

**Adaptation of Preschool Language Scale-4 (PLS-4) for Screening Language
Development of Bangla Speaking Children**

**A Thesis Presented to the Thesis Committee,
Institute of Education Development, BRAC University**

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Ethical Approval Form

Date: _____

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Title of Thesis Topic: **Adaptation of Preschool Language Scale-4 (PLS-4) for Screening Language Development of Bangla Speaking Children**

1. Source of population

2. Does the study involve (yes, or no)

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1. social risk
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1. Proposal
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The Research Checklist indicates:

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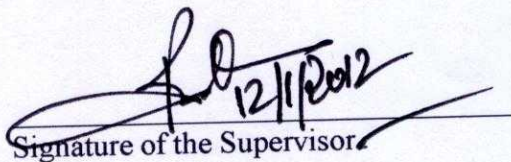
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EXECUTIVE SUMMARY

Language is the medium of communication and it is one of the important domains of children's overall development. "Language can be defined as a socially shared code or conversational system for representing concepts through the use of arbitrary symbols and rule-governed combination of those symbols" (Owens, 2001, p.7). Language refers to any symbol for the storage or exchange of information for communicative purpose and it includes not only expressive communication but also auditory comprehension (Coplan et al., 1982). Language development in children is a complex, dynamic and multidimensional process; children learn and develop new language skills step by step. Language screening of young children from socio-culturally and economically diverse backgrounds has been a challenging issue for researchers and clinicians. On average, children from minority backgrounds tend to score lower on standardized language tests than do the normative samples. These children were found to fail the screening test more often than would be expected (Washington and Craig, 1999).

There is a growing body of evidence in the literature suggest that language difficulties in children can impact on child's overall development. Screening enables different professionals (eg. Speech and Language Therapist (SLT), teachers or parents) to identify whether a child differs significantly in terms of his/her language abilities from a group of same aged children. But lack of instruments to screen children's language development is one of the key barriers professionals face when attempting to work on this issue. As a result of this issue, professionals have been working on the development of language measurement tools for several years. Among the many screening tools, one of the most widely used screenings is Preschool Language Scale-4 (PLS-4). The original Preschool Language Scale (PLS) was developed in 1969 because clinicians needed a diagnostic instrument capable of measuring the language development of young children (Zimmerman et al., 1992). Preschool Language Scale was based on the best available information about language development from the fields of psycholinguistics, human development and speech-language pathology. The scale proved to be especially useful for assessing early language development because it tapped a broad range of language skills. It is

quick and easy to administer and children enjoy the test tasks (Zimmerman et al., 1992). The Preschool Language Scale has already been translated and used in several countries as a valid instrument and it can also be considered as a valid instrument after adaptation in Bangladesh.

Screening of language development can provide future direction for developing better interventions. Therefore, a valid instrument for screening language development is vital. In Bangladesh, there is no developed tool to screen children's language development particularly for younger age group. So, it is very essential to develop a tool that can measure the language development of 2-3 years old children. Therefore, this study's aim was to provide qualitative and quantitative evidence on the relevance PLS-4 short form for 2-3 years old children to use in two villages in Bangladesh, as there was no language screening tool available in this region for this specific age group. This study therefore described a suitable procedure to adapt and translate standard screening instrument in close collaboration with the local community.

Observation method was used to ensure local validity of the adaptation and translation process. Consequently, the task's internal consistency (Cronbach's alpha) and content validity were assessed based on piloting among 20 children in two villages of Savar Upazilla under Dhaka district in Bangladesh. The key information from the qualitative data confirmed content validity of all 18 tasks covering auditory comprehension and expressive communication in PLS-4 short form. Quantitative analysis of the data revealed adequate internal consistency. The Cronbach's alpha for the Bangla version was 0.941 respectively. Pearson's correlation demonstrated with the fine process for translation and back-translation, the Bangla version of the PLS-4 short form appeared to have content validity and reliability to use in measuring children's language development. The availability of adequate Bangla adaptation of PLS-4 short form could stimulate the screening of language development in Bangladeshi children, particularly in those settings characterized by poor resources and instability. By providing locally relevant instrument-previously unavailable in this region- hoped to stimulate the screening of language development needs and associated risk and protective factors. Such continuing efforts could provide important evidence on the impact of delayed language development on the overall development of the children in this region. Nevertheless, this study may serve as an initial step towards appropriate cultural and linguistic adaptation and translation of language development screening instrument for the children in Bangladesh.

TABLE OF CONTENTS

CONTENT POINTS		PAGE NO
EXECUTIVE SUMMARY		i-ii
GLOSSARY OF TERMS		vi
LIST OF TABLES		vii
LIST OF FIGURES		viii
CHAPTER 01	INTRODUCTION	01-08
1.1	Introduction	01-02
1.2	Background and Literature Review	02-03
1.3	Rationale of the Study	03-04
1.4	Operational Definitions	05-07
1.5	Objectives of the Study	08
CHAPTER 02	METHODOLOGY	09-17
2.1	Preliminary Work	09
2.2	The Instrument	09
2.2.1	Preschool Language Scale-4 (PLS-4)	09-10
2.3	Methodology	10
2.4	Population of the Study	10
2.5	Setting of the Study	11
2.6	Sampling	11
2.7	Participant's Inclusion Criteria	11
2.8	Ethical Issues	12
2.9	Procedure	12

2.9.1	Adaptation Techniques	12
2.9.2	Determining Construct Equivalence	12
2.9.3	Translation	13
2.9.4	Formation of First Synthesized Version	13
2.9.4.a	Forward Translation	13
2.9.5	Discussion on First Synthesized Version	13
2.9.5.a	Observation	13-14
2.9.5.b	Panel of Experts	14
2.9.6	Formation of Final Pilot Version	14
2.9.6.a	Back-Translation to the Original Language	14-15
2.9.6.b	Review	15
2.9.7	Piloting	15-16
2.10	Quantitative Analysis	16
2.10.1	Item Analysis	16
2.10.2	Reliability Determination	16
2.10.3	Validity Determination	17
CHAPTER 03	FINDINGS	18-26
3.1	Sex Distribution of the Children	18
3.2	Age Distribution of the Children according to Age Group	18
3.3	Feasibility	18
3.4	Formation of First Synthesized Version	18-19
3.5	Observation Result on First Synthesized Version	19
3.6	Formation of 3 rd Synthesized Version	20-21
3.7	Back Translation and Formation of Final Pilot Version	22
3.8	Progression of Score according to Age (24-29 Month)	23

3.9	Progression of Score according to Age (30-35 Month)	23-24
3.10	Internal Consistency	24-25
3.11	Test- Retest Reliability	25-26
CHAPTER 04	DISCUSSION	27-30
4.1	Feasibility	27
4.2	Formation of First Synthesized Version	27-28
4.3	Observation on First Synthesized Version	28
4.4	Formation of Final Pilot Version	28-29
4.5	Progression of Score according to Age (24-29months)	29
4.6	Progression of Score according to Age (30-35 Months)	29
4.7	Internal Consistencies and Test-Retest Reliability	30
4.8	Content Validity	30
4.9	Implications	30
CHAPTER 05	LIMITATIONS	31-32
CHAPTER 06	RECOMMENDATIONS	33-34
CHAPTER 07	CONCLUSION	35
ACKNOWLEDGEMENTS		36
REFERENCES		37-42
ANNEXURE		43-51

GLOSSARY OF TERMS

BBS	Bangladesh Bureau of Statistics
PLS-4	Preschool Language Scale-4
PLS-3	Preschool Language Scale-3
PLS	Preschool Language Scale
SLT	Speech and Language Therapist
WHO	World Health Organization

LIST OF TABLES

Table 01: List of Tasks/Items with Ambiguity.....	19
Table 02: Synonyms and Others Name.....	20-21
Table 03: Deviated Tasks/Items.....	22
Table 04: Internal Correlation between the Tasks.....	25
Table 05: Test-Retest Correlation Reliability for PLS-4 after 5 Days.....	26

LIST OF FIGURES

Figure 01: Progression of Score according to Age (24-29 Months).....	23
Figure 02: Progression of Score according to Age (30-35 Months).....	23

1.1 Introduction

This study was undertaken for cultural adaptation of Preschool Language scale-4 (PLS-4). Language development is a complex process and it differs from child to child. It is important to have knowledge of typical language development in different languages and is essential when assessing language because language development may not progress in exactly the same way in different languages (Yliherva et al., 2009). Language development is one of the useful initial indicators of a child's overall development and cognitive ability. Identification of children at risk for delay or disorder may lead to interventions, increasing chances for improvement (Nelson et al., 2006). However, screening for language delay is not widely practiced in primary care system in Bangladesh. Yliherva et al. (2009) found that, in clinical work, standardized language tests and normative evaluation methods are often used to measure children's language abilities in vocabulary, syntax, morphology and other areas of language structure. However, more knowledge is needed on language development, and especially how a child uses language in different social contexts. Currently, in Bangladesh there is no standard test for screening the children's language development except Bayley and McCarthy language assessment but these are not adopted particularly for 2y to 3y old Bangla speaking children.

PLS-4 is a standardized language screening tool designed to provide the professionals (Speech and Language Therapist (SLT), teachers, parents, child development specialist) a means of screening the language development of children. It provides the indication about the landmark of children's language development (Zimmerman & Castilleja 2005).

Lack of instrument to screen or assess children put barriers on the professionals working to improve their growth and development particularly in the developing countries. Constructing a tool or instrument requires immense effort and has to go through an extensive process. Sometimes it becomes difficult to meet the expense for the massive project, manage the time period and availability of expertise. Therefore, cultural adaptation of an instrument allow the academic and intuitional researcher, who are working with large number of infants, children, adolescents and adults to determine a specific trend over a long period of time, be able to use a valid tool without much difficulty.

1.2 Background and Literature Review

Language is the medium of communication which is used to express ideas, knowledge, thoughts, feelings and opinions. It is essential in daily living as it works as a vehicle for exchanging views. To use language as a way of communication, children move developmentally through a series of milestones. Language development is a process which starts very early in human life and it is important to pay attention on the milestones of children's language development to identify any delay or deviation at the very early stages of life (Rescorla and Alley, 2001). The early detection of language problem is important, as this influence the overall development of a child (Luinge et al., 2006). Anam (1996) reported that there are a significant number of children in Bangladesh who have language impairments, delays or disorders and that is impacting on the ability to communicate. However, no specific study has been conducted in Bangladesh on language development of 2y to 3y old children. Literature on language development illustrates that, language screening and assessment is a vital source of information informing the intervention for children with language impairment (Streng et al., as cited in Anam, 1996). Screening provides information on a child's language ability as well as giving potential ideas about the suitability of any language intervention that the child and family or teachers need to help overcome the problems (Schirmer, as cited in Anam, 1996). The lack of a tool for screening makes it difficult for SLT, teachers and other relevant professionals to assess properly and give a diagnosis to the children (ibid). All these factors give importance to develop a reliable, valid, efficient and inexpensive screening tool for Bangla speaking children.

In order to develop a screening tool in any language, it is necessary to have knowledge and available information on that language particularly on the development milestones (ibid). Currently there is no information available on Bangla language development except the study of Anam (1996) which is provided information only on children's grammatical development (1.6y to 4y). After the adaptation it can be used as a more reliable tool for screening language development.

The task for the present study was to cultural adaptation of PLS-4 for 2y to 3y Bangla speaking children through translating the PLS-4 in Bangla language and to validate the PLS-4 through pilot testing to use in the specific community. This may offer a systematic means of screening receptive and expressive language of very young children with or without language impairment whose first language is Bangla.

1.3 Rationale of the Study

Bangladesh is a densely populated country with a population of about 160 million ("Country's Population", 2010). According to Bangladesh Bureau of Statistics (2004) in Bangladesh, about 15% of the total population is children (age between 0 to 5 years). Anam (1996) reported in her study that language delay or disorder is a common childhood problem and a large number of children are affected by different kind of language disorders. Specific language impairment is one of the most common childhood disorders of language, affecting 7% of children in USA (Castrogiovanni, 2008). It is estimated that 10% of the population in developing countries have some form of disability and Bangladesh is not an exception (Momin, 2003). Among that 10% of the Bangladeshi population approximately 4-5% has some type of communication impairment. So far as this researcher's knowledge goes there has not been any significant study on the number of children with language impairment with the exception of Nirafat Anam's study "The generation of a tool for screening the early grammatical development of Bangla speaking children and the potential use of this instrument in classes of hearing impaired children". Anam (1996) reported that "the number of children with language impairment in Bangladesh is huge and there is no established screening tool to assess the language development of children. So that, the early identification and intervention is difficult for the children with language

impairment". This study had been adopted a language screening tool which would contribute to early identification and assist in planning intervention for thousands of children in Bangladesh. Language development informs the screening process (Anam, 1996) as well as intervention and outcome measures (Shipley and McAfee 2004). "There are established screening tools in English and in some other languages and these are used as a diagnostic tool by different professionals such as: SLT and teachers" (Nelson et al., 2006). However, these tools are not appropriate for Bangla language because of the socio-economic, cultural, and linguistic differences. Children who demonstrate language impairment at an early age may also show behavioral problems, impaired psychological adjustment/emotional problems and other social difficulties at a later age that can impact on school achievement/academic learning and career opportunities. To minimize the likelihood of these later effects, it is important to identify the children who have a language impairment as early as possible and language screening tool can be the most useful and simple method to identify these children (Shipley and McAfee 2004).

The researcher anticipates that this study would provide a lot of useful information to support the language development of typical children as well as children with language impairments. There is a great vacuum in the research on typical language development in Bangladeshi children. This vacuum of knowledge therefore has highlighted a great importance for research in this field because of the vast number of children with language impairment. It is expected that this work would assist the SLTs, parents, primary/pre-primary school teachers and other relevant professionals who are involved in the field of health, disability, and education in Bangladesh. Finally, the findings of the study would contribute to the knowledge of planners, policy makers and others who make decision regarding the implementation of interventions for the children with language impairments and therefore; might have an impact on the overall wellbeing of the children.

1.4 Operational Definitions

1.4.1 Adaptation

The Oxford Advanced Learner's Dictionary (2002, p.14) defines 'adapt' as "to change something in order to make it suitable for a new use or situation" and 'adaptation' as "the process of changing something". In this research project PLS-4 has been adapted or changed in order to make it more suitable for screening the language development of Bangla speaking children (2y-3y). The working definition of adaptation is to modify the original PLS-4 and adopt the new one in relation to the Bangladeshi perspective.

1.4.2 Language Development

Language development of children is an ongoing process and this process is complex, dynamic and multidimensional (Vaidyanathan, 1995). Children learn and develop new skills phase by phase such as walking or talking as they grown up but none of these developments comes overnight (Owens, 2001). For example, a new born baby can only cry and smile to communicate. Then, over time the child gains greater control over his/her speech mechanism and start to make cooing sound, babbles and finally start to use meaningful word at the age of approximately one year. In other words, children reach in certain skills/abilities at expected ages and in an expected sequence. These specific skills are referred to as developmental milestones. Typically developing children generally reach milestones at about same age with the predicted progression although there are some individual differences (Owens, 2001 and Marshall & Warner, 1991). There are three components of language form, content and use but the two major processes that reflect the child's knowledge of language system are expressive language and receptive language. (Zimmerman et al., 1992).

Language development is an ongoing process which goes through a series of milestones. In this study language development of 2-3y old Bangla speaking children had been identified in expressive and receptive perspective.

1.4.3 Screening

Screening is a fast administrated procedure that allows the assessor to come to a quick decision regarding whether a child has a speech and language problem or not. It does not concern with either diagnosis or evaluation of the problem. Screening helps different professionals (SLTs, teachers or parents) to identify whether a child has language delay or not from a group of same aged children (Anam, 1996). "The process of screening aware professionals and caregivers to whether or not development milestones have been achieved and focuses attention on the child's development, the level of caregiver support, and on the child's self-esteem" (Nelson et al., 2006). Conduction of screening with large groups of children is very useful as it is quick and relatively inexpensive to administer (Anam, 1996). Screening can involve the use of questionnaires, developmental checklists, or brief tests (Klee and Fitzgerald, 1985). Nelson et al., (2006) reviewed 45 studies and came to the conclusion that there is no 'gold standard' for screening. In this study a screening tool (short form) has been developed for screening the language development (expressive and receptive) of Bangla speaking children which has been adopted from Preschool Language Scale-4 (PLS-4).

1.4.5 Preschool Language Scale-4 (PLS-4)

The Preschool Language Scale (PLS) was first developed in 1969 in the USA as a diagnostic tool which is capable of measuring the language development of children from birth to 6 years 11 months of age. The scale is useful for assessing children's early language development because it covered a broad range of language skills. It was quick and easy to administer and children enjoy the test tasks. The PLS was revised for the first time in 1979, the 3rd edition (PLS-3) was published in 1992 and the 4th (PLS-4) in 2002. There is also a Spanish version available (Zimmerman & Castilleja, 2005 and Zimmerman et al., 1992). "Changes to the scale included repositioned test tasks, clear administration directions and a simple scoring system based on a research and feedback from clinicians in variety settings" (Zimmerman & Castilleja, 2005 and Zimmerman et al., 1992). The PLS-4 is organized with two standardized subscales: Auditory Comprehension which assesses receptive language and Expressive Communication which

assesses language production. PLS-4 also has three supplementary measures: the Articulation Screener, the Language Sample Checklist and the Family Information and Suggestion Form (Zimmerman & Castilleja, 2005 and Zimmerman et al., 1992). It is not obligatory to administer any or all of the supplementary measures. The results get from the supplementary measures are not included into the auditory comprehension, expressive communication or total language scores, but provide independent supplemental about the child and his/her family. "PLS-4 also assesses behaviors considered to be language precursors. The precursors of receptive skills are evaluated within the auditory comprehension subscale with tasks that focus on attention abilities and the precursors to expressive skills are evaluated within the expressive communication subscale with tasks that focus on pragmatics and speech" (ibid). PLS-4 has been used widely in research examining language development of young children from different environments (Zimmerman & Castilleja, 2005 and Zimmerman et al., 1992). So, it is a useful diagnostic and research tool that can be used to identify current comprehension and expressive language skills and can measure changes in children's language skills over time. In this study, the entire PLS-4 has not been adapted, only the auditory comprehension (task from 25 to 32) and expressive communication (task from 26 to 35) part age range from 24m to 35m has been adapted.

1.5 Objectives of the study

The main objective of the study is to cultural adaptation of Preschool Language Scale-4 (PLS-4) for 2y to 3y old Bangla speaking children. The specific objectives are as follows:

1. To translate the PLS-4 in Bangla language and determine the construct equivalence
2. To validate the PLS-4 through pilot testing to use in the specific community

2.1 Preliminary Work

The Preschool Language Scale (PLS) was originally developed to identify language disorders and delays in preschool-aged children (Qi & Marley, 2009). It is a standardized language test widely used by speech-language pathologists and special education teachers to assess receptive and expressive language abilities of young children at risk. Although the authors of the PLS-3 reported that the scale is most helpful for assessing language development of children, in particular children with language disorders (Qi et al., 2003). Using PLS-4 short form with a sample of Bangla speaking children required insuring the accuracy and appropriateness of the newly translated instrument by taking into account differences in culture and language. This study included both qualitative and quantitative methods of data collection. Qualitative method included data collection from the children of specific community in the form of observation and quantitative method includes direct data collection through the PLS-4 short form (Bangla version). Approval from the concern authority was taken to conduct this study. Before starting the adaptation process permission was taken from the developer of PLS-4.

2.2 The Instrument

2.2.1 Preschool Language Scale-4 (PLS-4)

The Preschool Language Scale – 4th Editions (PLS-4) (2002) is an individually administered test designed to identify young children from birth to 6 years 11 months old who have a language disorder or delay. It consists of two subscales for the assessments of auditory comprehension and expressive comprehension respectively (Suen, n. d.). It also provides three supplementary measures, which include an articulation screener, a language sample checklist and a caregiver

questionnaire. The materials provided for the administration of the test includes an examiner's manual that spells out the administration, scoring and interpretation procedures; a record form that provides all the items of the test; a picture manual that contains color pictorial stimuli needed for many of the test items, and a box of manipulative (e.g., ball, bowls, rattles, windup toy, cloth) needed for interactions with the child during test administration. There are a grand total of 68 task items. Dependent on the age of the individual child, the administration time is reported to be between 20 to 45 minutes (Suen, n. d.).

2.3 Methodology

The several methods and techniques usually use to conduct research on any topic. These are survey, observation, Focus Group Discussion (FGD), use of key informants, case study, and so on. In addition the researchers use sampling for the selection of setting and population of the research. The specific methods and techniques to conduct a research project depend on the nature of the research problem, types and objectives of the research. The survey and observation method were used to conduct the research project.

2.4 Population of the Study

The population of this study was 2y to 3y year old children from two villages irrespective of their gender, religious identity and ethnicity. 2y to 3y year old children had been selected for the study because according to Piaget's pre-operational stage (2y to 7y) children's language makes rapid progress. Development of children's "mental schemas" quickly "accommodates" new words and situation. Single words gradually move into simple sentences (Evans, Myers & Ilfeld, 2000). According to Owens (2001) though language development starts just after the birth but expressive and receptive language makes rapid progress during 2y to 3y. The researcher divided all the children into two age groups (24-29 month and 30-35 month) maintaining an interval of six months. Anam (1996) used a six month interval in her study and she mentioned that "in research on English speaking children and children using some other languages it was proved that a 6 months interval was adequate and wide enough to show clearly the different developmental milestones".

2.5 Setting of the Study

Two villages of Savar Upazilla of Dhaka district was selected as an area for this study using the purposive sampling procedure. The main reasons behind the selection of these villages were: to enable easy access for the researcher and to consider the lack of knowledge of the parents about the language development of their children.

2.6 Sampling

The sample for this study from the population was selected by using purposive sampling method as it is the easiest, cheapest and time economy method for selecting participants (Bailey 1997). Purposive sampling is a sampling method used in qualitative research to select “a limited number of informants strategically so that their in-depth information will give optimal insight into an issue about which little is known” (Varkevisser et al., 2003). Total 20 children were selected as participants 10 from each age range (24-29 month and 30-35 month). A total of 745 full-text articles on English language milestones and screening were reviewed and found participant sizes ranged from 25 to 2590 subjects (Nelson, et al., 2006).

2.7 Participant's Inclusion Criteria

For the children to be suitable for inclusion in the study, had to fulfill all of the following criteria:

- I) Children should be between the ages of 2-3 years.
- II) Children who were brought up in a Bangla-speaking home and daycare center.
- III) All family members spoke only Bangla to the children.
- IV) Parents indicated no concern regarding Children's physical, psychosocial, cognitive and language development.
- V) Children who had hearing and vision within normal limit.

2.8 Ethical Issues

Scientific and ethical approval of the protocol was provided by a review committee of the Institute of Educational Development BRAC University. Informed consent (Annexure: 02) was taken from the respondents. They were assured that information provided was kept confidential, names were not disclosed, and outcomes had no adverse effect on the child.

2.9 Procedure

2.9.1 Adaptation Techniques

“The aim of adaptation process was to achieve different language versions of an instrument that are conceptually equivalent in each of the target countries/cultures. That is, the instrument should be equally natural and acceptable and should practically perform in the same way. The focus is on cross-cultural and conceptual, rather than on linguistic/literal equivalence” (WHO, n. d.). It was recognized that there were no fundamental rule for cultural adaptation. Following the recommendation of (WHO, n. d.) and Van Widenfelt and Colleagues (2005) the following steps were taken while translating the instrument. This involves the following phases:

2.9.2 Determining Construct Equivalence

“To permit valid group comparisons on translated tests, the construct measured by these tests must be equivalent across language groups” (Gierlet et al., 2000). This combines theoretical and practical approaches. In theoretical approach one panel of experts were associated to review the construct of the original instrument to the target area. For this study the instrument was reviewed by two Assistant professors of Psychology and one professor of Anthropology of a public University. The experts agreed on the equivalence of the original instrument to the target population. As PLS-4 had already adapted and tested in several countries the practical approach was enclosed.

2.9.3 Translation

Over the last few years, a certain agreement had been made that translation is the most suitable methodology for the process of adaptation (Beaton et al., 2000). This process may be summarized in three main phases: Translation into the target language (Forward Translation), Revision by the experts and sample of the target population, and Back-translation using a team of translators.

2.9.4 Formation of First Synthesized Version

2.9.4. a. Forward Translation

This was the first stage of adaptation. First, three independent translators translated the English (original) version of PLS-4 into Bangla, literally. The translators were the professionals whose mother tongue was the target language and were unaware of the purpose of this study. After the translation the items were revised by the researcher and with experts in the field. Two psychologists, one speech therapist compared the three Bangla translated PLS-4 short form (completed previously by three other independent translators) and formed a consensus. From their expert views the first synthesized version was generated.

2.9.5 Discussion on First Synthesized Version

2.9.5. a. Observation

The aims of this phase were to check that the content of the translated instrument was well understood, determined whether the vocabulary was suitable and whether the items were culturally applicable (Beaton et al., 2000). From the observation the researcher took advantages of the children interaction as well as determine the understandability and participant acceptability of the instrument and whether the assessment of the constructs were relevant and important. Seven children from the target population (those were not selected as sample) were observed for collecting information about children's understandability of the instrument. The observation was conducted in the study area (in the children's house) where the possibility of disturbance by external activities was minimal. Observation was conducted by the researcher and also discussed

with the parents about the understandability of the instrument. Participants were selected by purposive sampling. Each observation took 30-40 minutes. Researcher observed the children's understandability about the appropriateness, relevancy, importance, and clarity of the PLS-4 short form tasks. Analysis of the observation data allowed identifying items that were difficult to understand, not meaningful or not important. This allowed identifying items that were not well understood as well as the items that were interpreted differently from the scale's original intent, mostly due to culture-specific interpretation. Based on the analysis of the observation data few items were modified because of redundancy, perceived lack of importance, lack of specificity, or participants do not have understanding on the item. Few alternatives were proposed by the parents. These alternatives were assessed by the researcher and a second synthesized version of the scale was developed.

2.9.5. b. Panel of Experts

This version was revised by a group of five experts (Two psychologists, two therapists and one pediatrician). The experts identified the items which have greater problems for adaptation. From their observation a third synthesized version was generated.

2.9.6 Formation of Final Pilot Version

2.9.6. a. Back-Translation to the Original Language

"The key to achieving semantic equivalence was to retain the same meaning of each item/task after the translation into the language of each culture. This was particularly useful as source language version had ideas and words which, in the target language, seemed socially insensitive or expressed only with difficulty" (Maneesriwongul & Dixon, 2004). This technique helped to achieve conceptual equivalence. Back-translation, translating from the final language into the source language, had been shown to help improve the quality of the final version (Maneesriwongul & Dixon, 2004). The 3rd synthesized version was translated back into English. With the Bangla translation version, three independent translators, who did not have any information about PLS-4 short form, make the back translation. One of the translators is living abroad and doing his doctoral degree and another two were lecturers who are teaching English

for 2-3 years. Each first translation was back translated independently from each other. The back translators were bilingual (in both Bangla and English) and were fluent in the idioms and colloquial forms of the source language. Back-translators were not aware of the intent and concepts underlying the scale. For this reason back-translators without a prior knowledge of the intent of the original instrument, were free of biases and exceptions and their back-translation revealed unexpected meaning or interpretations. Misunderstanding in the first translation was amplified in the back-translation, and thereby revealed. Failure to adapt to the cultural target, context and ambiguity in the source version also had been uncovered. After the back-translation, modification of words, concepts, pictures, objects that had no clear equivalence in the target language was done by the experts of psychology background and the researcher. Similarity of meaning, even at the expense of similarity of form, was much more desirable than the opposite. Form may be intentionally varied to guarantee equivalence of meaning. Accordingly, assessment of perceived similarity of form and meaning was done separately to enhance the distinctness of the dimensions. Otherwise, rating may reflect overall similarity, combining meaning and form. Comparison of the three English back translated versions and the English original were done by rating each item on a 3- point scale (3 equals "best agreement", 2 equals "almost same", 1 equals "worst agreement").

2.9.6. b. Review

Items with apparent inconsistency between the two language versions were modified and tied up. The final translated version was proofed by the researcher to check for minor errors which was missed during the translation process. This produced the pilot version of Bangla PLS-4 short form and made ready to use in pilot field test.

2.9.7 Piloting

After translation of the instrument was completed, cultural appropriateness was determined, and instrumental discrepancies between the original and translated instruments were resolved, field testing was performed using the finalized translated version with a small group of individual from the target population. A convenient number of 20 children age between 2-3 years were

selected purposely for individual observation. The observation was administrated with consideration for the differences in expression and using of probe for the meaning of the children's response. The Bangla version of PLS-4 short form was consisting of 18 items (Annexure: 01). The participants were observed individually in their home environment. The researcher also discussed with the parents. Each observation took approximately 40 minutes to 60 minutes. Finally, initial pilot data had been collected.

2.10 Quantitative Analysis

2.10.1 Item Analysis

By computing corrected item-to-total correlation it was determined either an item in the instrument was useful and/or how it performed in the relation to the other items on the test. Data was analysed using the SPSS program (Version 12.0. SPSS Inc., Chicago, IL, USA). The descriptive statistics was used for the analysis. The samples were gender sensitive and children ages of 2-3 years were observed. Statistical significance was accepted at the 5% level.

2.10.2 Reliability Determination

For the reliability Cronbach's alpha coefficients were computed in order to measure the internal consistency of PLS-4. Cronbach's alpha coefficient range was considered from 0 to 1. Corrected Item-Total Correlation was finding out for the tasks. Test-retest reliability which was administering the same test to the same subjects at two points in time was used to measure of stability over time. Five children were observed with the Bangla PLS-4 short form twice and were given a time interval of 5 days between the tests. Both tests were administered by the same examiner (Researcher). A 5-point Likert scale was developed ranges from didn't understand (01) to understand well (5). The test score was computed by the average understanding on all 18 items. Level of significance was (p value) computed on each tasks.

2.10.3 Validity Determination

The term validity referred to the ability of test to measure what it intended to measure. Even though an instrument may be reliable it may or may not be valid. Before the pilot test of the PLS-4 short form, panels of experts (2 psychologists, 1 speech therapist and 1 pediatrician) were asked to examine Bangla version PLS-4 for the content validity. The panel of experts judged the extent to which the content of the instrument appeared logically to examine and comprehensively include, in a balanced way, the full scope of the characteristics or domain it was intended to measure. They were asked to identify the item that has difficulty to understand or had question about.

3.1 Sex Distribution of the Children

Total number of children was 20. Among them 12 (60%) was male and 8(40%) was female. Both male and female children equally participated in the study. All the children were from middle class families. All the parents of the children were literate.

3.2 Age Distribution of the Children According to Age Group

Total number of children was 20 from the age range of 2-3 years. All the subjects of the study were divided into two groups; "group 1" and "group 2". Group 1 contained age range between 24-29 month and group 2 contained 30-35 month. In group 1 there were 11 participants and in group 2 there were 9 participants.

3.3 Feasibility

There were no missing answers in PLS-4 short form. Participants responded to all of the tasks accordingly. For some particular tasks children needed elicitation from the administrator (researcher) to make the respondents understand the task. For example task 26 (auditory comprehension), task 30 (expressive communication).

3.4 Formation of First Synthesized Version

During the process of forward translation it had been found that the word "shorts" from the task 25 of auditory comprehension is not frequently used word in that particular cultural context. The Bangla meaning of "spatial concept" was difficult for the children to understand because the Bangla meaning is very abstract. The task 31 in auditory subscale "Simple descriptive concepts"

was also difficult for the children to understand as there were no appropriate objects or picture to make the children understood..

The Bangla meaning of “raising intonation” and “windup toy” was difficult to made, so it was translated as “bring the voice up” and “toys that move in the air”. Task 34 in expressive communication subscale was not appropriate for Bangla language as the structure “verb+ing” is not available in bangle language. Table 1 shows the list of task/items that showed ambiguity.

Table 1: List of Tasks/Items with Ambiguity:

Subscales	Tasks/Items	Words
Auditory Comprehension	25	shorts
	26	Spatial concepts
	31	Simple descriptive concepts
Expressive Communication	28	Windup toy
	28	Raising intonation
	34	Uses verb + -ing

3.5 Observation Result on First Synthesized version

The observation exposed some suggestions and identified children’s response regarding the sensitivity of the task. For example, task 30 (expressive communication) was reworded to clarify that meaning and preserve the intent of the English task. Task 30 of the PLS-4 English version says “use different word combinations like: verb + noun” which was difficult for the participants to understand as this grammatical structure is not available in Bangla language. In the task 35 (expressive communication) modifiers was in Bangla language but it was impossible to make children understand. So, it was deleted from the Bangla PLS-4 short form.

3.6 Formation of 3rd synthesized version

The expert team identified tasks, objects and pictures that showed variation throughout the observation. Task 26 ("Take the block off the box") was unclear on explaining the part "off the box". Again the task 30 was not appropriate due to the difference in the structure of the two (English and Bangla) languages. Table 2 shows the synonyms and other names of the task that had brought confusion.

Table 2: Synonyms and Others Name

Subscale	Task/Item		Task/Item Content
Auditory Comprehension	26	Identifying clothing items on self or caregiver (Coat)	This was not a common dress for people of selected two villages
	26	Identifying clothing items on self or caregiver (Hat)	The picture of the "hat" of English PLS-4 was different from the "hat" of that community
	27	Understands spatial concepts	This was difficult to make the children understood as there were no appropriate objects or picture to make the children understood. Investigator had to give examples to make them understand
	29	Understand use of objects (show me what you use to cook food)	This was hard to understand for the children because the picture of the stove of English PLS-4 was different from that of the two villages

Subscale	Task/Item		Task/Item Content
Expressive Communication	26	Name objects on photographs (Bird)	The picture of bird was not culturally appropriate
	28, 29	Windup toy	Was not culturally appropriate
	30	Uses different word combinations (verb+ noun)	Was not appropriate because Bangla language (grammar) structure is different than that of English language
	30	Uses different word combinations (noun + verb location)	This was hard to make understand. Had to give examples to make them understand. Structure is not similar in Bangla language.
	35	Uses a variety of nouns, verbs, modifiers, and pronouns in spontaneous utterances	Was very difficult to make the children understand. Investigator provided lot of verbal cues and modeling to make the children understood

3.7 Back Translation and Formation of Final Pilot Version

During the back translation it was observed that few items were deviated from the original scale. Task 26 for auditory comprehension asked “Identify shorts”. The meaning of ‘shorts’ was not reflected in the back translation version. Table 3 shows several sample task/item pairs (original and back-translation versions) from the PLS-4 translated into Bangla.

Table 3: Deviated Tasks/Items

Subscale	Task/Item		Explanation
Auditory Comprehension	26	“Identifies shorts”	Instead of “shorts” “small cloths or pants of boys/girls”
Expressive Communication	28	Raising intonation	Instead of “raising intonation” “raise the voice up”

3.8 Progression of Score According to Age (24-29 Month)

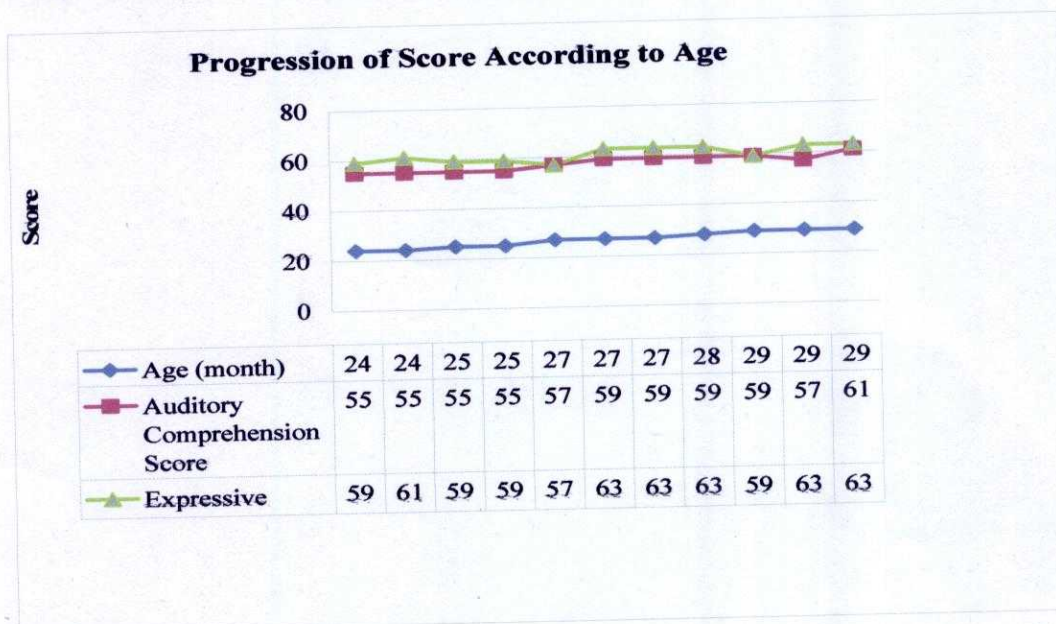


Fig 01: Progression of Score According to Age (24-29 Month)

3.9 Progression of Score According to Age (30-35 Month)

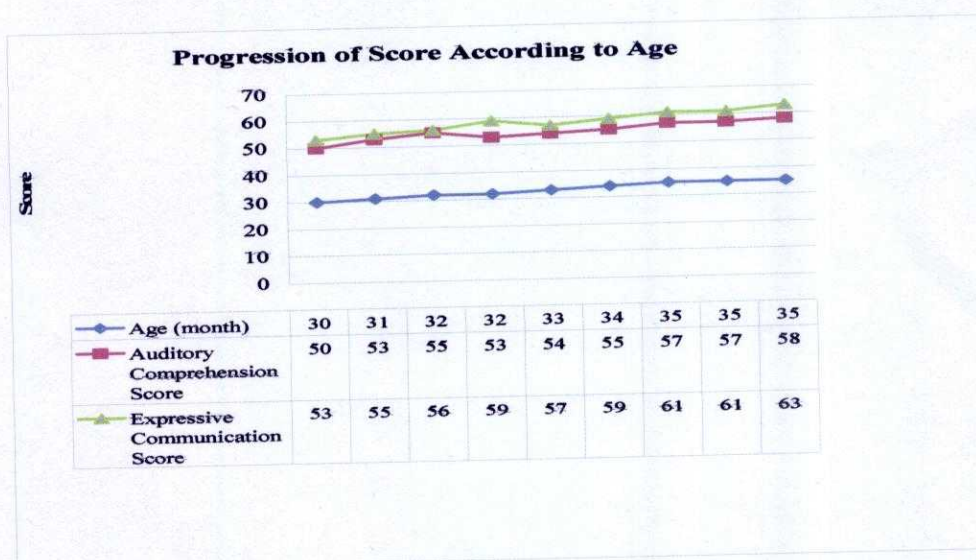


Fig 02: Progression of Score According to Age (30-35 Month)

There was a clear progression of language score with age in both of the groups (24-29 month and 30-35 month). In the first age group (24-29 month) total number of participant was 11. Minimum age in this group was 24 month. Participant aged 24 month scored 55 in auditory comprehension task and 59 in expressive communication. Maximum age was 29 month and score was 61 for auditory comprehension and 63 for expressive communication. In the second age group lowest age was 30 month and the score was 50 for auditory comprehension and 53 for expressive communication. Highest age was 35 month and the score was 58 for auditory comprehension and 63 for expressive communication. In some cases lower age participants scored better than higher age group. For example, in the 30-35 month age group 32 month participant scored 59 whereas 33 month participant scored 57 in the expressive communication task. Figure 3 and 4 shows the progression of score according to different age group.

3.10 Internal Consistency

18 tasks were used in the calculation of Cronbach's alpha. Obtained Cronbach's alpha score was 0.941. The result for internal consistency was computed by Pearson's correlation of 18 tasks is presented in the table 5. This table displays the correlation between a given task value item and the sum score of the other two items. Any item score less than 0.30 was considered as weak correlation for item-analysis purposes. Any items scores more than 0.30 was considered as a strong, positive correlation between the scores. Cronbach's Alpha if item deleted: table 5 displays Cronbach's alpha that would result if a given item was deleted. The value presented in this column represents the alpha value if the given item were not included.

Table 4: Internal Correlation between the Tasks

Tasks	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Auditory Comprehension Task 1	.745	.936
Auditory Comprehension Task 2	.609	.938
Auditory Comprehension Task 3	.727	.936
Auditory Comprehension Task 4	.745	.936
Auditory Comprehension Task 5	.765	.935
Auditory Comprehension Task 6	.609	.938
Auditory Comprehension Task 7	.745	.936
Auditory Comprehension Task 8	.548	.944
Expressive Communication Task 1	.727	.936
Expressive Communication Task 2	.727	.936
Expressive Communication Task 3	.745	.936
Expressive Communication Task 4	.609	.938
Expressive Communication Task 5	.727	.936
Expressive Communication Task 6	.745	.936
Expressive Communication Task 7	.765	.935
Expressive Communication Task 8	.609	.938
Expressive Communication Task 9	.745	.936
Expressive Communication Task 10	.448	.944

3.11 Test- Retest Reliability

All the tasks showed significant reliability after the test and retest. Tasks 01 to 07, 9-14 and 16-17 p value was <0.001. For task 8 and 15 level of significance was 0.001 and for task 18 p value was 0.005. Table 6 shows test-retest reliability for PLS-4 after 5 days.

Table 5: Test-Retest Correlation Reliability for PLS-4 after 5 Days.

Tasks	Lower Value	Upper Value	P value
01	3.24	4.36	<0.01
02	2.72	4.08	<0.01
03	3.72	5.08	<0.01
04	3.24	4.36	<0.01
05	2.12	3.88	<0.01
06	2.72	4.08	<0.01
07	3.24	4.36	<0.01
08	2.12	3.88	0.001
09	3.72	5.08	<0.01
10	3.16	5.24	<0.01
11	3.24	4.36	<0.01
12	2.72	4.08	<0.01
13	3.72	5.08	<0.01
14	3.24	4.36	<0.01
15	2.12	3.88	0.001
16	2.72	4.08	<0.01
17	3.24	4.36	<0.01
18	1.48	4.52	.005

The methods used to translate and culturally adapt the preschool Language Scale 4 (PLS-4) short form were undertaken with the goal of reducing ambiguity and misunderstandings. The bases of the ambiguity and misunderstanding were usually reliance on straightforward translation methods and overemphasis on psychometric procedures that rendered statistically reliable instruments with uncertainly valid. The combination of qualitative and quantitative research methods to translate and adapt the short form of PLS-4, allowed further examination of the extent to which the Bangla version of the scale conveyed the indented meaning of tasks developed in English. Although many steps were followed, the Bangla version was accomplished with minimal changes to the structure of the original English scale.

4.1 Feasibility

This study established the feasibility of the PLS-4 short form in two urban middle class villages of Bangladesh. In general the scale was well understood and responded by the participants. No missing response was found. After addressing all these issues in the piloting of 20 children the scale picked up variation in responses of all.

4.2 Formation of First Synthesized Version

At the beginning of the translation process it was decided to use a combination of translation techniques. In order to avoid the distortion of the translated (from English to Bangla) scale, a rigorous adaptation process was required. Independent forward and backward translators were appointed to prepare the PLS-4 short form. A team of expertise was involved to finalize the adapted PLS-4. This process ensured the validity and satisfaction of the adaptation procedure. Most of the translation processes were completed without any severe difficulties. During forward translation few questions required elaboration; few questions required rephrasing with similar

type of words by keeping the original intent of the question. Afterward it was decided to use example based on the daily life experiences.

4.3 Observation on First Synthesized Version

Observation allowed to further test to face validity of the translated instrument by uncovering the meanings that participants have already pointed. Although the wording of the items/tasks was not changed after the observation, data from the observation clearly indicated items/tasks that were not always capturing responses that were recognized to children's performance for that specific community. For example, the meaning of the task 30 (expressive communication) was to know about the children's ability to uses different word combinations (e.g. verb +noun). After the Bangla translation it became difficult to perform for the children as the word combination (verb+noun) is not usual in Bangla language structure. To overcome this, task was reworded and used probe when necessary. It was also decided to use cultural sensitive example to clarify.

After the observation, the researcher with the team experts modified, included probes and examples. It helped to identify list of disputed translated issues (semantic equivalence), the readability of the instrument (technical equivalence), and the construct of the concept (concept equivalence) in accordance with the minimum criterion.

4.4 Formation of Final pilot version

Back-translation is a well-known method to maintain equivalence between the original and translated version (Behling & law, 2000 as cited in Cha et al., 2007). The ideal was that corresponding tasks/items had similar meanings and similar form of language. At this time few problems were identified and evaluated those problems. For example, in the task 30 (expressive communication), the original version was worded "uses different word combinations: noun +verb + location". While the back-translated version stated that "uses different word combinations: noun + location + verb". This was clearly not the same. On reevaluation, it was found that the Bangla translation was reliable because noun +verb + location structure is not usual in Bangla grammar. So the Bangla version was left unchanged. Task 29 (auditory comprehension) also brought difficulty. The intent of the task was to understand use of objects.

One of the items/tasks was “show me what you use to cook food”. The picture of stove used in the original PLS-4 was not culturally appropriate. Most of the parents also reported that their children are not used to with the stove of the original PLS-4. So the picture of the stove was used which is culturally appropriate. After the back translation it was observed the translated words, picture and objects were deviated. But the tasks reflected the intent of the scale. Finally the translated version was revised and a valid pilot version was formed.

4.5 Progression of Score According to Age (24-29 Month)

Both male and female of this age group demonstrated regular progression of score with age. By the age of 2 to 2.6 years children acquire all the milestone of vocabulary in Auditory Comprehension subscale (Bax et al., 1980). In case of spatial concept children were not fully mastered at this age and some milestones yet to develop. Morphological skill was a hard skill for the children of this age group. For the expressive communication subscale children acquired most of the social communication milestones at this age range and other were emerging skills. In case of vocal development of expressive vocabulary, children acquired these milestones at this and become master over some of them and some remain hard for them. For this age group syntax and pragmatic skills were yet to be developed.

4.6 Progression of Score According to Age (30-35 Month)

Both male and female of this age group also demonstrated regular progression of score with age. For Auditory Comprehension subscale the vocabulary development which children acquired at 2.6 years that was still obvious in this group. At this age, children became master over some of the milestone of vocabulary and other was emerging. Spatial concepts still a hard milestone for Bangla speaking children. Morphology was an emerging skill for this age group. In expressive Communication subscale, children became master over the social communication skills, which were emerging skills in earlier age but in this age some social skills were disappeared which was acquired in earlier age. In this age group no item indicated vocabulary development were remain hard, all the milestones either developed completely or was in emerging skill. At this stage children began to learn syntax and pragmatic skills.

4.7 Internal Consistencies and Test-Retest Reliability

Cronbach's Alpha score was 0.941 which is very high and indicates strong internal consistency among the 18 tasks. Essentially this means that respondents who tended to select high scores for one task also tended to select high scores for the others; similarly, respondents who selected low scores for one task tended to select low scores for the other tasks. The Bangla PLS-4 version showed good reliability overall on the test-retest tasks, with significant p values and it was <0.001 .

4.8 Content Validity

A panel of experts (2 psychologists, 1 speech therapist and 1 pediatrician) was asked to examine Bangla version PLS-4 for content validity. All the members in the panel had no questions about the Bangla version short form PLS-4. All the members in the panel reported that they are able to understand all the items/tasks.

4.9 Implications

Although the findings were culture specific, the adaptation procedure presented in this study could be used in other settings. It can be used as a measurement tool for screening language development of the children in the community. It appeared particularly valuable for use in developing countries; as community based method tend to stimulate local ownership ensuring local relevance and sustainability of the findings. Furthermore, this study showed that a thorough adaptation of western screening instrument was needed when applied in different contexts, and that it was feasible, even in settings, characterized by poor resources and instability. By providing locally relevant instruments- previously unavailable in this region- hoped to stimulate the screening of language development needs and associated risks and protective factors. Such continuing efforts could provide important evidence on the impact of delayed language development point in this region, informing health policy. In Bangladesh, no system or policy for identifying delayed language development had ever been established, apart from individual effort. Therefore, it is hoped that later initiatives would encourage professionals to bring sustainable interest in language development and well-being in the society.

The process of cultural validation of an instrument ought to be for the whole country. A massive number of sample and thorough methods needed to incorporate for achieving that goal. Considering the time limit for the thesis it was extremely challenging. Therefore the adaptation was made for certain two villages of Savar city in Dhaka district. In the field of research on language development, to view a clear picture of the developmental progression wider age ranges was needed (Moyle, et al., 2007). In this study only one year age range (2-3 years) was used due to time limitation. Another limitation of this study was the participants were drawn by middle class family background from two villages. Language development is influenced by the social classes, culture and way of interaction (Rice, et al., 2008). So, if there were participants from all social classes then the result could be more realistic.

At the beginning of the translation process it was not easy to find suitable translators, particularly for the back translation. Again each translator took enough amount of time to translate. Furthermore, while working with the children during observation there were some difficulties. It was difficult to manage the children as the researcher was stranger to the children. Sometimes children were more motivated to play with the pictures and objects rather than follow the researcher's instructions. Here, in this study, it was overcome by providing the children a quiet, comfortable room reducing the distracting elements, establishing rapport before starting formal observation. Researcher also placed only the material in front of the children that was needed, provided break time and involved the parents during the session. Researching evidence of validity was a rigorous process and collective effort which was not possible to achieve in short period of time. Therefore, this study was aware of the limitations of the validation process. There was no gold standard available in the country to measure children's language development.

Again the time limitation of the study did not permit to conduct any parallel measurement with another language development measurement scale with construct for convergent validity. For standardization, it required large population with enormous data from different location, socio-economic condition, ethnicity, and huge amount of funding. These brought barrier for the external validity. The researcher recommended further psychometric testing in larger samples using caregivers to establish further reliability and validity. As for the adapted version of the instrument, it might conclude different diagnosis and interventions, but without any set norms, interpretation should make with cautions. In this study only a portion of the instrument had been adapted for certain two villages of the country, where specifically the longitudinal cohort study need to be conducted. With this, the instrument became ready to be used for further studies in poor villages. Nonetheless, the procedure used in this study could inspire other researchers in emergency settings to minimal address issues of local validity, when more thorough methods were unfeasible due to constrains in time and resources. A valid instrument for assessing language development of pre-primary and primary school children would be helpful for multiple purposes. However, while working in the two villages, there was always an imbalance between western facts and other systems, complicating cultural research, even if it was community-based.

Recommendations for further thought and exploration are outlined below:

1. This study only considered 2-3 years old children with a limited number of children. Further study can be conducted with a wide age range, large amount of sample following the thorough adaptation procedure.
2. An adaptation study can be conducted considering all the socio-economic background children from the different geographical region in Bangladesh.
3. Initiative can be taken to adapt the whole PLS-4 and establish the language development milestone of young children in Bangladesh.
4. Further research need to be conducted to examine the language skills of assessed in this study as well as the specific items of the Bangla version of PLS-4 short form in children from different home environments, children with language impairment and children with identified medical conditions (Otitis media, Fragile X, Autism) to determine how score and age of acquisition may differ in these populations.
5. Research can be conducted with any parallel measurement with another language development measurement scale with construct for convergent validity.

Guideline for Parents to Support Children's Language Development

To support children's language development parents can follow the following strategies:

- Try to find out that either your child speaks according to his/her age or not comparing to his/her peers
- If there is any delay then contact with the concern professionals (Speech and Language Therapists, Psychologists, pediatricians etc).

Also try to follow the mentioned language stimulation activities:

- Try to follow your child's lead in everyday life
- Observe, wait and listen to your child
- Imitate-copy your child's action and sounds
- Comment-talk about what's happening around the environment
- Ask questions-keep conversation going
- Add new experiences and words in daily conversations
- Play interactive and fun game and give the child to interact
- Teach different vocabulary with music, story and pictures
- Use sign/gestures to support their language development
- Create a communicative and language stimulating environment
- Try to listen your child and encourage to communicate
- Remember that, parents are the key person to help children's language development. So, parents should be patience, expecting their child will communicate and follow the above recommendations.

Adaptation and validation of the Bangla version of a scale to measure children's language development showed evidence of validity and reliability. Based on the methodological process for translation and back-translation, the Bangla version of PLS-4 short form appeared to have concrete validity and reliability to use in measuring language development in two villages in Bangladesh. A sound community based cultural adaptation of Western-based standardized children language development measure could extend their validity and local relevance for use in specific emergency and low-income settings. Nevertheless, this study serves as an initial step toward appropriate cultural and linguistic adaptation and translation of language development measurement instrument.

There is no doubt that, the importance of the translation and adaption processes is enormous particularly in developing countries like Bangladesh where many of the children do not get the opportunity to be screened for language delay and disorder. The Bangla adaptation of the PLS-4 short form appeared as a reliable and adequate instrument to measure 2-3 years old children's language development in two villages of Bangladesh.

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Annexure: 01
Bangla Version PLS-4
গুনে বোঝা

২৪ থেকে ২৯ মাস

২৫. নিজের এবং পরিচর্যাকারীর কাপড়-চোপড় সনাক্ত করতে পারে

সরঞ্জাম: শুধুমাত্র বচ্চার এবং পরিচর্যাকারীর কাপড়-চোপড় পরীক্ষা করা হবে।

আমাকে দেখাও তোমার:

ক. জুতা

খ. শার্ট

গ. মোজা

ঘ. ছোট জামা

ঙ. প্যান্ট

চ. ফ্রক

ছ. অন্যান্য (টুপি, জামা)

(পাশ: ৩টি শুদ্ধ)

২৬. বস্তুর অবস্থান বুঝবে (ভিতরে, নীচে, বাহিরে)

সরঞ্জাম: বাস্ক, চারটি ব্লক

ক. ব্লক বাস্কের ভিতরে রাখ

খ. ব্লক বাস্কের নীচে রাখ

গ. ব্লক বাস্কের বাহিরে আন

(পাশ: ২টি শুদ্ধ)

২৭. ছবি দেখে কাজ চিনতে পারে

সরঞ্জাম: ছবি- ঘুমাচ্ছে, খাচ্ছে, খেলছে, পানি খাচ্ছে/পান করছে, ধুচ্ছে, দৌড়াচ্ছে

ক. ঘুমাচ্ছে

খ. খাচ্ছে

গ. খেলছে

ঘ. পানি খাচ্ছে/পান করছে

ঙ. ধুচ্ছে

চ. দৌড়াচ্ছে

(পাশ: ৪টি শুদ্ধ)

২৮. বিভিন্ন ধরনের সর্বনাম বুঝতে পারে (আমকে, আমার, তোমার)

সরঞ্জাম: পুতুল, ৩টি কাপ, ৩টি চামচ

আমরা ১টি পিকনিক করছি। সবাই ১টি কাপ পায়। তুমি ১টি কাপ নাও।

ক. এখন আমাকে ১টি দাও

পুতুলকে ১টি দাও (স্কোর হবে না)

খ. তুমি ১টি চামচ নাও। এখন আমাকে ১টি চামচ দাও

পুতুলকে ১টি চামচ দাও (স্কোর হবে না)

গ. আমাকে তোমার চামচ দেখাও

ঘ. আমার চামচ কোথায়? (খাওয়া এবং পান করার অভিনয় করুন)

পিকনিক শেষ। এসো সব সরিয়ে রাখি।

(পাশ: ৩টি শুদ্ধ)

৩০ থেকে ৩৫ মাস

২৯. বস্তুর ব্যবহার বুঝতে পারে

সরঞ্জাম: গ্লাস, জুতা, সাইকেল, টেলিভিশন, চুলা

এইসব ছবিগুলো দেখ

ক. আমাকে দেখাও কোনটা দিয়ে তুমি পানি খাও

খ. আমাকে দেখাও তুমি পায়ের কি পর

গ. আমাকে দেখাও তুমি কোনটি চালাতে পার

ঘ. আমাকে দেখাও তুমি কোনটি চালু করে কাটুন দেখ

ঙ. আমাকে দেখাও কোনটি রান্নার জন্য ব্যবহার করা হয়

(পাশ: ৩টি শুদ্ধ)

৩০. সম্পূর্ণ বস্তু/বস্তুর অংশ বুঝতে পারে

সরঞ্জাম: ছবি- দর্জা খোলা গাড়ি, কুকুরের সামনের ছবি, কুকুরের পিছনের

ছবি, কুকুরের সম্পূর্ণ ছবি,

গাড়ি

এই ছবিগুলো দেখ।

আমাকে দেখাও:

ক. গাড়ির দরজা

খ. কুকুরের নাক

গ. কুকুরের লেজ

ঘ. গাড়ির চাকা

(পাশ: ৩টি শুদ্ধ)

৩১. সাধারণ বর্ণনামূলক ধারণা বুঝতে পারে। (বড়, ভেজা, ছোট)

সরঞ্জাম: ছবি- বড় গরু, ভেজা কুকুর, শুকনা কুকুর, ছোট বিড়াল, বড় বোতল, ছোট পেন্সিল

সবগুলো ছবি দেখ

ক. কোন প্রাণীটা বড়?

খ. কোন কুকুরটা ভেজা?

গ. কোনটি ছোট?

(পাশ: ২টি শুদ্ধ)

৩২. কোন ইশারা ছাড়া ২ ধাপের নির্দেশ পালন করে।

সরঞ্জাম: ঢাকনা যুক্ত বাস, পুতুল, কাপ

ক. বাক্সটি খুল এবং আমাকে পুতুলটি দাও

খ. কাপটি নাও এবং পুতুলটিকে পানি খাওয়াও

গ. কাপটি নাও এবং আমাকে দাও

(পাশ: ২টি শুদ্ধ)

প্রকাশের ভাষা

২৪ থেকে ২৯ মাস

২৬. ছবি দেখে বস্তুর নাম বলতে পারে

সরঞ্জাম: ছবি- বল, শিশু, পাখি, বিস্কুট, জুতা, কুকুর, বেলুন, চামচ, আপেল, বিড়াল

এই ছবিগুলো দেখ। এটা কি?

ক. বল

খ. শিশু

গ. পাখি

ঘ. বিস্কুট

ঙ. জুতা

চ. কুকুর

ছ. বেলুন

জ. চামচ

ঝ. আপেল

ঞ. বিড়াল

(পাশ: ৫টি শুদ্ধ)

২৭. যোগাযোগের জন্য ইশারার চেয়ে কথা বেশি ব্যবহার করে

সরঞ্জাম: খেলনা এবং বস্তু

পাশ: স্বাভাবিকভাবে ইশারার চেয়ে কথা বেশি ব্যবহার করে

২৮. প্রশ্ন করে।

সরঞ্জাম: ২টি কাপ, বাতাসে দোলানো খেলনা, কম্বল

খেলনা কোথায়(খুজুন)? এটা কোথায় (খুজুন)? এটা কি এখানে (থামবেন)? এটা এখানে!

ক. কথার সুর উপরে তোলা

খ. প্রশ্নের গঠন (কে, কি, কখন, কোথায়, কিভাবে, কেন)।

(পাশ: ১টি শুদ্ধ)

২৯. ভাষার বিভিন্ন ধরনের ব্যবহারের জন্য শব্দ ব্যবহার করে।

সরঞ্জাম: বিস্কুট/খেলনা দিয়ে আটকানো একটি ব্যাগ, খেলনা এবং বস্তু

ক. কাজ অথবা বস্তুর জন্য অনুরোধ করা

খ. কাজ অথবা বস্তুর নাম বলা

গ. আবার কোনকিছু করার জন্য সে ইশারা করে

ঘ. সাহায্য চাইবে

ঙ. হ্যাঁ অথবা না দিয়ে প্রশ্নের উত্তর দিবে।

তুমি কি পছন্দ কর?

তুমি কি চাও?

আমি কি দিয়ে খেলতে পারি?

চ. কোন মানুষের মনযোগ পাওয়ার জন্য শব্দ ব্যবহার করে।

(পাশ: ৪টি শুদ্ধ)

৩০. বিভিন্ন শব্দ যুক্ত করে ব্যবহার করে

ক. নামবাচক শব্দ + ক্রিয়া

খ. নামবাচক শব্দ + নামবাচক শব্দ

গ. নামবাচক শব্দ + অবস্থান + ক্রিয়া

ঘ. নামবাচক শব্দ + গুনবাচক শব্দ + ক্রিয়া

(পাশ: ৩টি শুদ্ধ)

৩০ থেকে ৩৫ মাস

৩১. বহুবচন ব্যবহার করে

সরঞ্জাম: ছবি- একটা শিশু, অনেকগুলো শিশু, একটা ঘোড়া, অনেকগুলো ঘোড়া, একটা ব্লক, অনেকগুলো ব্লক
এগুলো কি?

ক. শিশুরা

খ. ঘোড়াগুলো

গ. ব্লকগুলো

(পাশ: ১টি শুদ্ধ)

৩২. স্বতঃস্ফূর্ত কথায় ৩/৪ শব্দ বিশিষ্ট বাক্য ব্যবহার করে

সরঞ্জাম: খেলনা ও বস্তু

সে কি করছে? কি করছে? কোথায়?

.....

পাশ: একটি ৩/৪ শব্দ বিশিষ্ট বাক্য

৩৩. 'কি' এবং 'কোথায়' প্রশ্নের উত্তর দেয়।

সরঞ্জাম: ছবি- হাতে বালিশ নিয়ে ছেলে, গাড়ির ভিতরে ছেলে

ক. এই ছেলেটাকে দেখ। সে কি ধরে আছে? (বালিস)

খ. এই ছেলেটা ট্রাকে নেয় (ছেলেটাকে নির্দেশ করুন)

গ. সে কোথায়? (গাড়ি, এখানে, গাড়িতে)

(পাশ: ২টি শুদ্ধ)

৩৪. ক্রিয়ার সাথে তেছি/তেছে ব্যবহার করে

সরঞ্জাম: ছবি- বালিশের উপরে মেয়ে খেলছে, একটি মেয়ে খাচ্ছে, মেয়ে ঘুমাচ্ছে

ব্যবহারিক: বালিশের উপরের মেয়েটিকে নির্দেশ করে বলুন, মেয়েটি খেলছে।

ক. আমাকে মেয়েটি সম্পর্কে বল। (খাচ্ছে)

খ. আমাকে এই মেয়েটি সম্পর্কে বল। (ঘুমাচ্ছে)

(পাশ: ২টি শুদ্ধ)

৩৫. স্বতঃস্ফূর্ত কথায় নামবাচক শব্দ, ক্রিয়া, সর্বনাম ব্যবহার করে

সরঞ্জাম: খেলনা ও বস্তু

ক. ১০টি ভিন্ন নামবাচক শব্দ ব্যবহার করে

খ. ১০টি ভিন্ন ক্রিয়া ব্যবহার করে

জুতা নির্দেশ করে বলুন: এটা কি আমার জুতা? এটা কার জুতা?

গ. ১টি সর্বনাম ব্যবহার করে

(পাশ: ২টি শুদ্ধ)

Annexure-02

Consent Form

Md. Jahangir Alam is a MS student of Early Childhood Development Program in the Institute of Educational Development, BRAC University. As the part of the course he has to conduct a research on “Adaptation of Preschool Language Scale-4 (PLS-4) for Screening Language Development of Bangla Speaking Children”. The aim of the current study is to examine the adaptation of PLS-4 for 2y-3y old Bangla speaking children and to explore the existing language development milestones of 2y-3y old Bangla speaking children.

To conduct the research effectively it is important to collect data on language development of 2-3 years old children. All the confidentiality and privacy about any information will be maintained. Children’s name will not be written on any of the materials, and only the researcher will have the access to information. This study will not cause any harm to the participants. This study will not cause any benefit to the participants but in future children similar to them may get benefit from the study. Participant’s participation is totally voluntary and can withdraw at any time before or during the study. It is expected that the result of this study will be able to explore the existing language development milestones of 2y-3y old Bangla speaking children and will be able to identify delayed language development.

I have read the consent form or my acquaintance read the consent form to me. I completely understand the rights about my child/children’s participation and I am willing to let him/her as a participant of this research.

Signature/finger print of the father/mother:

Date:

Signature of the researcher:

Date:

Annexure-02

সম্মতি পত্র

মোঃ জাহাঙ্গীর আলম ইনস্টিটিউট অফ এডুকেশনাল ডেভলপমেন্ট, ব্র্যাক বিশ্ববিদ্যালয়ের আরলি চাইল্ডহুড ডেভলপমেন্ট প্রোগ্রাম এর মাস্টার্স কোর্স এর একজন ছাত্র। বর্ণিত কোর্সের অংশ হিসাবে তাঁকে “Adaptation of Preschool Language Scale-4 (PLS-4) for Screening Language Development of Bangla Speaking Children” শিরোনামে গবেষণাপত্র প্রস্তুত করতে হবে।

গবেষণার প্রস্তুতি স্বরূপ ২-৩ বছরের শিশুদের ভাষার উন্নতি সম্পর্কিত তথ্য সংগ্রহ করা বাঞ্ছনীয়। এই গবেষণায় অংশগ্রহণকারীর জন্য কোন রকম ঝুঁকির কারণ ঘটবে না। অংশগ্রহণকারী শিশুদের পিতামাতাগণ যেকোন সময় গবেষণার কার্যক্রম থেকে নিজ সম্মতিকে প্রত্যাহার করতে পারবেন। গবেষণাপত্র প্রকাশ কালে অংশগ্রহণকারীর পরিচয় ও অন্যান্য তথ্যসমূহের গোপনীয়তা রক্ষা করা হবে।

আশা করা যায় গবেষণার ফলাফল থেকে ২-৩ বছর বয়সী শিশুদের ভাষার উন্নতির ক্রমধারা জানা যাবে এবং সমস্যাগ্রস্ত শিশুদের সমস্যা যাচাই করা সম্ভব হবে।

উপরিউক্ত তথ্য সম্পর্কে অবগত হয়েই আমি..... আমার শিশুকে এই গবেষণায় অংশগ্রহণের অনুমতি প্রদান করছি।

শিশুর পিতা/মাতার স্বাক্ষর/টিপসই.....

তারিখঃ

গবেষকের স্বাক্ষর.....

তারিখঃ