Development of Null-Subject Sentences in Bangla Speaking Children

By

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A thesis submitted to the Department of English and Humanities in partial fulfillment of the

requirements for the degree of Bachelor of Arts in English

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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.

2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I have acknowledged all main sources of help.

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Approval

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Abstract

This study aims to explore the null subject acquisition process of Bangla speaking children. It also attempts to find out the developmental pattern of the acquisition of null subject in Bangla. In order to conduct the research, the researcher focuses on the language samples of 15 Bangla speaking children aged 2 to 4 years old. The data was analyzed for subject type (null subject, lexical subject, pronoun) and error. The results of the study indicate that the use of null subject is not consistent with the age of the children. The Bangla speaking children consider null subject as a part of their grammar. Nonetheless, the findings of the study offer guidance to the future studies on the acquisition literature in Bangla. Throughout the study, the researcher attempted to figure out the answers of these following questions:

1. What are the stages of null subject acquisition for Bangla speaking children aged 2 to 4 years? To illustrate, what is the developmental trend in the acquisition of null subject in Bangla?

2. Whether the null subject phenomenon in Bangla supports the grammar-based hypothesis or performance-based hypothesis?

Keywords: Null Subject; Pro drop; Child Language Acquisition; Bangla Speaking Children; Competence Based Hypothesis; Performance Based Hypothesis, Error.

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Chapter 1: Introduction

Subject drop in early child language is one of the most discussed as well as debated topics in the principle and parameter framework of UG (Universal Grammar). UG is formulated by linguist Noam Chomsky which postulates that principle is the universal rules that all children are born with whereas parameter varies from language to language. Under the principle - parameter framework, null subject parameter divides all the natural languages into two groups: pro drop language and non pro drop language. Pro drop languages are those which allows null subject, for instance, Italian, Spanish, Chinese and so on. English, French, German are the non pro drop languages and they do not allow null subject in their grammars. However, regardless of acquiring null subject or non-null subject language, children tend to drop subject in their early acquisition process. Null subject phenomenon in early childhood is studied by many proponents: (Hyams 1986, 1992; Hyams and Wexler 1993; Rizzi 1994, 2000; Bloom, 1990; Valian, 1991; Wang et al. 1992) and many more.

Bangla, one of the most spoken languages in South Asia is a null subject language (Sultana et al. 2016). Bangla is a morphologically rich and highly inflected language. Apart from this, Bangla verb agrees with tense, aspect and person marker when person marker is the only obligatory suffix (Sultana, 2016). In terms of Bangla, attention has been given on the acquisition of verb morphology. Despite being a null subject language, no significant research has been conducted regarding null subject properties of Bangla in the acquisition literature. This paper aims to discuss null subject acquisition of 15 typically developing Bangla speaking children who are aged from 2;1 years to 4;3 years. Moreover, it will look into the prominent hypotheses regarding null subject acquisition process in early childhood.

1.1.Problem Statement

The null subject parameter has played significant role in the theoretical study of comparative syntax in recent years. Around the age of two, children tend to drop subjects whether their languages are null-subjects or not. As Bangla is a pro drop language, it allows subject omission in adult speech as well. Bengali speaking children are also seen to be omitted subject in their early syntactic development phases. However, null subject acquisition in Bangla has not been explored yet significantly. This paper addresses this problem and attempts to investigate the developmental pattern of null subject acquisition in terms of Bangla speaking children. It will also look into the null subject parameter hypotheses to address the occurrence of null subject in early childhood.

1.2.Purpose of the Study

The present study intends to inquire into the acquisition of null subject phenomena in Bangla by analyzing the language samples of 15 Bangla speaking children. It also aims to examine the use of null subject and find out the developmental pattern of the acquisition of pro drop among the Bangla speaking children.

1.3.Central Research Question

The present study attempts to find out answers to these questions:

1. What are the stages of null subject acquisition for Bangla speaking children aged 2 to 4 years? To illustrate, what is the developmental trend in the acquisition of null subject in Bangla?

2. Whether the null subject phenomenon in Bangla supports the grammar-based hypothesis or performance-based hypothesis?

1.4.Significance of the Study

This study provides insights into the acquisition of null subject as well as overt subject for the Bangla speaking children. The results obtained from the research will contribute to the existing research on the acquisition method of Bangla language. Besides, this study offers directions to the future studies on the child language development in Bangla. Apart from this, the present study sheds some lights on one of the most debated area of principle parameter theory of UG.

1.5.Limitation of the Study

This study acknowledges certain limitations. Due to the outbreak of COVID 19 pandemic, the researcher could not collect data personally. The quality of the data would have been more reliable if the researcher could collect data by her own. Regarding this limitation, it could be argued that the researcher used spontaneous language sample of Bangla speaking children which have been used in the previous research. Another limitation of this research is the small number of participants. Besides, the sample size does not reflect the children from diverse socio-economic background of Bangladesh. Hence, the findings of this study would have been more authentic and valid if the researcher could incorporate diverse and extended sample size.

Chapter 2: Literature Review

This chapter is divided into 5 sections: section 1 defines the concept of null subject phenomenon, section 2 highlights some of the approaches regarding null subject, section 3 addresses the syntactic details of Bangla language, section 4 explores the null subject manifestation in Bangla and section 5 reviews null subject acquisition in other languages.

2.1. Null-Subject as a Concept

A null subject is the omission of subject in a sentence. The null subject phenomenon is also known as subject drop or pro drop. The concept of null-subject or pro-drop arises from the permissible dropping, in some languages, of subject pronoun of a sentence because of potential pragmatic recoverability from context (Macdonald, 2016). Huang (2000) defines pro-drop or null subject languages as languages which allow a subject pronoun in a finite clause to be empty or null (as cited in Nayudu, 2008). However, concept of null subject and pro drop language is originated from the principle and parameter theory of Universal Grammar (UG). UG is coined by Chomsky and propagated by other linguists which postulates that human brain is endowed with innate ability to acquire language. It explains that children are pre equipped with universal rules of grammar which allows them to acquire language in a short period of time. Moreover, Principle and Parameter Theory (PPT) attempts to explain the similarities and variations among the natural languages. Null subject phenomenon is considered to be parametric variation of UG. Nonetheless, null subject parameter is broadly discussed topic of the parametric variation of UG, yet its status is controversial. In terms of null-subject, languages are divided from many viewpoints by many proponents, as for example, Huang (2000) distinguished into three kinds; (1) Full null subject language, (2) non-null subject language and (3) restricted or semi-null subject language, Nayudu (2008) divided into two broad types; (1) Classical pro drop language

and (2) Semi pro drop language, he also divided it in terms of conditions; (1) Syntax based pro

drop language (Italian) and (2) discourse based pro dop language (Chinese).

2.2. Null-Subject in Language Acquisition

Null subject phenomenon has significant implication in early language acquisition as it

explains how children acquire language in their early childhood. It is also important in first (L1)

and second (L2) language acquisition in the generative grammar tradition. It has always been a

center of attraction to the researchers why some languages allow null subject and why some

languages do not. However, many scholars claim that non pro drop is considered to be the

default option in natural languages whereas pro -drop option has to be accounted for (Duiguine,

2017). Chomsky (1981) claims that the null-subject parameter is a parameter that children are

born with. It has been claimed for pro-drop languages that it is not only grammatical but also

conventional for speakers of such a language to drop subjects (as cited in Altan, 2008). Some

researchers explain this behavior as competence-based accounts which reflect a difference

between the child and adult grammar (Hyams 1986, 1992, Hyams and Wexler 1993, Rizzi 1994,

2000, Yang 2002, 2004). It is argued that null subject phenomenon is accounted for grammatical

reason and related to the principles of Universal grammar. On the contrary, omission of subjects

in early child language may occur due to the performance-based accounts, for instance, syntactic

factors, limitations on memory, planning and production capacity according to some researchers

(Bloom 1990, Valian 1991, Gerken 1991). However, some early approaches regarding null

subject phenomenon are summarized below:

2.2.1. Parameter Missetting Hypothesis: The parameter missetting idea was proposed by Hyams (1983, 1986) in where she argued that children's missing subjects are the result of a positive setting along the pro-drop (or null subject) parameter, the parameter responsible for licensing null subjects by "rich" inflection in languages like Italian and Spanish. Hyams (1983, 1986) first proposed that the Null-subject parameter, a parameter UG that accounts for the difference between languages, such as Italian and English with respect to the possibility for unexpressed subjects, comes fixed at an initial setting, one which permit phonologically null-subject. The central claim of this analysis was that all children start out speaking an Italian language (Hyams, 1992). However, Hyams she reanalyzed her first proposal and argued that the notion of 'rich agreement' is problematical even for the analysis of adult null-subject languages (Hyams, 1992). As it is observed that not all adult null-subject language rich inflectional paradigms and many languages do have rich inflectional systems that are not non-null subject language. For instance, German and Icelandic do not allow null-thematic subjects although they have null-expletives. On the contrary, there are languages like Chinese does not have verbal inflections but it is considered as null-subject language. This suggests that, 'rich agreement' does not meet the conditions of null subject phenomenon.

2..2.2. Morphological Uniformity: Morphological uniformity is proposed by Jaeggli and Safir (1987). According to Jaeggli and Safir (1987) null-subject phenomenon indicates the essential property that accounts for the possibility of null-subjects is 'morphological uniformity'. They claimed that null-subjects are permitted in all and only those language which have morphologically uniform inflectional paradigms. In other words, morphologically uniform paradigm license null subject. For instance, Spanish, Italian, Japanese all show paradigms with forms whereas the Chinese paradigms contains only underived forms (Jaeggli and Hyams, 1987).

2.2.3. Root Subject drop Hypothesis: Rizzi (2005a, b) hypothesizes that missing of subject in early English and French are an example of 'root subject drop' (RSD), a principle according to which a subject may be null in the specifier of the root (as cited in Hyams, 2011). Rizzi (1982) argues that a definite null subject is not allowed in certain uninflected clauses like gerundives and infinitives, whereas their corresponding inflected clauses allow for null subjects. (as cited in Nayudu, 20). Null-subjects of early grammars can be unified in part with the root infinitives under the truncation approach (Rizzi, 1993/1994) Later, Rizzi (2005a, b) proposed that subject drop in early English (and French) is an instance of 'root subject drop' (RSD), a principle according to which a subject may be null in the specifier of the root (as cited in Hyams,). Besides, early subject drop in the acquisition of non-Null Subject Languages is not a mere performance effect. It is possible in selective structural environments: the specifier of the root and the specifier position of uninflected clauses (Rizzi, 2002).

2.2.4. Processing Limitations Hypothesis: Performance based approach of null subject generally claims that null subject phenomenon is caused by severe limitations in the child's sentence processing and or memory capacity (Boster, 1994). Children with low MLU tend to omit more subjects and articles than children with high MLU in their spontaneous speech (Gerken,1991). It is assumed that the performance limitation occurs because children employ complexity reducing rules or strategies to transform planned utterances into producible forms. Thus, children employ their pragmatic knowledge to eliminate those sentential elements that provide for the listener the least new information (as cited in Gerken, 1991).

Furthermore, Orfitelli and Hymas (2012) experimented the two main competitive analysis of the null-subject phenomenon which are grammatical accounts and performance accounts. Their experiment showed that Null-Subject stage of child language is caused by a

grammatical difference between the child and adult English speakers. Conversely, performance

factors are not the underlying condition for the null-subject stage. Nevertheless, they play and

important role in the resolution of the mood ambiguity associated with Null-Subject utterances.

However, it visible that the discussions and hypothesis about null subject phenomenon is quite

debatable and unclear among the researchers in the literature. It seems that my study of null-

subject development stage of Bengali speaking children will add new perspectives to the existing

research. It will also contribute in the field of child language acquisition of Bangla speaking

children.

2.3. Syntactic Features of Bangla Language

Bangla belongs to the Indo-Aryan branch of the Indo-European language family. It is

widely spoken by the people of Bangladesh and few parts of Indian states such as West Bengal,

Assam and Tripura. Bangla is one of the most spoken languages in the world with around 193

million first language speaker and around 230 million total speakers (Shahnawaz, 2013).

However, modern Bangla has two distinct forms which are distinguishable in morphologically

and syntactically. One form is *Sadhubhasha* which serves the literary purpose and sometimes for

official sign and documents in Bangladesh. Another form is known as the *Cholitobhasha* or

standard colloquial Bangla which is usually used informal and daily communicative purpose.

Syntax is the grammatical structure of sentence which deals with the word order and

other principles of a well-formed sentence. Bangla mostly follows SOV (subject + object + verb)

structure. Nevertheless, Bangla has flexibility in the arrangement of the words in a sentence. It is

considered as free word order language as multiple word orders are possible in Bangla. For

example,

a. Mina   Rinake   boiti   dilo

   Mina (Nom)   Rina (Acc)   the book   gave.pst.3P.

   Mina gave the book to Rina

b. Rinake   Mina   boiti   dilo

   Rina (Acc)   Mina (Nom)   the book   gave.pst.3P.

   Mina gave the book to Rina

c. Boiti   dilo   Rinake   Mina

   The book   gave.pst.3P   Rina (Acc)   Mina (Nom)

   Mina gave the book to Rina

Unlike English, Bangla can easily express same meaning with different word order which can also be grammatically appropriate. English follows more rigid SVO structure in this case. For instance, 'Tarek Kicked the ball' and 'the ball kicked Tarek' convey the opposite meaning. Moreover, 'kicked the ball Tarek' is also grammatically incorrect in English.

2.4. Verb Morphology in Bangla

Bangla verb morphology consists of verb stem, aspect marker, tense marker and person marker. The position of each inflection has fixed order: verb stem> aspect>tense>person. Bangla has three distinct person marker for first person, second person and third person. Besides, Bangla verb sometimes contain honorific marker in the context of second and third person. these markers appear with the verbs in agreement with the Subjects of the sentences. There are three inflections that serve as the honorific marker in the 2nd person: /-0/ neutral, /-en/ formal and /-ish/ informal, and 2 in the third person: /-e/ informal and neutral, /-en/ formal (Sultana, 2016). Furthermore, there are three aspectual markers for Bangla verb: the *simple aspect*, the

progressive/continuous aspect and the *perfective aspect* (Shahnawaz, 2013). Here is an example

of verb inflection in Bangla verbs where the general from is verb stem. aspect marker. tense

marker. person marker.

Verb form	First person	Second person	Third person
Present simple Verb root-∅-∅-p	Ami boi **por-∅-∅-I** I book read	Tumi boi **por-∅-∅-o** You book read	She boi por-∅-∅-e (S)he book reads
Present progressive Verb root-ch^h-∅-p]	Ami boi **por-ch^h-∅-i** I book is reading	Tumi boi **por-ch^h-∅-o** You book are reading	She boi **por-ch^h-∅-e** (S)he book is reading
Present perfective Verb root-ech^h-∅-p	Ami boi **por-ech^h-∅-i** I book have read	Tumi boi **por-ech^h-∅-o** You book have read	She boi **por-ech^h-∅-e** (S)he book has read

This table only displays the three aspects of present tense of verb inflections in Bangla. It is quite

visible that Bangla is a richly inflected language

2.5. Bangla Syntactic Structure and Phrase

The structure of a simple sentence in Bangla can comprises of subject, main verb, direct

object, indirect object spatial expression, temporal expression and so on (Sultana, 2015). The

sequence of words in a sentence in Bangla is as follows: subject + temporal phrase + locative

phrase + indirect object + direct object + adverbial phrase + verb (Banglapedia, n d.).   Bangla

projects the syntactic components like noun, verb, adjective, etc. in head final word order (as

cited in Kar, 2009). The syntactic structure of a Bangla basic sentence is illustrated below:

Ami football khelch^{h}ilam / I was playing football

```
                          S
                        /   \
                      ↙       ↘
                    NP         VP
                    |         /   \
                    ↓       ↙       ↘
                    N      NP        V
                    |      |         |
                    |      ↓         |
                    |      N         |
                    |      |         |
                    ↓      ↓         ↓
                   Ami  football  khelch^h ilam

                    I    football  was playing
```
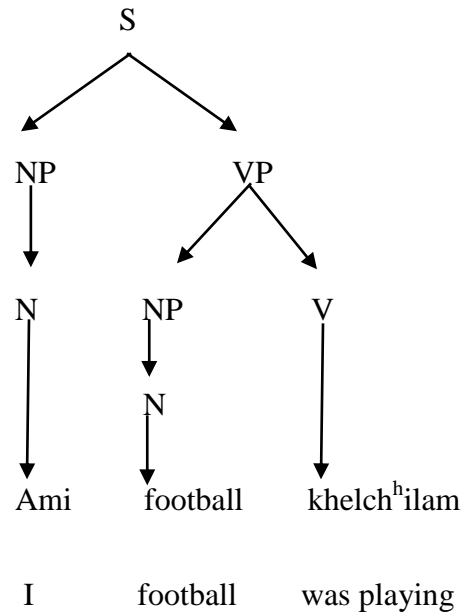
Unlike English, Bangla is a head final language. Bangla follows a head final word order which indicates that in any phrase the principal component has the right most position, and the tree branches out towards the left to incorporate the other elements (Sultana, 2015). In Bengali the negation follows the finite verb. Sentential negation is post-verbal in the embedded clauses similar to sentential negation in the finite clauses in Marathi.

2.6. Null Subject acquisition in Other Language

It is a well-established fact that children drop subjects whether the language is pro drop or non-pro drop in their early language acquisition. Despite having many theories about null subject phenomenon, it is still considered to be a disputed issue among the scholars. In case of non pro drop languages such as English and French, children tend to show slow performance in acquiring impoverished inflectional system of the language whereas the prodrop Italian speaking children are relatively quick to learn the complex system of inflectional morphology and achieve productivity (Pierce, 1992). On the other hand, a child will not be expected to drop subjects until

it has acquired the syntax of subjects and their Case properties (Duiguine 2017). Valian (1990) asserted that English-speaking children drop subjects at a much lower rate than Italian-speaking children (30% vs. 70%) whereas Wang et al. (1992) found that the 2 years old English-speaking children showed far fewer null subjects than the Chinese-speaking children (approximately 26% vs. 53%). Moreover, Boster (1994) claims that null subject in English speaking child is higher in matrix sentences than in embedded clause and within a clause it only omits subjects in initial position, not after a moved Wh-element or topic (p.324). Besides, Guilfoyle (1984) assumes that subject drop in early English production is not an outcome of the pro drop parameter rather the consequence of the inability of child grammar to case mark the subject. As children are not able to assign tense at their earlier stage of language acquisition, they do not produce modals or verb inflections. He also argued that, children are able to produce lexical subject in their utterances when they acquire the feature of tense and the trigger is the presence of modals and inflections in the input.

In case of Turkey, a pro drop language, both semantic (verb-inflectional) and pragmatic (pronominal options) marking of sentence subject is well established at an early age. Around the age of 2, Turkish children can produce subject agreement and verb marker across a range of tense along with all the three pronominal options: null, preposed and postposed pronouns (as cited in Altan, 2013). Altan (2013) found out that, the Turkish speaking children use pro drop structure more commonly with verbal predicates. He also claims that the Turkish children start their language acquisition with pro drop parameter and the percentage of pro drop structure decreases as children get older. Moreover, Dikilitas (2017) investigated on a Turkish-English bilingual child and Turkish monolingual child which revealed that there is no numerical

difference between the two participants, because both used overt and null subjects in the required contexts in Turkish yet the bilingual child used few incorrect null subjects in English (p. 42).

Wang et. al. (1992) found out that Chinese-speaking children drop both subjects and objects at irregularly target-like rates from the earliest stage whereas the English-speaking children show an immense subject-object asymmetry in the rate of argument drop. Besides, Lee (2000) claimed that American children dropped subjects at a much lower rate than the Cantonese or Mandarin children. Korean, a 'discourse oriented' language like Chinese also show asymmetry in the subject/object drop patterns (Kim, 2000). Moreover, Kim's (2000) study on subject/object drop pattern in Korean child and a cross linguistic comparison among seven languages also support performance-based limitation accounts of the null subject phenomenon in early English.

Telegu is a morphologically rich language and allows null subject. In Telegu, alike Bangla 1st and 2nd person, pronominal subject can be dropped in any context but the 3rd person pronoun is dropped when the subject can be identified by the listeners or it is mentioned in the earlier sentence (Suman, 2014). Telegu speaking children drop subject at a rate of 73%. Moreover., higher rates of dropping subject are noticed in 1st person and 2nd person pronominal subject.).

2.7. Null Subject Manifestation in Bangla

According to many scholars, Bangla falls under the null subject language category (Kar, 2009, Sultana, 2015) and more explicitly partial null subject (Cole, 2009, Baby, 2020). Kar (2009) asserted that Bangla is a null-subject language, and Bangla verbs express agglutinative features in the morphological paradigm, i.e., verbal inflections are suffixed to the verbs with each

having a distinct morphological significance (as cited in Sultana,). As Bangla verb is marked

with tense, aspect and person, its pronominal subject can be expressed 'in the verb'. Therefore,

partial null subject language is different from the Italian -like null subject language as it allows

subject omission under certain conditions. Cole (2009, 2010) claims that Bengali is a

contextually strong language where null subjects occur in conjunction with maximal agreement

(as cited in Rosenkvist, 2014). Roberts and Holmberg (2010) mention that partial null subject

such as Finnish, Russia, Hebrew, Marathi permits subject omission only on first and second

person conditions in any finite context. However, Bengali correspondingly meets the similar

conditions as it allows null subjects in first person and second person context. For instance,

a. Boi   Porchi

   Book   read.pres.prog.1P

   (I) am reading a book

b. Ekhane   keno   eshecho

   Here   why   come.past.prog.2P

   Why have (you) come here?

A handful researches have been conducted on the null-subject phenomena in Bangla. Sircar

(2013) investigated on the null and overt subject acquisition in Bangla which revealed that null

subject occurs twice as many as overt subject and the use of overt subject increase with Mean

Length of Utterance (MLU). Moreover, it was also found that the percentage of the null subject

acquisition is 67.3% for 2 years old Bangla speaking children.

However, the existing research on this topic which is discussed in the chapter will help the researcher to find out the developmental trend of null subject acquisition in Bangla. This study aims to look into the language samples of Bangla speaking children and interpret the null subject feature in their speech. I will also intend to examine whether the null-subject phenomenon supports the competence-based hypothesis or performance-based hypothesis.

Chapter 3: Research Methodology

Due to the pandemic situation the researcher could not be able to collect data physically. Hence, she uses the language sample of a subset of children which have been used for previous research (Sultana, 2015). The researcher has taken the consent from the original researcher to use her dataset in the dissertation. However, this chapter includes design of the research, information about participant, instrumentation, data collection procedure and the method of data analysis.

3.1. Research Design:

This research has been designed to explore the developmental pattern of null subject acquisition in terms of typically developing Bangla speaking children. The researcher attempts to analyze naturally produced language sample of 15 Bangla speaking children who are aged from 25 months to 51 months. For the research, the researcher has used spontaneous natural language sample because it plays an important role in evaluations of children's language skills (Rezapour and et. al., 2011). Moreover, naturalistic data are ecologically valid and involve spontaneous informal conversations makes them optimal for calculating general measures for linguistic development (as cited in Eisenbeiss, 2011).

The researcher follows mixed method for this study. Quantitative research methodology is used to find out the numerical outcome of the research. Besides, qualitative method is employed to get more insights into the topic as Creswell (2018) claims that in qualitative research the problems need to be explored to obtain a deep understanding" (Creswell, 2018).

3.2. Participant

There are a total of 15 children in this study who are aged between 25 months (2;1 years) and 51 months (4;3 years) from six daycare centers in Dhaka. The ratio of male and female participant is 9:6. The participants are divided into 3 age groups in where 5 children form each group. All the participants are acknowledged as typically developing children by their parents and caregivers of daycare centers. Their native language is Bangla and they belong to diverse socio-economic background. Demographic information of the participants is illustrated below.

Age group 2

Child name	Age (years)	Sex	Parent's education
ZF	2;1	Female	16 years
MR	2;2	Female	17 years
AF	2;3	Female	10 years
RJ	2;3	Male	17 years
SN	2;3	Male	10 years

Age Group 3

Child name	Age (years)	Sex	Parent's education
SJ	3;1	M	17 years
FR	3;1	F	17 years
FB	3;1	F	17 years
MH	3;3	M	17 years
RH	3;3	M	17 years

Age Group 4

Child name	Age (years)	Sex	Parent's education
SD	4;1	M	17 years
OS	4;2	F	12 years
SF	4;2	M	17 years
NS	4;3	M	17 years
TD	4;3	M	17 years

3.3. Instrumentation

Natural language samples have been collected from 15 typically developing Bangla speaking children for this study. The examiner has collected the language samples from six daycare centers in Dhaka. It is important to collect speech samples in naturalistic settings, where researchers can record participators in spontaneous interactions with family members, friends or researchers (Eisenbeiss, 2010). In this study, the examiner, participants and occasionally the caregiver of the daycare center participated in the data collection procedures.

The examiner has collected the impulsive language performance of the children through play session in the daycare center. Moreover, a set of toys have been used to make the session more effective and engaging. The examiner has used the similar set of toys with each child which included a doll's house, a cooking set, a toy car and some puppets to make the process consistent and reliable. However, the duration of the play session was 20 minutes for each child.

3.4. Data Collection Procedure

To collect the language sample, the examiner has obtained approval from the authority of the daycare centers and the parents of the children. The play session between the examiner and the participants took place in the daycare centers. Therefore, the testing has been materialized in a separate room which has been allotted by the respective organization.

The examiner has ensured that the testing rooms are noiseless and had ample amount of light. Moreover, the recording devices, which have been used in the recording are kept sophisticated to attain more clear and audible responses from the children. The examiner has used both audio and video recording for each child in the recording session. As Eisenbeiss (2010) stated that video recording facilitates in collecting situational information for understanding object, deictic and temporal reference as well as studying links between speech, gestures and action (p. 4). A wireless microphone which was attached to the child's outfit has been used for audio recording and a Canon Power shot S5IS camera has been used for video recording.

The testing and play session lasted for almost 1 hour for each child. The assessment procedure was kept persistent for each child. However, the free-play session was carefully planned by the examiner to hold the excitement of the children on spontaneous language production. Besides, the toys were given one by one to the children and most interesting tasks were reserved for the end.

3.5. Data Analysis Method

Percentage values are calculated for data analysis method. The transcripts are analyzed for the use of subject type: null subject, pronoun, lexical noun phrase and error. The researcher

calculated the percentage of null subject, pronoun, lexical noun phrase and error for each child individually as well as for the overall age groups. Therefore, the researcher attempts to compare the average value of each group and explore their developmental process regarding null subject acquisition. However, incomplete sentences, imperative sentences and interrogative sentences are excluded in the research. Examples of the use of null subject, pronoun, lexical noun phrase and error are illustrated below from the actual data.

1) EXA: Babuta   ki   korche?

    The child what do. Prog.3P

    What is the child doing?

  CHI: Ghumaitese

    Sleep.prog.3P

    (It)* is sleeping

In this example, the child drops the subject as the subject can be retrieved from the context. In this case, it can be said that when the context is established, children tend to drop subject in their utterances.

2) EXA: eije ekta kukur ase

    There a dog is.3P

    Look, there is a dog!

  CHI: kukur boshbe ekhane

    Dog   will sit.3P here

    The dog will sit here.

Example (2) demonstrates the lexical noun phrase which has been considered as one of the

subject types in this study.

3) EXA: Amake dao to ektu pudding banae

     Me   give.2P some pudding make

    Make me some pudding

  CHI: Ami to banate parina

    I   to make cannot

    I cannot make

Aforementioned example illustrates the use of personal pronoun produced by the children. This

study includes demonstrative pronoun as well.

4) EXA: Haat shorao!

    Hand move. 2P

    Move (your) hand!

  CHI: dhukte parbe na

    To enter will be able not

    (It)* will not be able to enter

In example (4), the child drops subject though the subject should have been used. As the subject

cannot be recovered from the context or grammar, it is considered as an error made by the child.

Chapter 4: Findings

In this chapter the researcher presents the analysis of the data which have been collected from 15 Bangla speaking children. The data was analyzed for the subject type, for instance, null subject, lexical NP, pronoun and error regarding null subject acquisition in Bangla. This chapter is divided into two sections. The researcher demonstrates the example of the use of null subject by children from the actual data along with the numerical analysis.

4.1. Qualitative Analysis

This section scrutinizes the acquisition of subject type of Bangla speaking children. The researcher sheds some lights on the use of different kinds of subject produced by the children through the actual example from the data.

4.1.1. Lexical NP for Providing New Information

5) EXA: Ei bari ta te ke thake?

This house who live.3P

Who lives in this house?

CHI: Ei barite babu thake. [FB. 3;1]

This house baby live. 3P

Baby lives in this house.

As it can be observed from this example that the child uses lexical NP as a subject which provides new information in the sentence.

4.1.2. Pattern of Error

In example (7) and (8), the children omit subject in the sentence though the subject should have been used. Since the subject cannot be recovered from the context, it is considered as an error made by the children. However, it can be noticed that children tend to make error with third person marker.

6) EXA: Ki obostha?

      What's up?

   CHI: Ekhane shuye ase [NS, 4;3]

      Here   lie. prog.3P

      * is lying here

7) EXA: Oshudh ta ki khete hobe?

      Medicine what to take

      Do I have to take the medicine?

   CHI: Bhat khabe. [RJ, 2;3]

      Rice will.eat.3P

      * Will eat rice

   EXA: Bhat k khabe?

      Who will eat rice?

4.1.3. Morphological Richness

8) EXA: Ki korcho tumi afiya?

What do. prog.2P you

What are you doing Afiya?

CHI: kheltesi. [AF, 2;3]

Playing

9) EXA: Mangsho ranna koro!

Meat   cook.2P

Do (you) cook meat!

CHI: kati. [RJ, 2;3]

Chop.1P

In most of the cases, children drop subject where the subject is not necessary because it can be figured out from the verb inflections. Note that, Bangla allows null subject as the verb is inflected with person marker.

4.1.4. Similar Subject

The children tend to drop subject when the two sentences have same subject. In example (10) and (11) the child uses null subject instead of repeating the similar subject.

10) EXA: Kukur ta ki gari chalate pare?

Dog the car drive   car

Can the dog drive car?

CHI: Na, pare na. [MH, 3;3]

No, can not

No, (it)* cannot

11) EXA: Komola to nai ekhane

Orange   not here

The oranges are not here

CHI: Ekhaneo to nai. [FB, 3;1]

Here   not

Not here either.

4.1.5. Adult Grammar Vs Child Grammar

12) EXA: Boshe boshe ki kortese putul ta

Sit   what   do. prog.3P doll the

What is the doll doing by sitting there?

CHI: putul ta ghumaitese. [OS, 4;2]

doll   the sleep. prog. 3P

The doll is sleeping

As can be observed that the child uses subject in some cases though the adult grammar will prefer null subject in that place.

4.1.6. Personal Pronoun

In most of the cases, children tend to delete personal pronoun in their utterances. It should be noted that adult grammar also omits personal pronouns as Bangla permits null subject

13) EXA: dakter ke ektu cha diba khete?

Doctor   some tea will give.2P.

Will (you) give some tea to the doctor?

CHI: dakter ke cha dibo na. [OS, 4;2]

Doctor tea will give.1P no

(I)* won't give tea to the doctor

4.1.7. Length of the Sentence

As can be observed from the following example, a child drops subject in a shorter sentence though it uses subject in a longer sentence.

14) CHI: Khala na sofa theke pore gese [ZF, 2;1]

Aunty   Sofa from fall.Perf.3P

Aunty has fallen down from the Sofa.

15) EXA: O ke ki dibo?

Her to should give.1P

Should I give it to her?

CHI: Khabe na [ZF, 2;1]

will eat.3P no

She* will not eat

4.2. Quantitative Analysis

The following figure demonstrates the percentage of null subject used by the three groups of children. It can be observed that age 2 produces more null subject than age 3 and age 4 produces less null subject than age 3. The result shows that the youngest group use the highest amount of null subject. However, the interesting part of the finding is that the ratio of the production of null subject is not consistent with the age. It can be assumed that the Bangla speaking children start with the pro drop parameter setting at the earliest stage. When they reach age 3, they start overgeneralizing and using subject even if the subject could be dropped. Consequently, the percentage of null subject drops in this age. Nonetheless, the percentage of null subject rises when they learn the pragmatic factors and null subjecthood of Bangla. As the children get older, they prefer using null subject when necessary.

Figure 1: Distribution of null subject
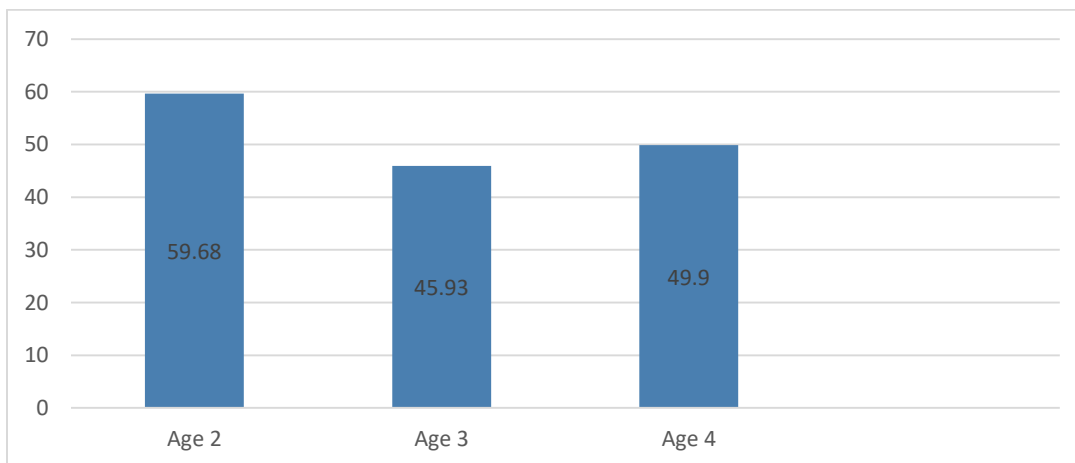
The following figure illustrates the percentage of the use of lexical NP across the three age groups. The result shows that the youngest group has the lowest percentage value than the older groups. As the stock of vocabulary develops with the age, the older children produce more lexical NP in their utterances than the younger groups.
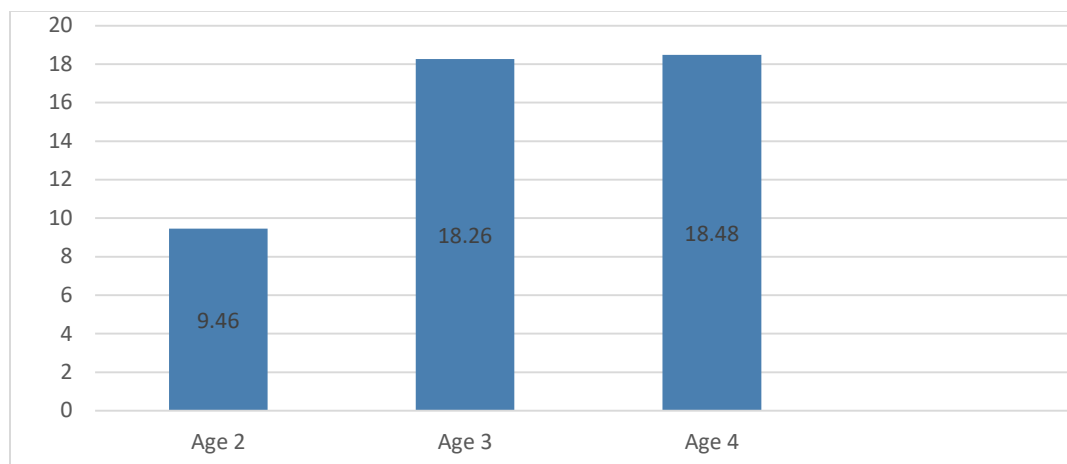
Figure 2: Distribution of lexical NP
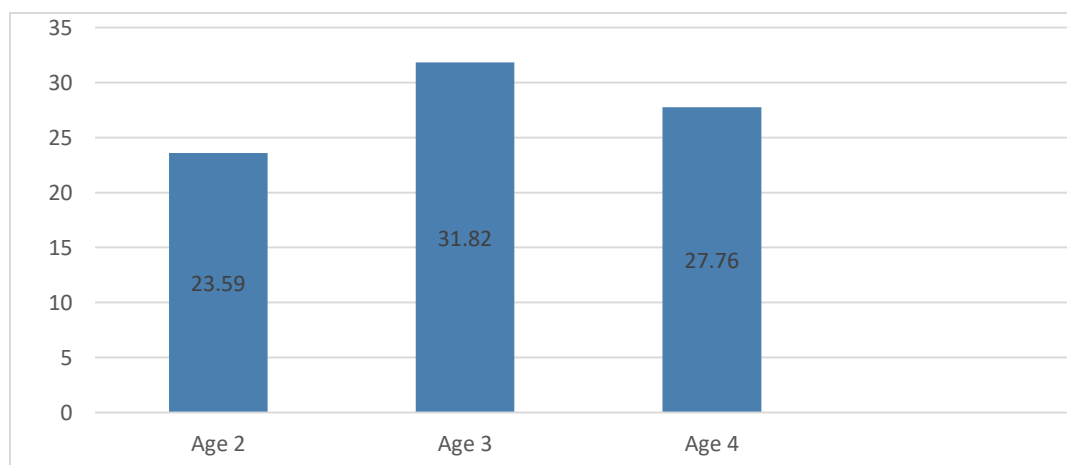

Figure 3: Distribution of Pronoun

Figure 3 demonstrates the use of pronoun produced by the three groups of participants. It can be observed that the age group 2 produce the lowest amount of pronoun whereas age group 3 produce the highest amount of pronoun. However, age the eldest group of children produces less pronoun than their younger peers.
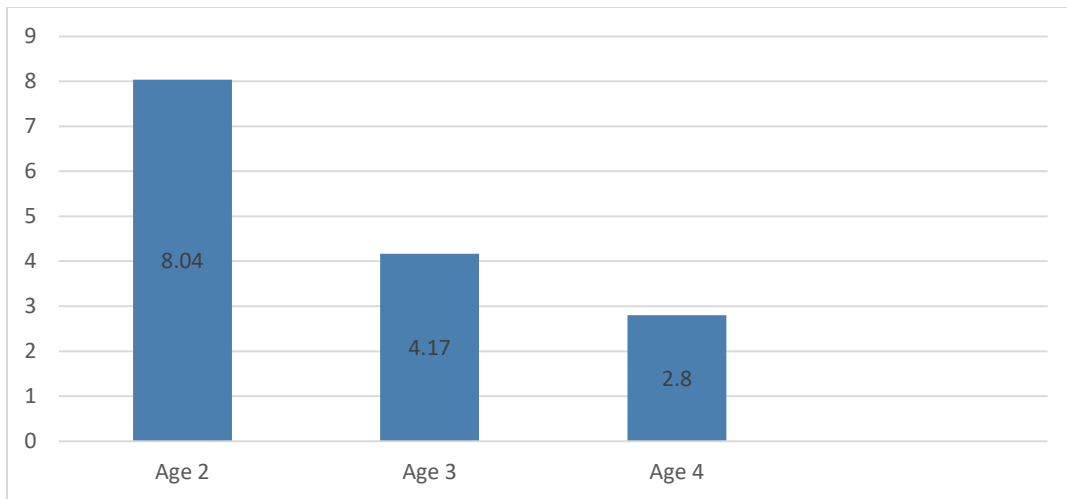
Figure 4: Distribution of Error

Figure 4 suggests that the children make less error as they grow older. The percentage of error decreases with the age. The result shows that the youngest group of children tend to drop subject when the subject should have been used. As they belong to telegraphic stage of their language development, it can be assumed that they delete more subject than the older group due to the processing limitation.

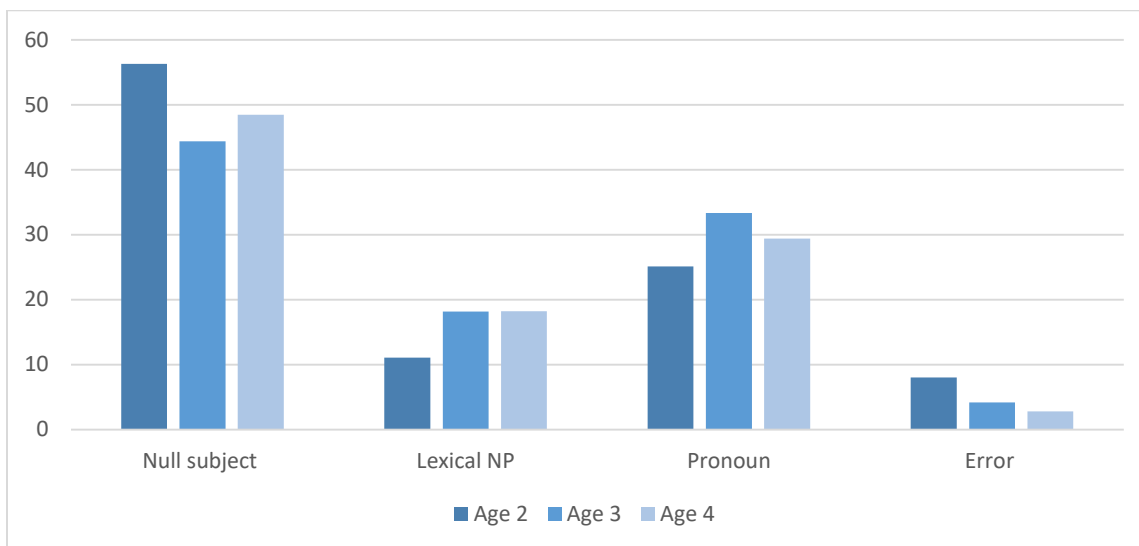Figure 5: Distribution of subject type

Figure 5 summarizes the distribution of subject type (lexical NP, pronoun, null subject) and error made by the three groups of participants. The result shows that the youngest group produce more null subject and less lexical NP than the older groups. However, participants who are aged 3 years old, produce less null subject and more pronominal subjects than the other two groups. It can be assumed that, this particular group of participants overgeneralize the use of null subject and use more pronominal subjects though the subject could be dropped in that place. As the children grow older, they get better in it and drops pronouns when necessary.

Chapter 5: Discussion

This chapter presents interpretation of the findings and results in order to address the central research questions of this study. The researcher also provides further discussion on existing literature on this area.

5.1. Addressing the Central Research Questions

The central research question 1 inquiries about the acquisition of null subject among the Bangla speaking children who are aged between 2;1 and 4;3 years. In order to figure out the answer, the percentage values of null subject, pronominal subject, lexical NP and errors are calculated for each group of children.

Figure 1 demonstrates the developmental pattern of null subject used by the three age groups. The percentages are 59.68%, 45.93% and 49.90% for age group 2, age group 3 and age group 4 respectively. It is clearly visible that the youngest group of the children uses the highest amount of null subject and lowest amount of overt subject which is consistent to the findings of previous studies (Hyams 1996, Wang et al. 1992, Valian 1991). However, the percentage of the null subject seems to decreases significantly when the children reach age 3. The results of this present study asserts that the frequency of null subject used by the children is not parallel to the age groups. Therefore, the researcher has explanation for this developmental pattern. It can be assumed that that the Bangla speaking children start with the pro drop parameter setting at the earliest stage. When they reach age 3, they start overgeneralizing and using subject even if the subject could be dropped. Consequently, the percentage of null subject drops in this age. Nonetheless, the percentage of null subject rises when they learn the pragmatic factors and null subjecthood of Bangla. As the children get older, they prefer using null subject when necessary.

Figure 2 and 3 illustrates the use of overt subject such as lexical NP and pronominal subject across the three age groups. From figure 2, it can be seen that the amount of lexical NP increases with the age. As the children grow older, their stock of vocabulary develops significantly. Nonetheless, the use of pronominal subject reveals different kinds of developmental pattern in the same way as the use of pro drops. This study suggests that 3 years old children use more pronoun compared with the 4 years old children. Moreover, another promising finding is that the children drop more 1st person and 2nd person than the 3rd person as pronominal subject. Similar result was obtained in the study of Telegu speaking children (Suman, 2014). As Bangla is a highly inflected language, it can be assumed that the Bangla speaking children know the morphological richness of Bangla from the early age. This supports the morphological uniformity hypothesis which is considered to be one of the reasons for licensing null subject (Jaeggli and Safir, 1987).

On another note, figure 4 confirms that occurrence of error decreases with the age. The percentage of error is 8. 04%, 4.26% and 2.80% for the age group 2, age group 3 and age group 4 accordingly. It can be seen that the oldest group makes less error in comparison to the youngest group of children. It is presumed that younger children make more error for overgeneralizing the concept of null subject in a sentence. The decrease in error across the age group demonstrates their development regarding null subject acquisition.

Therefore, the present findings suggest the overall developmental pattern of null subject acquisition across the three age groups. The results of the current study confirms that the percentage of the use of null subject generates a U-shaped pattern. Hence, the researcher proposes three developmental stage of null subject acquisition for the Bangla speaking children aged between 25 months and 52 months. In the first stage, it is assumed that the children know

that Bangla is a null subject language and they drop subjects without having proper knowledge. Their highest error rate proves that they overgeneralize the function of null subject phenomena. In stage 2, the percentage of null subject drops and use of pronominal subject and lexical NP increases. However, their error rate also decreases in this stage. In the last stage, the children again use more null subject and their accuracy rate is higher than the younger children. By this phase, they know the accurate use of null subject and use it when it is necessary.

The central research question 2 investigates the fact that whether the null subject phenomenon of the present study supports the competence-based hypothesis or performance limitations hypothesis. It is to be mentioned that performance limitation hypothesis claims that children drop subject due to the limited processing and memory capacity (Bloom1990; Valian 1991). On the contrary, competence-based hypothesis accounts for the grammatical explanation which hypothesizes that children drop subject because of the positive setting of the pro drop parameter (Hyams 1986; Hyams and Wexler 1993).

The results of the study note no significant differences in the length of the sentences for subject less sentence and sentences with overt subject. It can be observed from example (14) and (15) that the youngest child of the study can produce subject in a longer sentence though it omits subject in the shorter one. The researcher chooses the youngest children because they are likely to have processing restrictions in their utterances. Contrary to the findings of Bloom (1990) and Valian (1991), I found that children do not omit subject because of the processing limitation. However, the result of the present study is consistent with the previous study which advocates for the grammar-based hypothesis (Hyams, 1993). The present study suggests that children who deletes subject in their utterances are capable to produce longer sentences. Thus, it provides evidence against the performance limitation hypothesis.

Moreover, from example (8) and (9) it can be seen that children tend to drop subject due to the rich morphological uniformity of Bangla. It can be assumed that Bangla speaking children know that Bangla is a null subject language from their early acquisition process. The researcher claims that Bangla speaking children are well aware of the null subjecthood of Bangla. It can be noticed from the findings that children drop 1st personal and 2nd personal pronominal subject successfully when needed. Hence, it can be said that the results of the study do not stand for the performance limitation hypothesis of null subject phenomena. Instead, the result of the study indicates that Bangla speaking children treat null subject as a part of their grammar from their early language acquisition.

5.2. Further Points to be Addressed

The present study intends to highlight some further points which needs to be discussed. The results of this study confirm the inconsistent relationship of the percentage of null subjects with the age of the participants which does not support the findings in other language (Altan, 2013). When comparing the result of the present study to those of previous studies, it must be pointed out that there are some differences in methodology and data analysis method. Studies in Turkish which is also a null subject language found higher rate of null subject (75%) for 2 years old children. The possible reason behind this kind of result could be the inclusion of imperative sentence in their data analysis procedure. Note that imperative sentence usually lacks subject and thereby the researcher excludes imperative sentence for this study. However, a similar pattern of results was obtained in the study in Spanish (Bel,2003). In Spanish, the rate of pro drop is 67% for 2 years old child. Moreover, a parallel increase between the number of overt subjects and the gradual growth of the average length of the utterance is not observed which supports the results of present study (Bel, 2003).

On another note, from example (6) and (7) it can be seen that the children make error in a systematic way. One type of error has been noticed in the research. The findings of the study shows that the children mostly make error by deleting the subject when it should have been used. However, the Bangla speaking children do not produce double subject as an error in this study. This error pattern also provides hint for the presence of null subject parameter in the acquisition process Bangla speaking children.

By comparing the results from the prior research on Bangla regarding null subject, it can be observed that the percentage of the null subject produced in that of study does not match with the present study (Sircar, 2013). In such case, the researcher argues that the age of the participant is the significant factor in this case. The percentage of this present study is lower because the participants are older than the previous study. It should be mentioned that the younger children tend to drop more subject than the older subject in all case.

Apart from this, the Crosslinguistic investigation have revealed that null subject acquisition of Bangla and English do not follow similar fashion. English speaking children drop subject by 30% in 2 years old age even though English is a non-null subject language (Valian 1991). The percentage of the null subject produced by the Bangla speaking children is higher than the English-speaking children proves that Bangla speaking children know the null subjecthood of Bangla from their early stage. Moreover, Valian (1991) claims that the rate of dropping subject decrease as their MLU increases for English speaking children. The researcher argues that MLU based pattern may not provide clear picture of the null subject acquisition phenomena as MLU incorporates with the number of the words or morphemes in sentence. It can be assumed that if the children use subject in a sentence, the MLU level is supposed to be increased.

Further finding of the study suggests that older children use more pronominal subject than the younger children which agrees to the study in Arabic, a null subject language (Qasem, 2020). Their study shows that in age 2.10 the use of overt subject increase 23% compared to 2.9. by the Arabic speaking children (Qasem, 2020). The results of the present study lead to the similar conclusion where the significant change in the use of pronoun by the 3 years old children is noticeable.

Chapter 6: Conclusion

In this paper, the researcher aimed to find out the answers of the following questions:

1. What are the stages of null subject acquisition for Bangla speaking children aged 2 to 4 years? To illustrate, what is the developmental trend in the acquisition of null subject in Bangla?

2. Whether the null subject phenomenon in Bangla supports the grammar-based hypothesis or performance-based hypothesis?

To figure out the answers, the researcher looks into the language samples of 15 Bangla speaking children who are aged from 2 to 4 years.

6.1. Summary of the Findings

This study intends to investigate the acquisition of null subject among the Bangla speaking children. The findings of the present study indicate that the children show significant progress as they grow older. The researcher suggests three developmental stages of null subject acquisition. Moreover, it can be assumed that the Bangla speaking children treat null subject as a part of their grammar from their early acquisition process. Apart from this, the results of the study do not account for the performance-based hypothesis regarding null subject phenomenon in early child language.

6.2. Practical Implication

The audience will be benefitted by knowing the acquisition of null subject among the Bangla speaking children. Moreover, the parents will be able to understand how their conversation with the child might develops their language acquisition process.

6.3. Recommendation

The researcher recommends some suggestions for the future studies which are illustrated below:

- Future studies can investigate whether the verb types (accusative, transitive, ditransitive etc.) correlate with the occurrence of null subject in Bangla

- Other syntactic features such as clauses, cases and so on can be studied in line with the pro drop phenomenon.

- Future research can be conducted using crosslinguistic data.

6.4. Further Studies

This study focuses on the subject type produced by the Bangla speaking children. Further studies can look into the relationship between subject and verb types in terms of acquiring null and overt subject in Bangla. Moreover, they can expand the sample size to draw more generalizations. Different data collection and data analysis method can also be taken into account by the future researchers.

6.5. Conclusion

To conclude, null subject phenomena in the children's speech is extensively studied topic in the principal parameter framework. Though many proponents come up with several proposals, the issue is still disputed and unresolved. In this paper, the researcher attempts to explore the use of null subject and overt subject among the Bangla speaking children. In order to do so, spontaneously produced language samples of 15 Bangla speaking children aged 2 to 4 has been analyzed. The researcher identifies that null subject is considered as a part of their early grammar by the Bangla speaking children. Thought the study does not include verbs type and other

syntactic properties, it may draw the attention of the researcher on the field of child language

development. The findings of this study may provide guidelines to the future research.

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Appendix A

 Transcribed language sample of a child:

$ Child, Examiner, Auntie

+ Language: Bangla

+ Participant Id: C25

+ Name: RJ

+ Gender: M

+ DOB: 1/5/2011

+ DOE: 3/21/2013

+ CA: 2;3

+ Grade: p

+ Parent Educ: 17

+ Context: Con

+ Subgroup: Play

+ Location: Daycare center

+ Examiner: AS

+ Transcriber: AS

- 0:00

C (eije) eije ek/ta.

C x ei/ta ki?

E ei/ta ki?

C e/ta ghor.

E ka/r ghor e/ta?

C e/ta ama/r (e/ta) ghor.

E toma/r e/ta ghor?

C e/ta>

E ar e/ta?

C e/ta?

C e/ta ki ama/r?

E e/ta ki toma/r?

C gari.

C e/ta?

C e/ta ki ama/r?

E (tarpor) dekh/2o to!

E oi ghor/ta/LOCe ke ke thak/3e?

C e/ta ki?

C bati/LOCte ki?

C bati/LOCte ki [SR]?

E tumi jan/2o to.

E e/ta ki jeno.

E ami jan/1i na.

C (hap*) happybirthday.

E ka/r happybirthday aj/LOCke?

C eije ama/r happybirthday.

E toma/r happybirthday?

C ei happybirthday nai.

E happybirthday nai?

E keno?

E nai keno?

C happy birthday>

C (ek/ta) e/ta ki?

C e/ta ki [SR]?

C e/ta ki (e/ta ki) (e/ta ki) [SR]?

E e/ta ki (e/ta ki)?

Appendix B

The percentage ratio of the subject type:

child	age	null subject	pronoun	lexical np.	Error	total utterances	null sub. percentage	pronoun %	lex.np. %	error %
RJ	2;3	23	22	14	4	63	36.50793651	34.920635	22.22222	6.349206
SN	2;3	30	7	2	2	41	73.17073171	17.073171	4.878049	4.878049
ZF	2;1	24	4	2	5	35	68.57142857	11.428571	5.714286	14.28571
MR	2;2	19	5	3	3	30	73.07692308	19.230769	11.53846	11.53846
AF	2;3	16	12	2	2	32	47.05882353	35.294118	2.941176	5.882353
Total		112	50	22	16	199	59.67716868	23.589453	9.458839	8.040201
MH	3;3	28	44	14	3	89	31.46067416	49.438202	15.73034	3.370787
FR	3;1	22	15	8	1	46	47.82608696	32.608696	17.3913	2.173913
FB	3;	42	23	12	5	82	51.219512	28.0487	14.634	6.0975

	1						2	8	15	61
RH	3; 3	30	10	8	2	50	60	20	16	4
SJ	3; 1	27	20	19	3	69	39.13043478	28.985507	27.53623	4.347826
Total		149	112	61	14	336	45.92734162	31.816237	18.2584	4.166667
NS	4; 3	34	26	8	2	74	45.94594595	35.135135	10.81081	2.702703
OS	4; 2	28	8	10	1	47	59.57446809	17.021277	21.2766	2.12766
SD	4; 1	42	30	19	2	93	45.16129032	32.258065	20.43011	2.150538
SF	4; 2	33	31	14	3	81	40.74074074	38.271605	17.28395	3.703704
TD	4; 3	36	10	14	2	62	58.06451613	16.129032	22.58065	3.225806
total		173	105	65	10	357	49.89739224	27.763023	18.47642	2.80112