

Adaptation of the behavior assessment system for children- 2, behavior and emotional screening system for use in Bangladesh



By

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A thesis submitted for the MPhil degree in the Department of Educational and Counselling Psychology at the University of Dhaka

Supervisor: Professor Dr. MahjabeenHaque

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List of Abbreviations

ASEBA	Achenbach System of Empirically Based Assessment
BASC	Behavior Assessment System for Children
BESS	Behavior and Emotional Screening System
BSID- II	Bayley Scales of Infant Development-II
CBCL	Child Behavior Check List
CD	Cognitive Delay
DECP	Department of Educational and Counseling Psychology
DSM	Diagnostic and statistical Manual of Mental Disorders
EBP	Emotional and Behavioral Problem
ECI	Early Childhood Intervention
PTSD	Post Traumatic Stress Disorder
SDQ	Strengths and Difficulties Questionnaire
TDC	Traditionally Developed Children
TFR	Teachers Rating Form
U.S (DHHS)	U.S Department of Health and human Service

Declaration

I declare that the work on **Adaptation of the behavior assessment system for children- 2, behavior and emotional screening system for Use in Bangladesh** is my own work; both in conception and execution, and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. I also declare that no portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning

Signature of the author

Ayesha Seddiqa

Date

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Certificate of Supervisor

This is to certify that I have read the dissertation entitled **Adaptation of the behavior assessment system for children- 2, behavior and emotional screening system for Use in Bangladesh** submitted by **Ayesha Seddiqa** for the MPhil degree in Educational and Counselling Psychology and this is a record of authentic/original research carried out by her under my supervision and guidance.

Supervisor's signature and date:

Professor Dr. Mahjabeen Haque

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Abstract

Behavioral and emotional issues in preschool children have become a concern globally and also in Bangladesh where its high prevalence rate poses a threat to the country's future growth and development. Early identification of the behavioral and emotional issues is the best way to make early intervention for the preschool children which will reduce the rate of behavioral and emotional difficulty during early childhood. To address the needs, the present MPhil project was carried out with the aim of adapting behavioral screening system for children-2, behavioral and emotional screening system (Kempthorne R. W., & Reynolds C. R. 2007) for the preschool children of Bangladesh. The study was carried out to adapt and validate the Teacher Rating Scale and Parent Rating Scale for the preschool children. 200 teachers working with early childhood and 200 parents of young children, age range from 3-5 years was included as the participants. Cronbach's Alpha coefficients were an indication of reliability which was calculated separately for Teacher Rating Scale (.974) and Parent Rating Scale (.833). The test-retest Teachers form (0.874) and the test-retest reliability coefficient for parents form (.892) also shows satisfactory level of the scale over time. Results showed that, there is a significant positive correlation between the BASC-2, BESS preschool teachers rating scale and the SDQ scale ($r = 0.888^*$, $N = 50$, $p < 0.01$). It also showed that there is a significant positive correlation between the BASC-2, BESS preschool parent rating scale and the SDQ scale ($r = 0.647^*$, $N = 50$, $p < 0.01$). This finding ensured the construct validity of the bangle adapted version.

Key words: Behavior, Emotions, Early Childhood, scale adaptation, reliability, validity

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Introduction

From birth, children gradually build their ability to experience and express different emotions by their behavior. A large number of scientific evidence demonstrates that the positive behavioral and emotional development within children begins early in life which is closely connected with the emergence of cognitive, language, and social skills. The first five years are the foundations of developing the social competence and positive behavior pattern of a child that has a great link to emotional well-being and affect a child's later ability to functionally adapt in school and to form successful relationships throughout life. Early emotional development is largely influential for later academic performance, mental health, and the capacity to form successful relationships. Many researches related to early childhood focus exclusively on cognitive development as it relates to school readiness, neglecting the importance of such capacities as the ability to regulate one's own emotion and behavior and to manage successful interactions with other people. As a result, early childhood mental health safety is very important for the complete growth of a child.

For a better communication in the adult life behavioral and emotional regulation is very helpful and most importantly with the children go through early childhood as they are able to express their need and want through words and feelings.

1.1: Behavior

In a general term behavior is known as an action which is done by every being in this universe within their own range. In the broader term behavior can be defined as the response of any creature towards any stimulus coming towards it. This happens because of the survival instinct, making the protection layer, adjusting with the surroundings, being comfortable with

the environment around. The every action of a person that can be seen or heard is known as behavior. If the behavior is both observable and measurable it gives a good understanding of what the behavior looks like and sounds like (Alberto & Troutman, 2003).

Behavior can be explained through many ways. There are many factors which comes in handy to understand the behavior of human being. Every factors and types of administrating any behavior has it's own explanation and grounds of understanding (Linda Steg, 2009).

Table: 1.1 *Types of behavior*

Types of behavior		
observation	Overt behavior	Behaviors can be observed by the people around. Like, dancing, singing, and laughing.
	Covert behavior	Behaviors cannot be observed and remained secret. For example, thinking of that dance moves, remembering that song's lyrics.
Awareness	Conscious behavior	Behaviors are done with a known purpose. Ex- people cook because they feel hungry.
	Unconscious behavior	Behaviors takes place with an unconscious purpose Ex- girls screams seeing spider, cockroach.
Response	Voluntary behavior	Behaviors done under control or decisions. Moving hands, taking a bath after workout, all are voluntary behavior.
	Involuntary Behavior	Behaviors which can not be control. Ex- yawning, breathing, blinking.
	Simple behavior	Behaviors done with a definite range. If ant bites, then remove that insect.

Actions	Complex behavior	Behaviors done with a vast range. Ex- Hunting for food inside a forest
Cognitive process	Rational behavior	Behavior with a clear goal or behaviors are appropriate with the environment. Ex- putting warm clothes in cold. Takes medicine on time when there a sickness
	Irrational behavior	Behavior can not be explained with any goal or objectives or not appropriate with the environment. Ex- shouting at boss in an ongoing participatory meeting.
Intensity of emotion	Internal behavior	Behavior associated with the internal feelings, sadness, and rejection.
	External behavior	Behaviors tend to show outward behavior associated with inner feeling. Shouting out of anger on parents, aggressiveness out of rejected feeling towards peer mates and teachers.

1.2 Importance of understanding human behavioral presentation

As being a never ending process the understanding of human behavior holds a great importance. Human behavior is such a vital tool and instrument to make an understanding regarding the social capital, social infrastructure, environmental gestures, cultural practice, the foundation of norms, the beliefs of altitudes, the processing of thoughts, the way of expressing feelings, segments of the celebration and maintenance within a community (charls. H.Jastrow, 2016). It also gives the indication of the learning process of adaptation of the running behavior by children in that specific community. This understanding also gives broad pictures regarding the adaptation capacity of the children of that community. This can

be preserved as the behavioral guidance for not only the future researchers but also for the mass people too for improving the lifestyles of the children as in any community or society children are considered as the pathway of passing the legacy. And this understanding grows up day by day with the development of a child in his or her own life.

1.3 Appropriateness of the consistency in behavior

Understanding children's behaviors is very important to understand the individual child. The adverse situation in these cases can be identified as the problematic behaviors or showing behavioral difficulties. When the showcasing of the behaviors is not able to match up the synchronization with the age, social norms, environmental resources on a regular basis and with random episodes of problematic behaviors or behavioral difficulties occurs. Behavioral difficulties can have a variety of causes. According to the University of North Carolina at Chapel Hill, behavioral difficulties are connected with a variety of factors like birth complexity, malnutrition, heredity factor as a means of biological factors. Divorce in family, sudden death of any close person, inconsistent disciplinary styles, large numbers of siblings are known as the social factors of behavior problems within the children. When a child exhibits persistent and repetitive patterns of behaviors that break social rules and impair social interaction with others, behavior problems are diagnosed. (Bordin IAS, Offord DR, 2000). To identify the prevalence of childhood behavior problems, a good number of studies have been conducted in different countries (Matijasevich A, Murray E, Stein A, Anselmi L, Menezes AM, Santos IS, et al, 2014). An estimated prevalence rate of behavior problems ranging from 1 to 51% has been estimated from a review of child psychopathology studies published in 20 countries. (Roberts RE, Attkisson CC, Rosenblatt, 1998). Among preschool-aged children (1 to 6 years) Bauermeister JJ, So CY, Jensen PS, Krispin O, El Din AS, 2006

found an overall prevalence of 10%. In the case of emotional and behavioral problem within the children under 5 reported the prevalence rate was with a range of 9.5 to 14.2%.

1.4 Common Types of behavioral difficulties in early childhood

There are different types of behavioral problems in children of three to five years need to be appropriate attention in time and support can be decrease the severity rate of this difficulties. Persistent emotional and behavioral disturbance in young children may be an early indication of developmental problems, such as autism, speech and language disorders or learning disabilities.

1.4.1 Sleeping problem

Sleeping problem is one of the common problems in the children of 3 to 5 years. The proper attention and support of the parents can help the children to come out form the issues.

1.4.2 Feeding Problem

Feeding problems is another common behavioral problem in the children of three to five years old. In the review it has been seen that in U.S.A 25% of children are developing this problems in this daily lives.

1.4.3 Aggression

Showing aggression, non-cooperativeness, fighting with other children is very common during the early childhood ages. Absence of prosocial behavior, pro activeness rather than feeling disappointed, resistant to break up own comfort shells, also responsible for this situation.

Victims of repeated traumatic experiences, either within or outside the family, may show emotional and behavioral disturbances, including distressed reactions to reminders of the traumatic events, repetitive re-enactments in their play, sleep disturbance. Children under

five years can be diagnosed with post-traumatic stress disorder (PTSD). Anxiety, fear, depression can be seen in many children in these years.

1.5 Emotional development in early childhood:

Early childhood is the most important time for the children for their emotional development. This complex task continuous till adulthood. The relationship of the children with their families, caregivers, peers influence a lot in the development of emotional skills during the early childhood. Basically Emotional development is the ability of recognizing, expressing, and managing feelings at different stages of life. This is also known as the empathetic understanding for the feelings of others. All the emotions, both positive and negative emotions largely influenced by the relationship with the parents, siblings and peers. An insecure attachment with the significant one at the early childhood is associated with emotional incompetence during the adulthood. (Pollak, S. D., Cicchetti, D., Hornung, K., Reed, A. (2000). Rejection from the primary caregiver and peers causes the inappropriate emotional expressions during the early childhood and that has a big negative impact throughout the whole life of a person in terms of emotional expression.(Dodge et al., 2003; Schultz et al., 2000).

1.6 Emotional and Behavioral Problem (EBP)

Egger HL, Angold A, (2006), have found that, in the group of children younger than 5 years at least 8% to 10% of children have significant and impairing mental health issues that include emotional, behavioral, and social relationship problems. For the presence of the emotional and behavior problems of a child the whole family faces a great difficulty, distress and suffers substantially. Children with emotional and behavioral problems also have issues in social interactions, maintaining social relationships, academic performance, group

performance and physical health problems in adulthood.(Gaffrey MS, Luby JL, Belden AC, Hirshberg JS, Volsch J, Barch DM, 2011).According to Individuals with Disabilities Education Act (IDEA, 2004), an emotional disturbance is: ...A condition exhibiting one of more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behavior or feelings under normal circumstances; (d) a general pervasive mood of unhappiness or depression; and (e) a tendency to develop physical symptoms or fears associated with personal or school problems. Emotional and behavioral problems (EBP) have two classifications: "internalizing" (emotional disorders such as depression and anxiety) or "externalizing" (disruptive behaviors).Unresolved and problematic internal feelings, like sadness, anxiety, loneliness, fearfulness, depression, oversensitivity are associated with internalizing emotional and behavioral problems. In the case of Children with externalizing emotional and behavioral problem show outward behavioral problems including, hitting, fighting, aggression, and oppositional behaviors. Children with both internalizing and externalizing behaviors (e.g., a student with aggressive behaviors impulsive behavior from time to time temper tantrum, disruptive behaviors with a low intensity in the preschool children are regarded as normal. Unpredictable, prolonged, severe temper loss, frequent destructive patterns of behaviors and emotional outburst outside the norm for the age and level of development is recognized as behavior disorders.(Parry TS, Med J, 2005).Children with EBD tend to inattentive with their study. They don't want to attend school regularly which leads to poor academic performance (Anderson, Kutash, &Duchnowski, 2001).During the first 2 years of life the behavioral and emotional difficulties of children labeled as

“problems” rather than “disorders” (Bagner DM, Rodríguez GM, Blake CA, Linares D, Carter ASClin Child FamPsychol Rev. 2012).

To identify the behavior problems in Young Children in Rural Bangladesh, Naila Z. Khan, Shamim Ferdous, Robiul Islam, Afroza Sultana, Maureen Durkin Helen, McConachie conducted a study at 2008. According to that epidemiological survey the prevalence of behavior impairment was 14.6% in 2- 9 years children in the rural area of Bangladesh. A prevalence study in urban, rural and slum districts of Bangladesh was also done by Mullick and Goodman at 2005. They found that, 15.4 % children of the rural area had different type of diagnosed behavioral or emotional issues compared with the 19.5% slum and 10% urban children. However, they also found that for the emergence of behavioral and emotional issues during the early childhood the type of parenting style has a great impact. By using the Behavior Check List one earlier survey of rural children in Bangladesh also gave the similar picture.(Richman N, Graham P. A, 1971).

1.6.1 Prevalence of early childhood behavioral and emotional difficulties

Researches indicate that, the rate of behavioral and emotional difficulties among the children in increasing day by day. The report of The U.S Department of Health and human Service (DHHS), 1999 showed that, at least one in five (20%) children and adolescents has a mental health disorder. They also found that, at some point in life at least one in 10 people may manifest serious emotional difficulty. According to the report within the age limit of 0-5 years the estimated prevalence rate of behavioral and emotional disturbance was with a range of 9.5% to 14.2%.

At 2017 Reza Pourhosein, Mojtaba Habibi found that, the prevalence of behavioral and emotional problem is higher within the preschool children than the older children. They also found that, the most common disorder at the early childhood was emotionally

reactiveness, around 11.2 % of children at Iran faced with this difficulty at their preschool period. At the research of Alkon et al., 2003; Joseph & Strain, 2004; Pianta & Caldwell, 1990, preschool teachers reported that about 10-20% of children in preschool level have behavioral and emotional difficulty and it was reported by 63.1 % preschool teachers that sometimes it become very difficult to handle some children with behavioral and emotional problems.

In Bangladesh it was found that the rate of prevalence of behavioral and emotional disorders was 40.35%, within the orphan children which is higher than the children stayed with their parents. (Wasima Rahman, MSI Mullick, Mohammad Asraful Siddique Pathan, Nafia Farzana Chowdhury, Mohammad Shahidullah, Helal uddin Ahmed, Surajit Roy, Atiqul Haq Mazumder Farzana Rahman, 2012). The prevalence of behavior impairments was 14.6% within the rural children age range from 2-9 years and those behavior problems were significantly predicted by malnutrition (Naila Z. Khan Shamim Ferdous Robiul Islam Afroza Sultana Maureen Durkin Helen McConachie 2009).

1.7 Comorbidity

Emotional regulation helps the children to be more social and engaged with the people around. When children are good at expressive their emotions in their early childhood it helps their social networking increases more even in their later life. And it also helps them to behave in a functional ways. Functional emotional expression and social interaction help the children of 3-5 years old, decreasing their anxiety levels. (Rubin, Susan, Fox, Calkins; 2009) On that note it can be stated that the way of functional social interaction is an indicator of understanding if the emotional expression are functional or not in the children.

Social adaptation skills and emotional regulation are very much connected. When a child is able to express his emotion even he doesn't know what he is expressing, also helps him to make a step towards socialization. Because through the emotion and the expression of

the emotion, which can be counted as behavioral presentation, a child gets a cue in various ways, how to act and how to be connected with the surrounding. If a child has emotional difficulties, it has effect his/her behavioral presentation too, as a result it will lead a social withdrawal in to him/her. (Schultz, Izard, Ackerman, Youngstrom, 2001).

Emotional difficulties in a person impact the function of motor coordination of the body. That also goes for the children of preschools. Children who face difficulties in expressing their emotions regularly, they also face difficulties in their motor coordination in the same pace. The children who are going through the depression and anxiety, their motor function are also affected in many ways. (Piek, Bradbury, Elsley, Tate, 2008).

1.8 Etiology

In the past decades, several risk factors have been identified that are thought to play a role in the etiology of early childhood behavioral and emotional disorders. The primary explanatory models consists of genetic, cognitive and brain factor, psychosocial factors which include the environment and events taking place during the children's developmental history. Parental attitude and raring behavior (McLeod, Wood, & Weisz, 2007; McLeod, Wood, & Avny, 2011), as well as experiences marking the course of a child's personal development may have important influence on the onset of behavioral and emotional disorders, as well as learning experiences that shape a child's internal image of the physical and social environment, its potential threats, and how to cope with it.

1.8.1: Genetic, and cognitive factors

Behavioral- genetic research has shown that, there is no significant influence of genetic on behavioral problems in early childhood. The comparative study on twin and DNA heredity to estimate the early childhood behavior problems was done by Maciej Trzaskowski,

Philip S Dale, Robert Plomin, (2013). Childs behavior problem was rated by the parents and teachers. On the other hand to explain the genetic factor and early childhood emotional disturbance research found that, there is a interconnection between genetics and environmental factors for the emergence of emotional disturbance during the early childhood.(Lisabeth Fisher DiLalla,Paula Y. Mullineaux,and Sara J. W. Biebl, 2012).

With the objective of investigating the influence of cognitive delay (CD) and behavior problems between ages 9 months to 5 years, a research was conducted. It was a Longitudinal Study on Early Childhood behavior problems and sample were 8000 children. The sample was classified into four groups according to the behavior pattern such as, typically developing (TD) children, or as having resolved behavioral issues, newly developed behavior problems, or persistent CD between 9 and 24 months, result showed that, among the cognitively delayed children Behavior problems increased day by day and by the age 5, they had behavior scores moderately (0.59 SD) higher than Typically developed children. (2018).

Research has identified various types of cognitive biases that are thought to play a role in the development and maintenance of early childhood anxiety disorder as a means of emotional difficulties. More precisely, there is clear evidence showing that anxious children typically display hyper- attention towards potentially threatening material (i.e., attentional bias) and more frequently interpret ambiguous stimuli and situations in a threatening way. (Vasey & Maceod, 2001).

1.8.2 Psychosocial factors

Children's vulnerability to develop behavioral and emotional disorders involves psychosocial factors that include the environment and events taking place during children's developmental history. Parental attitudes and behavior such as overprotective parental rearing behaviors, an insecure attachment relationship as well as events marking the course of a

child's personal development may have a significant influence on the onset of behavioral and emotional disorders, as well as direct (i.e., conditioning) and indirect (i.e., modeling, negative information transmission) learning experiences that shape a child's internal representation of the physical and social environment, its potential threats, and how to cope with it.

Attachment:

Bowlby's attachment theory hypothesized a child who has not had sensitive and responsive care, and is therefore uncertain about the accessibility of their parents when in need, is said to have an insecure or ambivalent attachment (Bowlby, 1973; Bowlby, 1987). According to him children will exhibit attachment behavior when separated from the caregiver or the attached figure, and thus elicit protective behavior from their caregiver. Bowlby postulated an important interaction between the child and the caregiver: a caregiver who is responsive and sensitive to the child's needs lead to a feeling of security in the child. These children are called securely attached children. Insecurely attached children do not experience responsiveness and sensitivity from their caregiver, and do not trust that a caretaker will protect them. They may experience chronic vigilance and anxiety; which may set the stage for the development of behavioral and emotional disorder.

For the emergence of behavioral and emotional problems within the preschool children mother- child attachment is one of the significant predictors. (Mary LaMont, 2012). A study was conducted at the Islamia University of Bahawalpur. The researcher found that, the secure attachment styles had a significant positive relationship with the consistent and age appropriate behavior pattern of the preschool children. Insecure attachment style, especially insecure avoidant attachment was a good predictor of externalizing behavioral problems. Muhammad Azam Tahir and HumaFaiz did the study at 2014 with the title of "Impact of Attachment Styles on Internalizing and Externalizing Behavioral Problems among

Children and their Academic Achievement”. Another research was done on “Children of mothers with mental illness: attachment, emotional and behavioral problems” by, Judi Cunningham, Gillian Harris, Panos Vostanis, Femi Oyeboode & Jackie Blissett(2004). They found that, there was a significant positive correlation between insecure attachment and emotional distress of the children.

Parental rearing style:

The style of parental nurturing has a connection with behavioral and emotional state of children. Parenting style gets differentiated based on many aspects. Like the age of the parents, the socio-economic status. As middle class children are trained to be achievement oriented. Self-discipline, initiative, responsibility, academic achievement and restraint of aggression are encouraged. Lower class parents, on the other hand, focus on the behavior rather than attitudes or motivation of the children. Perhaps, this is because they tend to view the world in terms of concrete events and practical outcomes. In upper class families the child is generally regarded as the carrier of the family’s name, its heritage and its status.

Developmental psychologist overwhelmingly endorse authoritative parenting as the optimal parenting style for raising children (Steinberg,2001), authoritative parenting is associated with healthy development of children especially those who are in early childhood. It balances between affection and support and an appropriate degree of parental control in managing child’s development.

After the birth primary caregiver especially the parents are the most important persons who are playing the role model characters for the children in showing, understanding the emotion. The acceptance of the emotion by the parents helps the child to regulate his/her emotion in a common and smooth track. Children observe the most. If they observe that expressing emotion is getting attention in the family setting, it will encourage him/her to show his/her emotion. If the opposite happens he/she will not create a hindrance in

processing his/her emotion. Which can in future creates the emotional difficulties in his/her. At the same time the, children's observation also covers how their caregiver are expressing emotion. Is it rude, passive or filled with understanding? It also effects their emotional regulation. On that note it can be stated that parenting style plays a vital role, if the parents make the children feel emotionally secured to them, child will have less emotional and behavioral difficulties than the child who does not feel emotionally secured to his/her primary care giver. (Moris, Slik, Steinberg, Myres, Robinson; 2007). He/she will get the vibes how to act in social situation through this observation on his/her parenting. Along with creating emotional difficulties parenting style also play a responsible roles in producing maladaptive psychological disruption. The mode of socialization among the family setting (e.g. the communication between the relatives, the relationship between parents as a couple) gives the view of bigger picture of the social life to a child. If there any disturbance prevails, it affects the child by creating social phobia or GAD (Generalized Anxiety Disorder), (Lieb, Wittchen, DiplStat, 2000). The harsh parenting style and stressful family environment increases the rate of early childhood behavior problems (Campbell et al. 2000). A recent study suggested that the first year of the child's life with maternal depression had the largest effect on later behavior problems of the child. (Bagner et al. 2010).

1.9: Measurement of Early Childhood Behavioral and Emotional problems

Though it's very difficult to measure the problem behaviors in preschoolers, there is increased interest for the diagnosis and developing treatment plan for the emotional and behavioral disorders in young children. Involving parents and other caregivers to complete standardized behavior checklists is one of the primary methods for assessing behavior problems. The most commonly used tool is Child Behavior Checklist/1½–5 (CBCL/1½–5; Achenbach & Rescorla, 2000). Through this checklist parents' rate the behavioral pattern of their child. The tool is used for assessing; screening and diagnosis problem behavior in young

children. (Timothy R. Konold, Bridget K. Hamre and Robert C. Pianta, 2003). However a number of questionnaires and interview tools have become accessible in the past decade that categorize and measure symptoms of behavioral and emotional disorders in terms of the prevailing diagnostic system, i.e., the DSM (Silverman & Ollendick, 2005).

Nowadays different methods are used to measure behavioral and emotional problems of the children. These are interviews, parent report and teacher report, self-report, physiological measures behavioral measures etc.

1.9.1 Diagnostic interview

In general, the most widely used method for assessing childhood disorders is interview. Interviews could be structured, unstructured or semi-structured. It is best to use available structured or semi-structured interviews because of lack of objectivity and poor reliability of the unstructured interview. These interviews permit the clinician to measure the types of behavioral and emotional problems that are present, the severity of those symptoms and the functional impairment that these symptoms may cause, (McLoone, Hudson, & Rapee, 2004). In the case of early childhood behavioral and emotional assessment parental and teachers interview is conducted. Generally, the components that are covered in an interview are- history of symptoms (i.e. onset of symptoms, presence of avoidant behavior etc.); developmental history of the child (i.e. Temperament, adaptability etc.); medical and psychiatric history (i.e. number of medical visits for the symptoms, under medication or not); School history (i.e. academic, behavioral and social functioning etc.); family history (i.e. stressors, resources, coping style, history of loss, death, history of psychiatry in family etc.). Two common clinical interviews are described below. The Anxiety Disorders Interview Schedule for DSM-IV: Child version (Silverman & Albano, 1996) and Parent version are considered as gold standard. This semi-structured interview has been developed specifically to assess child and adolescent anxiety disorders as well as a number of frequent comorbid

disorders (e.g., conduct disorder, mood disorders, oppositional disorder). The Diagnostic Interview Schedule for Children-Revised (DISC-R; Schwab-stone et al., 1993) is a highly structured interview form used to elicit diagnostic criteria for the common psychiatric disorders of childhood and adolescence. It contains both child and parent versions. The following diagnostic categories are addressed: attention deficit hyperactivity disorder, oppositional defiant disorder, conduct disorder, major depressive disorder, dysthymia, simple phobia, separation anxiety, social phobia, generalized anxiety disorder, agoraphobia/panic disorder, and obsessive compulsive disorder.

1.9.2 Parent and teachers rating scales

Adults such as parents and teachers have had broad experience regarding the child's behavior, feelings and cognitions, therefore they are a valuable source of information during the early childhood. But sometimes parents may not be fully aware of the extent of the child's anxiety, as observable behavior may occur outside of the parent's visibility, such as at school, or when interacting with peers (Comer & Kendall, 2013). Again teacher's rating can also be discrepant from parent or child self-reporting; usually teachers report fewer internalizing symptoms than young children and their parents. So, the combination is very important. Generally widely used parent rating scales for assessing early childhood behavioral and emotional problems are: Ages & Stages Questionnaire: Social-Emotional (ASQ: SE; Squires et al. 2002) for children from 3-66 months, Brief Infant-Toddler Social-Emotional Assessment (BITSEA; Carter and Briggs-Gowan, 2006) for children from 12-36 months, Toddler Behavior Screening Inventory (TBSI; Mouton-Simien et al. 1997) for the age range from 12-41 months, Temperament and Atypical Behavior Scale (TABS; Bagnato et al. 1999), Child Behavior Checklist (CBCL; Chenbach and Rescorla, 2001); Infant-Toddler Social-Emotional Assessment (ITSEA, Carter and Briggs-Gowan, 2006); Baby and Infant Screen for Children with Autism Traits (BISCUIT, Matson et al. 2009); the Behavior Assessment Scale

for Children-2nd edition (BASC-2; (Reynolds & Kamphaus, 2004); Diagnostic and Statistical Manual for Primary Care (DSM-PC) Child and Adolescent Version (Wolraich et al. 1996), Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision. Washington, DC: APA, 2000.

1.9.3: Role of the teachers or primary learning helper

After the parents children spend most of their time with their teachers in school. Teachers play another vital role in understanding children's emotional and behavioral difficulties and smoothness. Teachers have the influence on the students proves as long-lasting as the children see them performing something different and shows a position where they exercise a power position. Their accountability also has a great effect on the children

- Being very mindful regarding their own emotional level and behavioral presentation
- Mindful observation about the children
- Having regular connection with the parents of the children
- Having a clear concept regarding the developmental milestone.

Some widely used teacher's measures for behavioral and emotional problems in children are Strengths and Difficulties Questionnaire (SDQ; Goodman in J Am Acad, 2001; BASC-2 Behavioral and Emotional Screening System (BESS; Kamphaus and Reynolds in Behavior assessment system for children-second edition: behavioral and emotional screening system. Pearson, Bloomington, 2007)

1.9.4 Current assessment tools used in Bangladesh

In Bangladesh to develop different assessment tools for the early childhood is a huge area of working as there is only some adapted and translated tools to assess the mental state of the young children. There is no specific tool to assess the behavioral and emotional issues

combindly during the early childhood. Only few tools are used to assess the behavioral and emotional state for the young children like:

i) Child Behavior Checklist, Bengali version of Teacher's Rating Form

To assess the childhood behavior problems of school children (ages 4-18) the teacher's version of Child Behavior Checklist (CBCL), the Teacher's Rating Form (TRF) is very effective and widely used instrument (Barkley, 1988). In 1986 Achenbach and Edelbrock was developed this rating instrument. Briefly, they created two clusters of different behavioral issues and classified all the behavioral issues in two different clusters like- internalizing and externalizing behavior problem.

Although TRF was developed in America, many researches have been conducted to study the effectiveness of the scale in assessing children's behavioral issues. All the studies found that, in both developed and developing country this tool can measure behavioral and emotional issues of the children successfully.(Achenbach et al., 1985; 1990; Bird et al., 1988; Weisz et al., 1987).It was also found to be suitable to assess the same construct for the children of Bangladesh (Begum, 1993).

ii) Strengths and Difficulties Questionnaire (SDQ)

SDQ is another behavioral screening standardized questionnaire for measuring emotional and behavioral disorders in children and adolescents ranging from 4 to 16 years of age (Goodman, 1997; Mullick & Goodman, 2001). It has the parent version, teacher version and a self report questionnaire for children aged 11 years or above (Goodman, 1997).It consists of five subscales: conduct problems, hyperactivity-inattention symptoms, and peer relationship problems and pro-social behaviors. The 25 items in the SDQ comprise 5 scales of 5 items each. The respondent needs to rate the 25 items using a 3 point Likert scale (Not

true, somewhat true and certainly true) based on the child's behavior over the last six months. For each of the 5 scales the score can range from 0- 10 if all 5 items were completed. Scale score can be prorated if at least 3 items were completed. The Total Difficulties Score is generated by summing the scores from all the scales except the prosocial scale. The resultant score can range from 0-40.

Some other tools named Bayley Scales of Infant Development-II (BSID- II), Monowara Parveen, Syed Tanveer Rahman, Shaheen Islam, Sultana Sarwatara Zaman, Jena Hamadani, Naila Zaman Khan (2014), The Conners Comprehensive Behavior Rating Scale are also used to measure behavioral and emotional issue in children.

1.10 Early Childhood Intervention

The identifications in difficulties in behavior and emotion Early Childhood Intervention (ECI) serves the system through which the physical, emotional and behavioral growth in early ages of any children can be understood. Early childhood intervention also refers the process through which the deficits in a child can be prevented in emotional, physical and behavioral level or through the intervention any disability can be detected properly in a child, if existed. Early childhood intervention is also plays a vital role to design the therapy for the children with special need. Apart from that there are other functions of Early Childhood Intervention for the special need children

The need of creating awareness of positive child rearing practices in the early years of life by the psychologists in the beginning of late 1930's was the concerning ground of flourishing the early childhood intervention. Initially was only for the nursery and preschool going children gradually it has maybe it place to work with the children on different age. The aim of the early child intervention is to understand whether the child needs any kind of special help or care from the different other stakeholder of the society. Early child intervention also

give the stake holder of this particular state do understand the emotional of a child from a very early ages as they are not so sure or practiced culturally to speak up their own emotional state.

1.11: Review of the literature

Many valuable research works has been done regarding the assessment on the emotional and the behavioral factors of the children. Some reviews of those researches can make the importance of these issues regarding this topic more highlighted.

Susan B. Campbell conducted a research to identify the cause of Behavioral Problems in Preschool Children in January 1995. The research finding indicated that Negative, inconsistent parental behavior and high levels of family adversity have a positive correlation with the emergence of behavior and emotional problems in early childhood and predict their persistence in school age.

In 1999 Paul. R. Amato & Fernando Rivera have done a study, to find out the correlation between the parental involvement and child's behavior problem. They found that, for children's behavior problems paternal and maternal involvements were independently and significantly associated.

A multivariate analysis of emotional and behavioral adjustment and preschool educational outcomes was conducted by Fantuzzo, J., Bulotsky, R., McDermott, P., Mosca, S., & Lutz, M. N. in 2003. They found that, focusing on positive behaviors of the children rather than highlighting the negative behaviors improves the tendency of doing positive behaviors within the pre-school children.

In 2003, National Institute of Child Health and Human Development, Early Child Care Research Network conducted a research which gave the explanation that, during the first 5 years of life if children spent more time with any of a variety of non maternal care, the

more behavior problems and disobeying the adults they manifested during the kindergarten age.

Golden, J. A. (2007) did a study on Children with behavioral and emotional problems. He wanted to know that, is the behavior of a child explained only by complex learning or there is an impact of internal motives to do that behavior. Result showed that, both have a great impact on the behavior pattern of a child.

Egger HL, Angold A (2006) conducted a study to identify the common behavioral and emotional problems within the preschool children. The result showed that, within the age range from 0-5 years 8%- 10% children have different behavioral, emotional and social relationship problems.

Parenting style and parental emotional expression has a great impact on the emergence of behavioral and emotional problem within the children. To identify the correlation Duncombe, M. E., Havighurst, S. S., Holland, K. A., &Frankling, E. J. (2012) conducted a research. The result showed that, inappropriate parenting practice and emotional expressiveness had a significant positive relationship with the disrupted behavior of children.

In another body of literature explained that early parental care has a significant correlation with antisocial behavior in adolescence. The permissive and authoritarian parenting is positively correlated with antisocial behavior (Ehrensaft et al., 2003;Knutson, DeGarmo, & Reid, 2004; Narusyte, Andershed, Neiderhiser, &Lichtenstein, 2007; Reti et al., 2002; Roche, Ensminger, &Cherlin, 2007;Smith & Farrington, 2004; Thornberry, Freeman-Gallant, Lizotte, Krohn, &Smith, 2003).

In 2017 LixinRen and Xiao Zhang, conducted a study on 109 Chinese children, aged approximately 3 years. The focus of the study was to examine how paternal parenting interacted with child temperament (i.e., negative emotionality and persistence) and children's internalizing and externalizing problems. The supportive and aversive paternal parenting

practices were reported by fathers, and the child temperament and behavioral problems were reported by both mothers and fathers. The researchers found that, paternal aversive parenting interacted with temperamental emotionality and persistence to predict children's externalizing problems.

Another finding was, the children who were more emotionally reactive and had poor attention span were more vulnerable to aversive parenting from father.

A recent study in rural Kenya by Matthew C H Jukes, Michael T Willoughby, 2017 it was found that, the rate of behavioral problems in preschool children was high.(420 of 3273, 13%) of the children showed externalizing problems and 22% showed internalizing problems.

The BASC-2 *Behavior and Emotional Screening System* was designed to provide a systematic and efficient way to evaluate a child's or adolescent's current risk of having problems with behavioral or emotional functioning. The standardization of the BASC-2 Teacher Scale, Parents Response Scale and Self-Report of personality was conducted from August 2002 through May 2004. More than 12000 teacher, parent and students forms, collected from 233 cities in 40 states, were completed for the study. Children and adolescents from various settings participated, including public schools, private schools, mental health clinics and hospitals, preschools and daycares.

Some other studies that have influence over the development of the BASC-2 *Behavior and Emotional Screening System* may include-

Reynolds, C. R., & Kamphaus, R. W. (1992) worked with *Behavior Assessment System for Children*.

McEvoy, A., & Welker, R. (2000) found a strong positive correlation between academic failure and anti- social behavior as means of behavioral and emotional problems and the onset of behavioral and emotional problems was the early childhood.

In 2003, Fantuzzo, J., Bulotsky, R., McDermott, P., Mosca, S., & Lutz, M. N conducted a multivariate analysis of emotional and behavioral adjustment and preschool educational outcomes.

At the year of 2003 Flanagan, K. S., Bierman, & Kam, C. M. try to identify at-risk children at school entry by indicating the usefulness of multi behavioral problem profiles.

The Conduct Problems Prevention Research Group and Hill, L. G., Lochman, J. E., Coie, J. D., Greenberg, M. T., (2004) conducted a study to identify the effectiveness of early screening for externalizing problems.

At the year of 2004 they also conducted research on *Behavior Assessment System for Children (2nd edition)*.

Kamphaus, R. W., & Frick, P. J. (2005) worked with the Clinical Assessment of Children's personality and behavior (2nd edition) which had a great impact on the development of BASC-2, BESS later.

DiStefano, C. A., & Kamphaus, R. W. (2007) works for the Development and validation of a behavioral screener for preschool-age children.

Development and predictive validity of a teacher screener for child behavioral and emotional problems at school was a study conducted by Kamphaus, R. W., Thorpe, J. S., Winsor, A. P., Kroncke, A. P., Dowdy, E. T., & Van Deventer, M. C (2007).

After the development of the BASC-2 (BESS) many researchers has already done many review works on Behavior and Emotional Screening System for children.

The Universal screening program for behavioral and emotional problems was implemented by Dowdy, E. (2008, February).

DiStefano, C., Kamphaus, R.W., & Dowdy, E. (2009, August) worked with Validation of the Behavioral and Emotional Screening System for behavioral and emotional problems in elementary school.

The Author (2010), Test review of the BASC-2 Behavioral and Emotional Screening System.

For the factor structure of a teacher-rated screener for emotional/behavioral risk Chin, J., Mays, K., Twyford, J., & Dowdy, E. (2010, August) worked with. They decided to include items related to adaptive skills, externalizing problems, internalizing problems, school problems to assess the behavioral and emotional problems.

Chin, J., Twyford, J., Eklund, K., & Dowdy, E. worked at 2010 for identifying the Gender differences in teacher/parent screenings for emotional/behavioral risk, 2010, March, where the rate of aggressive behavior was higher in male children and emotional disturbance was higher within female children.

To revise the factor structure of BASC-2, Behavioral and Emotional screening Dever, B., Mays, K., Kamphaus, R.W., & Dowdy, E (2010) worked with the Teacher Form, Child/Adolescent form.

To clarify the Psychometric properties, practical implications, and future directions a factor analytic investigation of the BASC Behavioral and Emotional Screening System Parent Form has been done by Dowdy, E., Chin, J., Twyford, J., & Dever, B. (2011) .

1.11.1 Related Research Works of Bangladesh context

A study was conducted by Rahman, (2008), where the sample were 200 children of sex workers in Bangladesh, age range from 6- below 12. Child Behavior Check List (CBCL) was used as the measurement tool. From the results it showed that 53.5% of children of the total sample scored with behavior problem at CBCL.

By using the TRF (Teacher's Rating Form Azad (2006) conducted a study on 300 primary school children in Dhaka city. The age of the participants was range from 6 – 10

years. The results indicated that 10.33% of children fall in the clinical range of behavior problem scores.

In Dhaka city a study was conducted by Parveen (2001) on child's behavior problem. Sample's age range was from 6 – 16 years. She found that in Dhaka city percentage of behavioral problem within the children lives with family was 15%. In the case of institutionalized children and trafficked children the percentage was 45% and 75%.

Hoque (1999) conducted a study at Tongi Correction Centre of Dhaka. The study found that among the male juvenile offenders (age ranged from 10-18 years), the prevalence rate of disruptive behavior disorder, such as-conduct disorder, attention deficit hyperactivity disorder and oppositional defiant disorder was 86 percent. On the other hand, the prevalence rate for emotional disorder like anxiety and depression was 29 percent.

In 1998 a study was conducted on the problems of adolescent in Bangladesh by Chowdhry and Afrose. The study found that, within the total sample 35% has social problems, 45% adolescent have academic problems, 35 % have psychological problems.

In Dhaka city the children with a age range of 11- 16 years children have conduct disorder, emotional disorder, hyperkinesis and other problem with the percentage of 24%, 52%, 10%, 20%. The researcher has used the Bengali translated version of 'Strengths and Difficulties Questionnaire' (SDQ, Goodman et al., 1998; 2000).

Begum (1994) conducted research on both parents and teachers to identify the gender difference in behavioral and emotional problem. They reported that, than girls boys have significant more behavior problems ($p < .001$).

Begum (1993) conducted the research by using Childhood Behavior Check List (CBCL) and Teacher's Response Form (TRF) to identify the behavior problems within the children. The number of sample was 627 (341 boys and 286 girls). The research was conducted in Dhaka city, Bangladesh. To identify the range of behavioral and emotional problems mothers reported 11.8 % of boys and 10.7% of girls and teachers reported 12.8% of boys and 11.2% of girls to have behavioral problem in the clinical range.

The prevalence of behavior impairments was 14.6% within the rural children age range from 2-9 years and those behavior problems were significantly predicted by malnutrition (Naila Z. Khan; ShamimFerdous; RobiulIslam;Afroza Sultana; Maureen DurkinHelen McConachie2009).

1.12Rationale

Bangladesh is a developing nation with an estimated population of 157.8 million people as on July 2017 according to the website of CIA, of whom 27.76% are under age of 15 years. That estimates nearly 43.81 million children. Considering the prevalence rate(11–21%) of at least one psychiatric disorder in 5- to 10 year old Bangladeshi children(Mullick& Goodman, 2005).Parental pressure and expectations, academic competition, admission tests, strict rules, both parents are working and all the reasons may have strong relation with the behavioral and emotional disturbance in early childhood. The common occurrence of distressing events and their emotional effects among children and adolescents and emphasized the need to develop useful and reachable mental health services for Bangladeshi children and adolescents. It is highly likely that children from developing countries are more vulnerable to distressing experiences and more likely to suffer a variety of psychological difficulties than children from developed countries (Kendler et al., 2010; Patel, 2007; Patel et al., 2007). Therefore, it is of utmost urgency to adapt and validate easy to administer instruments for detection of

behavioral and emotional problem during the early childhood, which will give the opportunity to develop a behavioral intervention plan as preventive manner. As behavioral and emotional problems, is affected by culture the assessment tools have to be psychometrically valid for that culture. In Bangladesh, only a few studies have been carried out in the area of preschool child's behavioral and emotional disturbance and majority of which are with school going children and in the rural area. Only two behavioral and emotional scales for children have been translated in Bangla to use for research and/or clinical purpose whereas there are more than a half dozen of psychometrically sound behavioral and emotional measuring instruments for preschool children is available in developed countries.

As a developing country of Asia, Bangladesh needs to turn its huge population into human resource. But certainly it cannot be achieved with children with behavioral and emotional problems, because they are turning into adults suffering from anxiety and other psychological disorders. Hence, it is important to develop programs with the aim of preventing the enormous economic, personal and social cost of behavioral and emotional difficulties for children and the community. Well-developed measures of behavioral and emotional difficulties and intervention programs will help the preschool children to overcome their issues and move towards a positive development in a most effective way. The few educational/counseling/clinical psychologists working in school and hospital setting can make the use of this tool to identify the behavioral and emotional issues in early childhood to plan for a preventive strategy.

The *BASC-2 Behavior and Emotional Screening System* assess the behavioral and emotional functioning of children and adolescents. This measure may be to identify behavioral strengths and weaknesses in children and adolescents, or to identify individuals

who may be in need of further intervention. By adapting this screening system in bangla it will be useful for the related professionals in identifying behavioral and emotional problems early that allows for the delivery of timely prevention and intervention services to children, their schools, and their family. With this view the researcher felt the need to adapt the Teacher Preschool Form and The Parent Preschool Form because scientific evidence states that, early childhood (the first five years) is the foundation period to build the social competence and positive behavior and emotional pattern of a child. This has a strong link to the emotional well-being and functional adaptive ability and maintenance of successful relationships throughout the life. Early identification of behavioral and emotional problems of preschooler's providing the direction for a successful early intervention effort to deal these problems (e.g., Murray 2010; Nixon 2002; Shaw et al. 2006).It is expected that these tools can be a resource for the clinicians working with children in mental health arena of Bangladesh.

1.13: Objective of the Study:

The general objective of the present research was to adapt and validate Behavioral Assessment System for Children- 2, Behavioral and Emotional Screening System (BASC-2, BESS)to measure behavioral and emotional problems in preschool children of Bangladesh.

The specific objectives of the general objective include the adaptation and validation of two subscales or forms of BASC-2, BESS to use in Bangladesh namely:

- i) The Teacher Preschool Form
- ii) The Parents Preschool Form

Method

2.1 Participants

For adaptation purpose a total number of 400 participants were finally selected. 200 teachers of pre- school level were included for the adaptation of the Teachers Preschool Form, where all the teachers were female. They were selected from different kindergartens, pre- schools, day care Centre's of Dhaka city. Their age range was from 24 years to 36 years with an average age of 28 years ($SD=2.10$).

For adapting the Parent Preschool Form 200 parents were included. The parents were selected from kindergartens, pre-schools daycare centers, and also from the family setting of Dhaka city. The parents were selected from different socio- economic backgrounds. Among them 130 were mothers and 71 were fathers. The fathers' age range from 30 to 45 year (mean age =34, $SD =5.55$). The mothers' age range from 23 to 34 years (mean age = 33, $SD=6.23$)

Table 2.1 *Distribution of participants according to age, sex and family type*

		Teacher Preschool Form	Parent Preschool Form
Children 3-Below 4 Age	Male	46	53
	Female	53	43
Children 4-5 Age	Male	49	55
	Female	53	49
Participants Sex	Male	0	86
	Female	201	114
Participants Family Type	Nuclear	161	69
	Joint	40	128
	Other	0	3

Table 2.2 *Distribution of participants according to educational qualification*

Education Level	Teacher Form	Percent	Parent Form	Percent
O – HSC	0	0	5	2.5
Honor's	52	25.9	68	34.3
Masters or above	148	73.6	125	63.1
Missing	1	.5	2	1
Total	201	100	200	100

2.2 Sampling technique

Convenience sampling procedure was used to select the participants i.e. those who voluntarily agreed to participate in the study. The inclusion criteria for the participants were the parents and teachers of children from 3-5 years. No children diagnosed with any other mental issues or neuro developmental disabilities were not included. Only the parents and educational institutes gave consent to the research were included.

2.3 Recruitment

Different pre-schools were approached for the conduction of the study. An official letter from the Department of the Educational and Counselling Psychology (DECP), University of Dhaka was given to the school authorities for their approval for the study. Upon the approval of the school principals and parents were approached and they were briefed about the study. Finally, a consent form was signed by the parents and teachers who participated in the study.

2.5 Measures

A. **BASC-2 Behavioral and Emotional Screening System**, (Kemphaus R. W., & Reynolds C. R. 2007). **Teacher Preschool Form**

BASC-2 (BESS) is designed to determine the behavioral and emotional strengths and weakness in children and adolescents in preschool through high school. It was developed by Kemphaus R. W., & Reynolds C. R. (2007). The measure was formed on a total sample of 12,350 individuals (3300 students, 4450 teachers, and 4600 parents) from 233 cities in 40 different U.S states. The BASC -2 BESS offers numerous features that make it an efficient and effective way to identify behavioral and emotional problems in children and adolescents. It consists of brief screening measure that can be completed by teachers, parents, and students including the following:

- A teacher form with two levels: Preschool (for ages 3 through 5) and Child/ Adolescent (for grades K through 12).
- A parents form with two levels: Preschool (for ages 3 through 5) and Child/ Adolescent (for grades K through 12).
- Student form with one level: Child/ Adolescent (for grades 3 through 12)

The Teacher Preschool Form assesses the Anxiety (item number- 11, 21), Aggression (2, 4, 13, 16), Attention problems (1, 8, 20), Depression (3, 7, 10, 14, 23, 25), Hyperactivity (6, 15, 18), Social skill (5, 12), Functional communication (9, 17, 19), Adaptivity (22, 24) of a child. It has 25 items. The measure is highly reliable and valid. The split-half reliability is 0.93-0.95. The test-retest reliability for Teacher Preschool Form is 0.80. Correlation values adjusted for sample variability are high, ranging from .71 for the Teacher form. (Cohen et al., 2003). To identify the construct validity total score from the teacher form was compared with the results obtained from several other instruments that measure different types of behavioral

and emotional problems. The correlation between BASC- 2 BESS Teacher Form and the ASEBA TRF, $r = .76$

B. Parent Preschool Form

The numbers of items in Parent Preschool Form are 30. The items are arranged into different domains of behavioral and emotional issues at early childhood- Attention problem (item number 1, 8, 15, 20), Aggression (2, 4, 13, 16, 24), Depression (3, 7, 10, 14,), Social skill (5, 9), Hyperactivity (6, 18, 26, 29), Functional Communication (17, 19), Anxiety (11, 21, 23, 28), Adaptivity (22, 27), activity of daily living (25, 30). Here the respondents rate the items using a four-point rating scale, corresponding to responses of Never, Sometimes, Often, and Almost Always.

The measure is highly reliable and valid. The split-half reliability is 0.90-0.97, test-retest reliabilities for parents preschool form is 0.80. Correlation values adjusted for sample variability (Cohen et al., 2003) are high, ranging from .71 for the Teacher, Child/ Adolescent Form to .83 for the Parent Preschool Form. Further studies have reported internal consistency reliabilities (alphas) of 0.71-0.90. The authors report evidence of discriminative validity, predictive validity and exemplary convergent validity. Renshaw et al. (2009) reported evidence of discriminative validity and extensive convergent validity. The BASC- 2 BESS showed good convergent validity, with another parent measure like Achenbach System of Empirically Based Assessment, Child Behavior Check List (ASEBA CBCL). To determine convergent validity of the Parent Preschool Form, the total score was correlated with other reports. The total Parent Preschool Form had significant correlation with both the ASEBA CBCL-internalizing (0.66 in the behavioral and emotional disordered group) and externalizing subscales (0.82 in the behavioral and emotional group) (Cohen et al., 2003).

C. Bangla version of Strengths and Difficulties Questionnaire (SDQ)

SDQ is another behavioral screening standardized questionnaire for measuring emotional and behavioral disorders in children and adolescents ranging from 4 to 16 years of age (Goodman, 1997; Mullick & Goodman, 2001). It has the parent version, teacher version and a self report questionnaire for children aged 11 years or above (Goodman, 1997). It consists of five subscales: conduct problems, hyperactivity-inattention symptoms, and peer relationship problems and pro-social behaviors. The 25 items in the SDQ comprise 5 scales of 5 items each. The respondent needs to rate the 25 items using a 3-point Likert scale (Not true, somewhat true and certainly true) based on the child's behavior over the last six months. For each of the 5 scales the score can range from 0- 10 if all 5 items were completed. Scale score can be prorated if at least 3 items were completed. The Total Difficulties Score is generated by summing the scores from all the scales except the prosocial scale. The resultant score can range from 0-40.

D. Demographic information sheet

2.6 Procedure

For translation and cultural validation Sousa and Rojjanasrirat (2011), prescribed guidelines were followed. Before proceeding permission was taken from the author

Ensuring construct equivalence

At first, it was determined if the key terms (Behavior and Emotional problems) carried the same meaning in our culture and in United States, where the scale was developed. To determine this term it was discussed with some subject matter experts. It was discussed with an Associate Professor of Department of Educational and Counselling Psychology,

University of Dhaka, an Expert in disability and their management, and a Psychologist working with early childhood. After having few numbers of discussions with them the concept equivalence was ensured.

Step 1. Translation of the BASC- 2, BESS (Preschool parent and teacher version) into Bangla (Forward Translation)

Four translators were assigned to translate the English BASC- 2, BESS into Bangla. They were fluent in both Bangla and English language. They have in-depth experience regarding both the culture and have a distinct background. Two translators were experts in psychological terminology and the content area of the construct (one associate professor from the department of educational and counseling psychology and one lecturer from department of psychology). The other two were not from the arena of psychology but familiar with colloquial phrases, jargons, and idiomatic expressions (one lecturer from BRAC Institute of languages, one lecturer from English department of Jagannath University). Each one was given the Parent Preschool Form and Teachers Preschool Form to translate.

Step 2. Comparison of the translated versions of the scale: synthesis I

After the translation an expert panel consisting of an independent translator, the researcher, and other two subject matter specialists compared the translated version with the original scale. The instructions, the items and the response format of four sets of forward-translated versions were compared. They checked ambiguities and discrepancies of words, sentences, and meanings. Few modifications were made according to the consensus regarding the translation and thus 1st draft of BASC-2, BESS was prepared.

Step 3. Blind Back Translation (Bangla to English)

Again two sets of bilingual translators with distinct were assigned separately to translate the Bangla BASC-2, BESS to its original English language. They were completely blind to the original version. In each set one was the subject matter expert and the other one was the language expert. They produced English version of BASC-2, BESS independently.

Step 4. Comparison of two sets of back-translated versions: Synthesis II

The same expert panel strengthen with another research expert in the same field were again examined the back-translated four versions regarding format, wording, the grammatical structure of the sentences, the similarity in meaning, and relevance. Any ambiguity and discrepancies concerning each of the back-translations and the original scale were discussed and resolved through consensus among the panel members to derive at a pre-final version of the scale. Hence, the 2nd draft of bangla BASC-2 BESS was produced.

Step 5. Pilot testing of the pre-final versions of the Bangla BASC-2, BESS (cognitive debriefing)

The pre-final Bangla BASC-2, BESS was pilot tested among 30 parents and 30 teachers of 3-5 years children to evaluate the instructions, response options, and the items of the scale for lucidity. Each participant is asked to rate the instructions and the items using adichotomous scale i.e. clear or unclear. The items or instructions that were marked as unclear were asked to provide suggestions on how to rewrite the statements to make the language clearer. The instructions, response format and the items that are found to be clear by at least 90% of the sample were retained and those found to be unclear by at least 10% of the sample were re-evaluated. These were scrutinized by an expert panel of 4 members consisting of the researcher, and other 3 members (two educational psychologists and one university teachers of psychology) who were knowledgeable about the content areas of the construct

and the target population. Their mother tongue was Bangla. The minimum inter-rater agreement required was 80% regarding the instructions, response format, and the items. One item was found to be unclear by 20% of the panel members which was revised and re-evaluated. Thus the newly translated and adapted Bangla BASC-2, BESS was prepared.

Step 6. Field test (Psychometric testing in a sample of the target population)

The field test was carried out to determine the reliability and validity of the Bangla version of the BASC-2, BESS. The field test was carried out on 200 parents of 3-5 years children and 200 teachers who are working with early childhood.

The flowchart of the adaptation process of BASC-2, BESS is presented in figure 2.1.

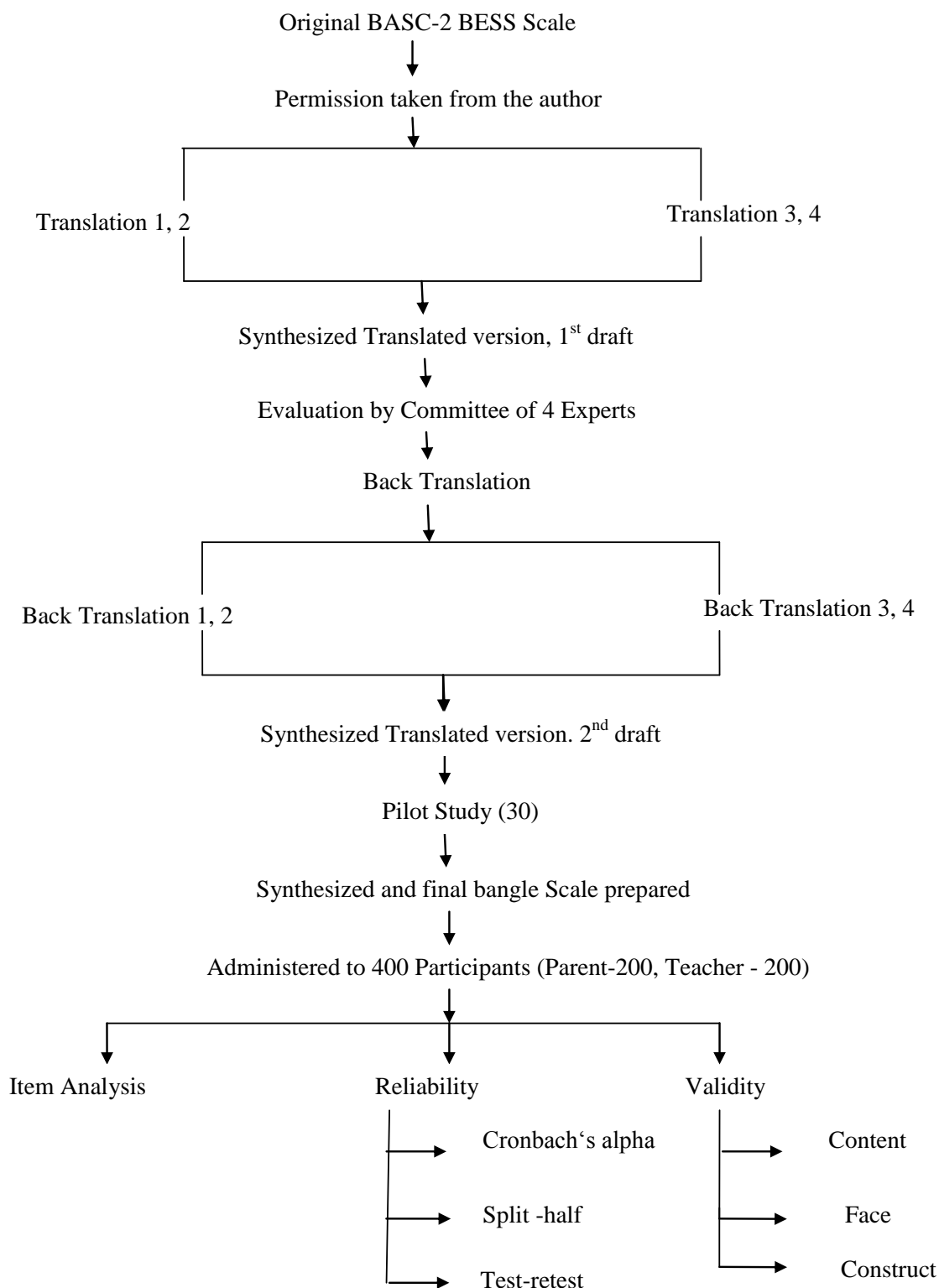


Figure 2.1: Procedure of Bangla Adaptation of BASC-2, BESS

2.7 Data Collection

Data collection tool contained one demographic information sheet, the Bangla BASC-2, BESS and Bangla version of Strengths and Difficulties Questionnaire (SDQ). Permission was taken from the school authorities to collect data. Written consent from the parents and teachers were obtained before participating in the study. The researcher was present during all the administration in order to assist any of the participants who faced difficulties in completing the scales. The participants were verbally instructed to respond to each item by indicating how frequently the statement is true for the selected child. Here the respondents were rate the items using a four-point rating scale, corresponding to responses of Never, Sometimes, Often, and Almost Always .The researcher ensured that there is no right or wrong answers. To measure the test- retest reliability the Bangla BASC-2, BESS was administered within the same participants. During the reset period the numbers of participants for the parent form were 90 and the numbers of participants for the teachers form were 126. The number of participants decreased due to 4 preschool authority's withdrawal of the permission to conduct the retest as they had different official issues (exam, class party, writing workshop for the parents).

2.8 Data processing and analysis

All data were analyzed by computer program SPSS version 18. The data analyses were done in several steps. At first all responses were screened manually to detect incomplete/ambiguous data. Descriptive statistics were calculated for a description of the data. To determine the reliability of the Bangla BASC-2, BESS, internal consistency (Cronbach Alpha) and test-retest reliability were calculated. To determine the construct validity Pearson correlation was calculated among the Bangla BASC-2, BESS and the Bangla SDQ.

Results

Table 3.1: *Descriptive Statistics of BASC-2, BESS (Teachers Preschool form and Parents preschool form)*

	N	Sex	Mean	Std. Deviation
Teacherpreschool form of Behavioral and Emotional Screening System (BASC-2,BESS) N= 200 teachers	95	Male Child	27.27	17.17
	105	Female Child	25.15	14.59
	200	Total	26.15	15.86
Parents preschool form of Behavioral and Emotional Screening System (BASC-2, BESS) N= 200 parents	108	Male Child	26.39	7.98
	92	Female Child	28.14	8.84
	200	Total	25.64	8.41

Descriptive statistics of the Teacher Preschool Form of BASC-2, BESS showed that the mean score for all 200 respondents was 26.15 with a standard deviation of 15.86. For male children (M=27.27, SD=17.17) mean score respectively higher than the female (M=25.15, SD=14.59) children. The lowest possible score was 0 and the highest possible score was 75. From the Parent Preschool Form of BASC-2, BESS showed that the mean score for all 200 respondents was 25.64 with a standard deviation of 8.41. For male participants (M=26.39, SD=7.98) mean score respectively lower than the female (M=28.14, SD=8.84) participants. The lowest possible score was 0 and the highest possible score was 90.

Table 3.2: *Descriptive Statistics of BASC-2, BESS (Teacher Preschool Form and Parent Preschool Form)*

	Family Type	N	Mean	Std. Deviation
Teachers form Items of Behavioral and Emotional Screening System (BASC-2, BESS)	Nuclear	161	26.46	16.32
	Joint	40	24.90	13.93
	Total	201	26.15	15.86
Parents form Items of Behavioral and Emotional Screening System (BASC-2, BESS)	Nuclear	69	25.74	8.70
	Joint	128	28.01	8.27
	Other	3	26.00	1.73
	Total	200	27.19	8.41

Descriptive statistics of the Teachers form of BASC-2; BESS showed that the mean score according to family type for all 200 respondents was 26.15 with a standard deviation of 15.86. Nuclear family (M=26.46, SD=16.32) mean score is respectively higher than the joint family (M=24.90, SD=13.93) participants. From the Parents form of BASC-2, BESS showed that the mean score for family type of all 200 respondents was 27.19 with a standard deviation of 8.41. Nuclear family (M=25.74, SD=8.70) mean score is respectively lower than the joint family (M=28.01, SD=8.27) participants.

3.1 Item analysis

Cronbach's alpha was found to be 0.974. Correlated item-total correlations were examined which are presented in Table 3.3. For majority of the items (except item number 2, 11, and 21) Cronbach's alpha did not increase. For the item number 2, 11 and 21 Cronbach's alpha values were .975 which is close to the whole scale Cronbach's alpha value of .974 indicating that they would not degrade the overall quality of the scale. The expert panel revised items 2, 11, and 21 and reached to a consensus to retain them in the main scale. Therefore no item

was excluded. Corrected Item-Total Correlation and Cronbach's alpha if Item deleted is presented in Table 3.3.

Table 3.3: *Teacher Preschool Form Item-total statistics and Cronbach alpha if the item is deleted.*

Teachers Form items of Behavioral and Emotional Screening System(BASC-2), BESS	Corrected item-total correlation	Cronbach's Alpha if Item Deleted
BASC-2, BESS(1)	.897	.972
BASC-2, BESS(2)	.581	.975
BASC-2, BESS(3)	.840	.973
BASC-2, BESS(4)	.875	.972
BASC-2, BESS(5)	.899	.973
BASC-2, BESS(6)	.809	.973
BASC-2, BESS(7)	.833	.973
BASC-2, BESS(8)	.666	.974
BASC-2, BESS(9)	.682	.974
BASC-2, BESS(10)	.832	.973
BASC-2, BESS(11)	.385	.975
BASC-2, BESS(12)	.814	.973
BASC-2, BESS(13)	.860	.973
BASC-2, BESS(14)	.888	.972
BASC-2, BESS(15)	.837	.973
BASC-2, BESS(16)	.868	.973
BASC-2, BESS(17)	.830	.973
BASC-2, BESS(18)	.837	.973
BASC-2, BESS(19)	.775	.973
BASC-2, BESS(20)	.781	.973
BASC-2, BESS(21)	.491	.975
BASC-2, BESS(22)	.695	.974
BASC-2, BESS(23)	.791	.973

BASC-2, BESS(24)	.702	.974
BASC-2, BESS(25)	.796	.973

For Parent Preschool Form Cronbach's alpha was found to be 0.833. Correlated item-total correlation were examined which are presented in Table 3.4. For majority of the items (except item number 6, 9, 21, and 27) Cronbach's alpha did not increase. For the item number 9 and 27 Cronbach's alpha values were .834 which is close to the whole scale Cronbach's alpha value of .833 indicating that they would not degrade the overall quality of the scale. The expert panel revised items 9 and 27 and reached to a consensus to retain them in the main scale. In the case of item number 6 and 21 Cronbach's alpha value were .835. The expert panel changes some words of those items and combined taken the decision to include the two items also. Therefore no item was excluded. Corrected Item-Total Correlation and Cronbach's alpha if Item deleted is presented in Table 3.4.

Table 3.4: Parent Preschool Form Item-total statistics and Cronbach alpha if the item is deleted.

Parents Form items of Behavioral and Emotional Screening System(BASC-2, BESS)	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
BASC-2, BESS(1)	.496	.823
BASC-2, BESS(2)	.398	.826
BASC-2, BESS(3)	.385	.827
BASC-2, BESS(4)	.271	.830
BASC-2, BESS(5)	.207	.833
BASC-2, BESS(6)	.096	.835
BASC-2, BESS(7)	.413	.825
BASC-2, BESS(8)	.334	.828
BASC-2, BESS(9)	.163	.834
BASC-2, BESS(10)	.431	.825
BASC-2, BESS(11)	.448	.824
BASC-2, BESS(12)	.390	.826

BASC-2, BESS(13)	.449	.824
BASC-2, BESS(14)	.332	.828
BASC-2, BESS(15)	.528	.821
BASC-2, BESS(16)	.492	.824
BASC-2, BESS(17)	.286	.830
BASC-2, BESS(18)	.460	.824
BASC-2, BESS(19)	.177	.834
BASC-2, BESS(20)	.432	.825
BASC-2, BESS(21)	.140	.835
BASC-2, BESS(22)	.326	.828
BASC-2, BESS(23)	.387	.826
BASC-2, BESS(24)	.531	.821
BASC-2, BESS(25)	.375	.827
BASC-2, BESS(26)	.460	.824
BASC-2, BESS(27)	.153	.834
BASC-2, BESS(28)	.202	.833
BASC-2, BESS(29)	.459	.824
BASC-2, BESS(30)	.240	.832

3.2 Reliability

Pearson correlation coefficient between BASC-2, BESS Test-1 and Test-2 scores with an interval of 15 days was significant, $r = 0.874$, $p < .001$.

Table 3.5: Reliability Coefficient of the Bangla version of BASC-, BESS.

Scale	Cronbach's alpha, reliability coefficient (N = 201)	Split-half reliability coefficient (Spearman -Brown)	Test-retest reliability coefficient (N = 126 for teachers form and N= 90 for parents form)
Teacher form items form Behavioral and Emotional Screening System (BASC-2, BESS)	.974**	.977**	.874**
Parent form items form Behavioral and Emotional Screening System (BASC-2, BESS)	.833**	.790**	.892**

** Correlation is significant at the 0.01 level (2-tailed).

From Teacher Preschool form of BASC-2, BESS high alpha coefficient value (0.974**) indicates of high internal consistency (Table 3.5). This finding was consistent with the original BASC-2, BESS Cronbach's alpha value (0.80-0.91). The split-half reliability coefficient value (0.977**) stated significant level of internal consistency of BASC-2, BESS. The test-retest reliability coefficient (0.874**) also showed satisfactory level of the scale over time.

It also showed that from Parents Preschool Form of BASC-2, BESS high alpha coefficient value (0.833**) was indicating of high internal consistency (Table 3.5). This finding was consistent with the original BASC-2, BESS Cronbach's alpha value (0.80-0.91). The split-half reliability coefficient value (0.790**) states significant level of internal consistency of BASC-2, BESS. The test-retest reliability coefficient (0.892**) also showed satisfactory level of the scale over time.

3.3 Validity

Content validity

A measurement has content validity when its items cover all aspects of the construct being measured. In the present study the construct being measured was the behavioral and emotional strengths and weakness of children in preschool. All the judges agreed that the teachers and parents items covered the dimension of behavioral and emotional strengths and weakness of children in preschool.

Construct validity

Construct validity is the degree to which a test measures the construct that it is supposed to measure. In other words, how well does the BASC-2, BESS measure the theoretical concept of behavioral and emotional strengths and weakness of children in preschool? There are two necessary components of construct validity: convergent and discriminant validity. In present study only convergent validity was determined.

Convergent validity

Convergent validity refers to the degree to which scores on a test correlate with (or are related to) scores on other tests that are designed to assess the same construct. In other word, it takes two measures that are supposed to be measuring the same construct and shows they are related.

To calculate convergent validity BASC-2, BESS scores were correlated with SDQ scores.

Table 3.6: *Pearson correlation for construct validity.*

Scale	Mean	Standard Deviation	Informant Rated Strengths and Difficulties Scale
Behavioral and Emotional Screening System (BASC-2, BESS) Teacher Preschool Form	26.15	15.86	.888**
Behavioral and Emotional Screening System (BASC-2, BESS) Parent Preschool Form	27.19	8.41	.647**

** *Correlation is significant at the 0.01 level (2-tailed).*

Results showed that there was a significant positive correlation between the BASC-2, BESS teachers item and the SDQ scale ($r = 0.888^*$, $N = 50$, $p < 0.01$). Results also showed that there was a significant positive correlation between the BASC-2, BESS parents item and the SDQ scale ($r = 0.647^*$, $N = 50$, $p < 0.01$). These findings were consistent with the calculated construct validity of original BASC-2, BESS which had a strong positive correlation with Achenbach System of Empirical Based Assessment (ASEBA), Child Behavior Check List (CBBCL), Achenbach & Rescorla, 2001.

Discussion

In the recent time mental health professionals are very much concern with the early childhood mental health. According to Centers for Disease Control and Prevention (2013) approximately 13 to 20 percent of children in the United States has been developed a mental health disorder each year. As early childhood involves the rapid development of a child there is a higher risk for emotional and behavioral difficulties, also the best time to make prevention and early intervention plan to reduce the behavioral and emotional problems in early childhood (Poulou, 2015). One important thing is that, during this period of the children any trauma, insecure attachment of child-caregiver can negatively affect neurodevelopmental processes that leads to social, emotional, cognitive, and/or behavioral problems (Perry, 1995).

Children identified with significant emotional and behavioral problems have difficulty in math and reading skill. Dropout rate is higher at high school, develop drug dependency issues. At the adulthood they face trouble in maintaining interpersonal relationships with others and with the life partner. (Benner, Kutash, Nelson, & Fisher, 2013; Frey & George-Nichols, 2003; Kutash, Duchnowski, Sumi, Rudo, & Harris, 2002; Landrum, Tankersley, & Kauffman, 2003; Mayer, Lochman, & Acker, 2005; Serpell, Hayling, Stevenson, & Kern, 2009). The present study addressed this issue. Studies have been carried out to adapt and validate assessment tools to measure behavioral and emotional problems in preschool children.

In accordance with the first general objective of the present study the Teacher Preschool Form and the Parent Preschool Form of BASC-2 BESS were adapted to use with Bangladeshi participants.

The BASC-2, BESS TeacherPreschool Form and Parent Preschool Form were adapted in this study for using it in Bangladesh.

A standard procedure (Saussa&Rojjanasrirat, 2011) was followed for the cross cultural translation and adaptation. Item analysis was carried out, and the reliability and validity of the bangla version scale were determined.

Item analysis indicated that, the bangla version of all the 30 items of parent form and 25 items of teachers form for the preschool level as good. The scale also showed high internal consistent reliability (Cronbach' alpha = .97) for the teachers form as well as the parent form Cronbach' alpha = .83 for the parents form. The present alpha value was very close to the original scale .90 for the composite scales (Kemphaus and Frick, 2005). Moreover, Spanish adaptation also showed good internal consistency, supporting the present findings (Assing, R, 1998).

The Bangla BASC 2, BESS had high temporal stability, $r = .88$ for Teacher Preschool Form and $r = .89$ for Parent Preschool Form at two weeks interval which was comparable to the original scale where test-retest reliability coefficient for both scale was $r = .80$ (Kamphaus, R, W., Thrope, J. S, Winsor, A. P., Kroncke, A P., Dowdy, E. T., & VanDeventer, M. C. 2007)

Subject matter experts ensured the content validity of the Bangla version scale. Correlation between BASC-2, BESS and SDQ indicated convergent validity of the adapted forms. The correlation coefficients between BASC-2, BESS and SDQ for teachers form were .89 and for parents form were .647. In the case of original BASC-2, BESS the Teacher form was highly correlated with ASEBA & Conners3 ranged from .70s- .80s. And the Parent form was also compared with the same measurements and found a correlation range from .70s - .80s (Community, 2011).

The descriptive statistics of the adapted Bangla version of Teacher Preschool Form of BASC-2, BESS found that, behavioral and emotional problems higher within the preschool boys than the girls, (mean score for male children was 27.27 and mean score of female children was 25.15). A study was conducted by Chen, Jennifer Jun-Li (2008) to identify the gender differences in externalizing problems among preschool children. The study found that, boys showed the higher rates of externalizing problems than girls. The study is supporting the current finding. From the teachers rating scale it was found that, aggressive behavior rate is higher in the male children than the female children. Among the pre-school children physical aggression is common behavioral and emotional issue than a girl child who were rationally aggressive.(Nida Khan and Nimisha Kumar, 2014). They also found that, the children who were more aggressive during his or her early childhood faced the problem in social competencies at their later life.

In the Bangla Version of Parent Preschool Form of BASC-2, BESS showed the picture that, female child had much more behavioral and emotional issues than a male child. Parents rated their female children more emotional than a male child. Mean score for male children 26.39, where the Mean score for female children 28.14. The girls got higher score in the items related to emotions from their parents. The University College London at 2018 found the similar result. The study found that, girls experience emotional difficulties more than twice of boys, while boys are significantly involved with behavioral problems.

One interesting observation from the adaptation was the rate of behavioral problem is higher in the joint family than the nuclear family setting. From the individual interview with the parent explained that, in the joint family the child is reared by different caregivers and the child are treated differently by the different caregiver. If this situation is occurred during the early childhood it had a great impact on the behavioral and emotional state of the children.

4.1 Limitation and future directions

Though the adapted Bangla version of the Teacher Rating Scale (TRS) and Parent rating Scale (PRS) of BASC-2, BESS has excellent psychometric properties, further studies should be carried out with a representative sample including both behaviorally and emotionally healthy children and children with diagnosed behavioral and emotional disorders, the finding of which can be used to develop a norm to diagnose preschool children in clinical setting.

In the study only one parent rated the behavioral and emotional state of the child. To get the valid holistic behavioral and emotional feature of the child both parents should be included. Further studies should be included by collecting data from both parents and teacher for each child can give the clear picture about the child.

Further studies should also investigate the discriminate validity of the scale and the psychometric properties of its subscales.

Another limitation of the study was not to develop any intervention tool for the behavioral and emotional difficulties in the preschool children. Further studies can focus on developing structured intervention tools to deal behavioral and emotional difficulties in early childhood.

The study had some limitations which are giving the future direction to work with it. At the same point the present research adapted and validated a widely used scale to measure behavioral and emotional problems in early childhood. This research can be used for various research and clinical purposes to assess preschool children's overall level of behavioral and emotional problems in Bangladeshi context.