASD children in CRP, head office at Savar, and all other divisional branches under honorable supervisor, Prof. Md. Obaidul Haque. The purpose of the study is to identify the quality of life among the parents of children with autism spectrum disorder and behavioural aspects of children with autism spectrum disorder. The "Bangla WHOQOL BREF" and "**THE NISONGER CHILD BEHAVIOR RATING FORM**" will be used as data collection instrument that take about 25 to 30 minutes approximately followed by parents' interview where have no likelihood of any harm to the participants. These scales assess the behavior of children with autism and quality of life. All participants will receive information sheet from data collector and through completing inform consent by participants maintain the ethical issues. It also assures that all data will be kept confidential & will not be used any information of participants without permission. There are no risks involved in this study. Participation is voluntary and refusal to participate at anytime during the course of the research, without giving any reason, without his/her medical or legal rights being affected.

Contact details of the researcher:

Nure Naznin
Session: 2016-2017
DU Registration No: 912
Student of M.Sc. in Rehabilitation Science (MRS)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

A.10 (Consent Form-English)

Consent Form

Assalamualikum, I am Nure Naznin, student of masters of rehabilitation science in Institute of Bangladesh Health Professions Institute (BHPI). The title of my project is **"Quality of life of parents and behavioural aspects of children with ASD"**. This project study is a part of Masters Program.

For my project study, I would like to get some sort of information from you. Bangladesh Health Professions Institute (BHPI) has permitted me to collect data. I want to take you as sample for collecting information. All the information in the interview will be kept in safety and treated as confidential. For collecting information mp3 player will be used and my need 25-30 minutes.

Your participation in this study will not affect on your present, past and future. Your valuable information my assist others in future. Knowing about my study, if you are not agreeing, you have full right to withdraw from the study. If you are ready I can start.

After reading and considering the above information I am interested to take part in this research spontaneously and provide my signature.

Participant's signature.. Date..

Interviewer's signature.. Date..

Witness's signature.. Date..

A.11 Consent form (Bengali)

সম্মতিপত্র

আসসালামু আলাইকুম ।

আমি নূরে নাজনীন, ঢাকা বিশ্ববিদ্যালয়ের চিকিৎসা অনুষদের অধিভুক্ত বাংলাদেশ হেলথ প্রফেশনস্ ইন্সিটিটিউট এর মাস্টার্স ইন রিহ্যাবিলিটেশন সাইন্স কোর্সের চূড়ান্ত বর্ষের একজন শিক্ষার্থী। অধ্যায়নের অংশ হিসেবে আমাকে একটি গবেষণা সম্পাদন করতে হবে এবং এটা আমার প্রাতিষ্ঠানিক কাজের একটা অংশ। নিম্নোক্ত তথ্যাদি পাঠ করার পর অংশগ্রহণকারীদের গবেষণায় অংশগ্রহনের জন্য অনুরোধ করা হলো।

আমার গবেষণার জন্য আপনার কাছ থেকে কিছু গুরুত্বপূর্ণ তথ্য নেওয়া হবে। আপনাকে আমি আমার তথ্যাবলী সংগ্রহের নমুণা হিসেবে গ্রহণ করতে ইচ্ছুক।

আপনি আমাকে যে সকল তথ্য দিবেন সেগুলো গবেষনার কাজে ব্যবহৃত হবে, যা সম্পূর্নভাবে গোপনীয় থাকবে। এই গবেষণায় অংশগ্রহন আপনার বর্তমানে এবং ভবিষ্যতে কোন প্রভাব ফেলবে না কিন্তু আপনার গুরুত্বপূর্ন তথ্য অন্যের সাহায্যে আসতে পারে। আপনি যদি ইচ্ছা করেন তবে তথ্যাবলী নাও দিতে পারেন। এতে আমার কোন বাধ্যগততা থাকবে না। এই তথ্যাবলী সংগ্রহ করতে ২৫-৩০ মিনিট সময় লাগবে। আপনি যদি সম্মতি দেন তাহলে আমি শুরু করতে পারি।

ধন্যবাদ।

উপরোক্ত সমস্ত তথ্যাবলী পড়ে এবং বিবেচনা করে স্বেচ্ছায় আমি এই গবেষণায় অংশগ্রহনে আগ্রহ প্রকাশ করে স্বাক্ষর প্রদান করলাম।

অংশগ্রহণকারীর স্বাক্ষরঃ	তারিখঃ
গবেষকের স্বাক্ষরঃ	তারিখঃ
স্বাক্ষীর স্বাক্ষরঃ	তারিখঃ

A.12 (Demographic Information Question-English**)**

Demographic Information

Code No:

Child name: **Date of data collection: ___/___/___**

DOB:

Age:

Gender:

Respondent name: _____

DOB:

Age:

Occupation:

Living area:

Relation with children with ASD

1. Mother 2. Father

Educational Background

1. Illiterate
2. Primary
3. Secondary
4. Higher Secondary
5. S.S.C.
6. H.S.C
7. Graduate
8. Post- Graduate

Parent monthly income (BDT):

1. At least 58,106 (Top income group)
2. At least 18,404 (Middle income group)
3. At least 8,342 (Bottom income group)

A.13 (Demographic Information Question-Bengali**)**

অংশগ্রহনকারী এবং **শিশুর তথ্য**

শিশুর নাম: **কোড:**

জন্ম তারিখ: **তথ্য সংগ্রহের তারিখ: ___/___/___**

বয়স:

লিঙ্গ:

অংশগ্রহনকারীর নাম: _____

জন্ম তারিখ:

বয়স:

পেশা:

বাসস্থান:

শিশুর সাথে সম্পর্ক

১. মাতা ২. পিতা

শিক্ষাগত যোগ্যতা

১. নিরক্ষর
২. প্রাথমিক

৩. মাধ্যমিক
৪. উচ্চ মাধ্যমিক

৫. এইচ এস সি

৬.স্নাতক

৭. স্নাতকোত্তর

পিতামাতার মাসিক আয় (BDT):

১. অন্তত ৫৮,১০৬ টাকা (উচ্চ আয়ের শ্রেনী)
২. অন্তত ১৮,৪০৪ টাকা (মধ্যম আয়ের শ্রেনী)
৩. অন্তত ৮,৩৪২ টাকা (নি**ম্ন** আয়ের শ্রেনী)

A. 14 THE NISONGER CHILD BEHAVIOR RATING FORM

Child's Name: Child's Date of Birth:

Rater's Name: Date of Rating:

I. Positive Social: Please describe the child's behavior as it was at home over the last month.

Not True [0]
Somewhat or Sometimes True [1]
Very or Often True [2]
Completely or Always True [3]

	IN THE LAST MONTH, THIS CHILD HAS:	0	1	2	3
1	Accepted redirection				
2	Expressed ideas clearly				
3	Followed rules				
4	Initiated positive interactions				
5	Participated in group activities				
6	Resisted provocation, was tolerant				
7	Shared with or helped others				
8	Stayed on task				
9	Was cheerful or happy				
10	Was patient, able to delay				

II. PROBLEM BEHAVIOR. For each item that describes the child's behavior as it was over the last month, circle the:
0.... if the behavior **did not** occur or **was not a problem**
1.... if the behavior occurred **occasionally** or was a **mild problem**
2.... if the behavior occurred **quite often** or was a **moderate problem**
3.... if the behavior occurred **a lot** or was a **severe problem**

		0	1	2	3
1	Apathetic or unmotivated				
2	Argues with parents, teachers, or other adults .				
3	Clings to adults, too dependent				
4	Cruelty or meanness to others				
5	Crying, tearful episodes				
6	Hits or slaps own head, neck, hands, or other body parts				
7	Defiant, challenges adult authority				
8	Knowingly destroys property				
9	Difficulty concentrating				

10	Disobedient				
11	Rocks body or head back and forth repetitively				
12	Doesn't feel guilty after misbehaving				
13	Easily distracted				
14	Easily frustrated				
15	Overly sensitive; feelings easily hurt				
16	Exaggerates abilities or achievements				
17	Explosive, easily angered				
18	Has rituals such as head rolling or floor pacing				
19	Fails to finish things he/she starts				
20	Feelings easily hurt				
21	Feels others are against him/her				
22	Harms self by scratching skin or pulling hair				
23	Feels worthless or inferior				
24	Fidgets, wiggles, or squirms				
25	Shy around others; bashful				
26	Gets in physical fights				
27	Irritable				
28	Repeatedly flaps or waves hands, fingers or objects (such as pieces of string)				
29	Isolates self from others				
30	Lying or cheating				
31	Nervous or tense				
32	Gouges self, puts things in ears, nose, etc., or eats inedible things				
33	Overactive, doesn't sit still				
34	Overly anxious to please others				
35	Overly excited, exuberant				
36	Physically attacks people				
37	Refuses to talk				
38	Repeats the same sound, word, or phrase over and over				
39	Restless, high energy level				
40	Runs away from adults, teachers, or other authority figures				
41	Says no one likes him/her				
42	Secretive, keeps things to self				
43	Repeatedly bites self hard enough to leave tooth marks or break skin				
44	Self-conscious or easily embarrassed				
45	Shifts rapidly from topic to topic when talking				
46	Short attention span				

47	Shy or timid behavior				
48	Steals				
49	Odd repetitive behaviors (e.g., stares, grimaces, rigid postures)				
50	Stubborn, has to do things own way				
51	Sudden changes in mood				
52	Sulks, is silent and moody				
53	Physically harms or hurts self on purpose				
54	Talks back to teacher, parents, or other adults				
55	Talks too much or too loud				
56	Temper tantrums				
57	Threatens people				
58	Threatens to harm self				
59	Engages in meaningless, repetitive body movements				
60	Too fearful or anxious				
61	Underactive, slow				
62	Unhappy or sad				
63	Violates rules				
64	Withdrawn, uninvolved with others				
65	Worrying				
66	Argues with other children or peers				

A.15 THE NISONGER CHILD BEHAVIOR RATING FORM

Child's Name: Child's Date of Birth:
Rater's Name: Date of Rating:

INSTRUCTIONS: Transcribe the ratings from the Nisonger CBRF and write them into the "rating" column next to the appropriate item number "#". When all ratings have been transcribed, total the columns to obtain the subscale scores.

Compliant/ Calm		**Adaptive Social**		**Conduct Problem**		**Insecure/ Anxious**		**Hyperactive**		**Self-Injury/ Stereotypic**		**Self-Isolated / Ritualistic**		**Overly Sensitive**	
#	rating	#	rating	#	rating	#	rating	#	rating	#	rating	#	rating	#	rating
1		2		2		16		9		6		1		3	
3		5		4		21		13		11		18		5	
4		7		7		23		19		22		25		14	
6		8		8		30		24		32		29		15	
9		Total		10		31		33		43		37		20	
10				12		34		35		53		47		Total	
Total				17		41		38		58		49			
				26		42		39		Total		64			
				36		44		46				Total			
				40		45		Total							
				50		48									
				54		52									
				56		55									
				57		60									
				63		65									
				66		Total									
				Total											

A. 16 THE NISONGER CHILD BEHAVIOR RATING FORM (Bebgali)

শিশুর নামঃ বয়স/জন্ম তারিখঃ

পূরণকারীর নামঃ তারিখঃ

ক) <u>সঠিক সামাজিকতাঃ</u> গত মাসে আপনার বাচ্চা বাসায়/বাড়ীতে কি ধরনের আচরণ করেছে তা বর্ণনা করুনঃ

গত এক মাসে বাচ্চা কি কি করেছে	সত্য নয় (০)	মাঝে মাঝে(১)	খুব সত্য(২)	সবসময় সত্য(৩)
১।পুনঃনির্দেশনা গ্রহন				
২।মতামত সঠিকভাবে প্রকাশ করা				
৩।অনুসরণ নিয়ম				
৪।ইতিবাচকভাবে যোগাযোগ স্থাপন করা				
৫।গ্রুপ কার্যক্রমে অংশগ্রহন				
৬।বিরক্ত ও জ্বালাতন সহনশীলতার ক্ষমতা				
৭। শেয়ার করা বা অন্যকে সাহায্য করা				
৮।কাজের মধ্যে থাকা				
৯।উৎফুল্ল বা খুশী ছিল				
৯।ধৈর্যশীল ছিল/অপেক্ষা করত				

খ) <u>আচরণগত সমস্যাঃ</u> গত এক মাসে বাচ্চা কি কি করেছে

০= আচরণ ঘটেনি বা (not a problem)
১= আচরণ মাঝে মাঝে ঘটেছে বা (mild problem)
২=আচরণ প্রায়শই ঘটেছে বা (moderate problem)
৩=আচরণ অনেক ঘটেছে বা (severe problem)

	০	১	২	৩
১। উদাসী				
২। পিতা-মাতা, শিক্ষক বা অন্য বড়দের সাথে তর্ক করে				
৩। বড়দের জড়িয়ে ধরে, পরনির্ভরশীল				
৪। অন্যদের সাথে নিষ্ঠুরতা বা নীচতা করে				
৫। মাঝে মাঝে কান্না করে				
৬। নিজের মাথায়, হাতে বা অন্যকোন অঙ্গে আঘাত করে বা থাপ্পর দেয়				
৭। বড়দের ক্ষমতা নিয়ে অভিযোগ করা বা দ্বন্দ্বার্থের সম্মুখীন হওয়া				
৮। বুঝে বা জেনে সম্পদ নষ্ট করা				
৯। মনোযোগ দিতে সমস্যার সম্মুখীন হওয়া				
১০। অবাধ্য				
১১। শরীর বা মাথা সামনে পিছনে বারবার দোলানো				
১২। খারাপ ব্যবহারের পর অনুশোচনা বোধ না করা				
১৩। খুব তাড়াতাড়ি কিংকর্তব্যবিমুড় হয়ে যাওয়া				
১৪। খুব সহজেই হতাশ হয়ে যাওয়া				
১৫। মাত্রাতিরিক্ত সংবেদনশীল বা যন্ত্রনা দেয়া				
১৬। দক্ষতা বা সফলতাকে অতিরজীত করা				
১৭। সহজেই রেগে যাওয়া				
১৮। মাথা ঘুরানো এবং মেঝেতে পদার্পন করা				
১৯। কোন কাজ শেষ করতে ব্যর্থ হওয়া				
২০। অল্পতেই কষ্ট বা ব্যথিত হওয়া				
২১। অন্যের বিরুদ্ধে যাওয়া				
২২। নিজের ত্বকে আঘাত করা এবং চুল টানা				
২৩। মুল্যহীন অথবা নিকৃষ্ট অনুভূত হওয়া				
২৪। উশখুসানী, উত্তেজিত হওয়া				
২৫। অন্যকে দেখে লজ্জত অনুভূত হওয়া				
২৬। শারীরিক লড়াই করা				
২৭। খিটখিটে অনুভূত হওয়া				
২৮। কোন বস্তু বা হাত বারবার দোলানো				
২৯। অন্যের থেকে নিজেকে আলাদা করে রাখা				
৩০। মিথ্যা বলা বা প্রতারন করা				
৩১। উত্তেজিত হওয়া বা দুশ্চিন্তায় ভোগা				
৩২। নিজের ক্ষতি করা, যেমন কানের বা নাকের মধ্যে কিছু দেওয়া অথবা অখাদ্য খেয়ে ফেলা				
৩৩। অতিকর্মঠ অথবা বসেই না				
৩৪। অন্যদের সন্তুষ্টি নিয়ে বেশী চিন্তিত				

৩৫। অতিউত্তেজিত এবং উচ্ছ্বাসিত				
৩৬। শারীরিকভাবে মানুষ আক্রমণ				
৩৭। কথা বলা প্রত্যাখ্যান				
৩৮।একই শব্দ, বাক্য বা বাক্যাংশ এর পুনরাবৃত্তি				
৩৯। অস্থির, উচ্চ শক্তি স্তর				
৪০। প্রাপ্তবয়স্কদের কাছ থেকে দূরে চলে যায়, শিক্ষক বা অন্য কারো থেকেও				
৪১। তাকে কেউ বলে কেউ পছন্দ করে না				
৪২। গোপনীয়তা, নিজের জিনিস নিজের কাছে রাখে				
৪৩। বারবার নিজেকে কামড় দেয়ার প্রবনতা এবং কামড়ের দাগ বসিয়ে দেয়				
৪৪। স্ব-সচেতন বা সহজেই বিব্রত				
৪৫। একটা বিষয় থেকে অন্য বিষয় এ দ্রুত পরিবর্তিত হয় যখন কথা বলে				
৪৬। মনোযোগ দানের সময় অনেক কম				
৪৭। লজ্জা বা নির্লিপ্ত আচরণ				
৪৮। চুরি করার অভ্যাস				
৪৯। অদ্ভুত পুনরাবৃত্তিমূলক আচরণ (উদাহরণস্বরূপ, এক দৃষটিতে তাকিয়ে থাকা, ভেংচি কাটা, দৃঢ় অঙ্গবিন্যাস)				
৫০। একগুঁয়ে, নিজের কাজ নিজকের মত করে করে				
৫১। আকস্মিক আচরণ গত পরিবর্তন				
৫২। অভিমানি , শান্ত ও মেজাজী				
৫৩। কোনো কারণে শারিরীকভাবে নিজেকে ব্যাথা বা কষ্ট দেয়া				
৫৪। শিক্ষক, বাব-মা কিংবা বয়জ্যেষ্ঠ কারো পেছনে কথা বলা				
৫৫। অনেক বেশি কথা বলে অথবা অনেক জোড়ে বলে				
৫৬। বদমেজাজ স্বভাবের				
৫৭। হুমকিস্বরূপ ব্যাবহার				
৫৮। নিজেকে ক্ষতি করার হুমকি দেয়া				
৫৯। নিরর্থক ও পুণরাবৃত্তি শারিরীক নড়াচড়া				
৬০। অনেক বেশি ভীতিসম্পিন্ন এবং উদবিগ্নতা				
৬১। কম সক্রিয় এবং অনগ্রসর				
৬২। মন খারাপ এবং দুঃখী				
৬৩। বিশৃঙ্ক্ষলা				
৬৪। অন্যদের সাথে মিশতে অনাগ্রহী এবং উদাসিন				
৬৫। ব্যতিগ্রস্থ থাকা				
৬৬। বন্ধু কিংবা অন্য বাচ্চাদের সাথে তর্ক করা				

A. 17 WHOQOL BREF (Bengali version)

অংশগ্রহনকারীর নামঃ বয়স/জন্ম তারিখঃ

পূরণকারীর নামঃ তারিখঃ

		খুব খারাপ	খারাপ	ভালও নয় খারাপও নয়	ভাল	খুব ভাল
1.(G1)	আপনার জীবন যাত্রার মান কেমন ?	১	২	৩	৪	৫

		খুব অসন্তুষ্ট	অসন্তুষ্ট	সন্তুষ্টও নয় অসন্তুষ্ট নয়	সন্তুষ্ট	খুব সন্তুষ্ট
2.(G4)	আপনার স্বাস্থ্য নিয়ে কি আপনি সন্তুষ্ট ?	১	২	৩	৪	৫

		একদম না	কম	মোটামুটি	বেশী	খুব বেশী
3.(F1.4)	শারীরিক ব্যথার জন্য আপনি কি পরিমান প্রয়োজনীয় কাজ থেকে বিরত ছিলেন ?	১	২	৩	৪	৫
4.(11.3)	আপনার দৈনন্দিন কার্যক্রম ঠিক রাখতে চিকিৎসা কতটুকু প্রয়োজন ?	১	২	৩	৪	৫
5. (F4.1)	আপনি জীবনকে কতটুকু উপভোগ করেন?	১	২	৩	৪	৫
6.(F24.2)	জীবনকে আপনার কতটুকু অর্থপূর্ণ মনে হয় ?	১	২	৩	৪	৫
7.(F5.3)	আপনি কাজে কতটুকু মন সংযোগ করতে পারেন ?	১	২	৩	৪	৫
8.(F16.1)	আপনার দৈনন্দিন জীবনে কতটুকু নিরাপত্তা অনুবভ করেন ?	১	২	৩	৪	৫
9(F22.1)	আপনার ভৌত পরিবেশ কতটুকু স্বাস্থ্যকর ?	১	২	৩	৪	৫

		একদম না	কম	মোটামুটি	অধিকাংশ	পরিপূর্ণভাবে
10.(F2.1)	আপনার কি প্রতিদিন কাজ করার মত শক্তি আছে ?	১	২	৩	৪	৫
11.(F7.1)	আপনি কি আপনার শরীরের গড়ন নিয়ে সন্তুষ্ট ?	১	২	৩	৪	৫
12.(F18.1)	আপনার কি প্রয়োজন মেটাতে যথেস্ট টাকা আছে ?	১	২	৩	৪	৫
13.(F20.1)	আপনি কি দৈনন্দিন জীবন যাপনের জন্য প্রয়োজনীয় তথ্য পান ?	১	২	৩	৪	৫
14.(F21.1)	অবসর কাটানোর / বিনোদনের সুযোগ আপনার কতটুকু আছে?	১	২	৩	৪	৫

		খুব খারাপ	খারাপ	ভালও না মন্দও না	ভাল	খুব ভাল
15. F(9.1)	আপনি কতটা ভালভাবে চলাফেরা করতে পারেন ?	১	২	৩	৪	৫
16.(F3.3)	আপনার ঘুম নিয়ে আপনি কত খানি সন্তুষ্ট ?	১	২	৩	৪	৫
17.(F10.3)	দৈনন্দিন কাজ করার ক্ষমতা / দক্ষতা নিয়ে আপনি কতটুক সন্তুষ্ট ?	১	২	৩	৪	৫
18.(F12.4)	আপনার কাজ করার ক্ষমতা / দক্ষতা (ক্যাপাসিটি) নিয়ে আপনি কতটুক সন্তুষ্ট ?	১	২	৩	৪	৫
19.(F6.3)	নিজেকে নিয়ে আপনি কতটুকু সন্তুষ্ট ?	১	২	৩	৪	৫
20.(F13.3)	অন্যদের সাথে আপনার ব্যাক্তিগত সম্পর্ক সমূহ নিয়ে আপনি কতটুকু সন্তুষ্ট	১	২	৩	৪	৫
21.(F15.3)	আপনার যৌন জীবন নিয়ে আপনি কতটুকু সন্তুষ্ট ?	১	২	৩	৪	৫
22.(F14.4)	বন্ধুদের কাছ থেকে পাওয়া সাহায্যে আপনি কতটুকু সন্তুষ্ট ?	১	২	৩	৪	৫

23.(F17.3)	আপনি আপনার বাসস্থানের অবস্থান নিয়ে কতটুকু সন্তুষ্ট ?	১	২	৩	৪	৫
24.(F19.3)	আপনি যে স্বাস্থ্যসেবা পান তাতে কি সন্তুষ্ট ?	১	২	৩	৪	৫
25.(F19.3)	আপনি যাতায়াত ব্যবস্থা নিয়ে কতটুকু সন্তুষ্ট ?	১	২	৩	৪	৫

		কখনো না	কখনো কখনো	মাঝে মাঝে	প্রায়শই	সব
26.(F8.1)	আপনার হতাশা ,উদ্বেগ , অবসন্নতা এই সব নেতিবাচক অনুভুতি কত ঘন ঘন হয় ?	১	২	৩	৪	৫