Development of Verb and Noun Inflections of 4-12-year-old Children with Autism in Port Harcourt Metropolis

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Abstract

Researches on the language deficits of children with Autism Spectrum Disorders (ASD) have often times focused on describing the semantic, pragmatic and phonological aspects with much less attention to their morphosyntactic abilities. The paper describes the acquisition of some secondary grammatical morphemes of 4–12-year-old children with autism who are minimally verbal to mark number, person, tense and aspect. The study adopted the participant observation, interviews, focus group and the joint attention methods of eliciting data and the use of instrument such as a wordlist of 60 basic items, a language chart containing pictures of some objects and persons performing some actions and 4 sets of 25 question/sentence frames targeting the inflectional forms. Fifteen- (15) children with autism served in the course of data collection, recorded on a data collection template based on a four (4) point Likert scale and analyzed by calculating the total average of the children's responses to question items. The study found among others, that minimally verbal children with autism have significant deficits in identifying and marking plurals in nouns, tense in the past and future, as well as the present progressive verb form. in the English language; of the secondary categories investigated, the present progressive was the least difficult to acquire and that children with autism have challenges in the functional use of pronouns. Furthermore, the paper reveals that minimally verbal children with autism do not acquire language naturally but rather learn language in a formal setting which can be in the home or at school.

Keywords: Inflection, Grammatical Morphemes, Autism, Language Acquisition, Morphosynthetic Abilities

1.1 Introduction

Language acquisition is a process in which children gain competence of their native or first language without any conscious training. According to Chomsky, this is made possible by the possession of Language Acquisition Device (LAD), an inborn capacity that enables a child to learn language naturally. As early as 6-8 years of life, normal children have come to understand and use any language they are exposed to; for most children in Port Harcourt, the language of exposure is English or Nigerian pidgin. Thus, most children learn English or Pidgin as their first language. This situation is due to lack of inter-generational transfer or the attitude most parents to the indigenous languages. The picture becomes more precarious for children with autism who have great difficulty learning to use any language, and who require assistance in order to communicate. They do not acquire language effortlessly and so are taught English in the learning centres in Port Harcourt.

Language acquisition researches have traditionally and largely focused on semantic and pragmatic deficits. This is due to the difficulty in eliciting speech data form non-verbal and minimally verbal children. Emphasis has been on their functional language acquisition, behaviour and deficits. Few studies have therefore investigated the grammatical abilities of these children. The study of acquisition of fourteen grammatical morphemes of English by Brown (1973) has generated interest in this regard in English and other languages. Researches in autism and other communication disorders in Nigeria still focus on the nature, history, aetiology and management of the disorder to the neglect of studies morphological development or impairment in children

Language disorders are disorders that affect the processing of linguistic information. The American Psychiatric Association (2013) has defined language disorders as communication disorders in which a person has persistent difficulties in learning and using various forms of language (i.e., spoken, written, sign or body language). Language disorder can be receptive affecting effective comprehension, or it may be expressive affecting actual speech production which may moderately or significantly impede intelligibility. It may be acquired or developmental.

Autism, also known as Autim Spectrum Disorder (ASD) is a complex, developmental and behavioural disorder of the brain characterized by deficits in social interaction and social communication involving restrictive patterns of interests and activities which are evident in childhood and persist into adulthood, (APA, 2013). Thus, one of the hallmarks of autism

is persistent impairment in language and communication which varies widely from very mild to very severe. At one end of the spectrum are the severe autistic children who may remain nonverbal to adulthood, and at the other end, a group of those whose cognitive ability is within average and above and whose language behaviour is within normal, Attwood (2005). Studies have shown that children with autism may display wide range of deficiencies such as poor conversational skills, early language delay with late production of words, limited vocabulary, morpho-syntactic errors of inflection, pronoun reversal errors, semantic and pragmatic disabilities, echolalia, jargon, phonetic and phonological difficulties, etc. The child with autism exhibits some traits which are basically repetition of the speech of the adult and they also experience some difficulties in social interaction. Autism is one among other language disorders that affects both children in their language developmental stages as well as adults who have already acquired language but due to some factors such as injury on some part of the left hemisphere responsible for language production or who are suffering from some ailments like stroke may have completely or partially lost the functional use of language. Language disorders may affect any of the components of language – phonology, morphology, syntax, semantics or pragmatics in isolation or in combination.

Inflection is a vital aspect of the morphology of language. This is because words in most languages of the world change their forms to mark certain grammatical features. Inflectional morphology is concerned with the modification of words to mark syntactic functions such as number, gender, tense, aspect, negation, mood, etc. in the language. Inflectional morphemes differ from derivational morphemes in that, they do not change the word category of the words to which they are attached but rather, they mark or signal grammatical distinctions. Inflectional affixes are usually added to the stem of the word which is that part that remains when every inflection is removed. Acquiring of inflection of a language, involves gaining knowledge of the rules of formation which is language specific. Whereas, some languages employ affixation and cliticization, others use compounding, reduplication, segment or tonal modification.

Researches in child language acquisition and disorders have shown that majority of children with language impairment exhibit morphological deficits. Of these, inflectional abilities of the children have been intensely investigated especially in the English language. Works on derivation and compounding are not equally investigated. The works by Cazden (1968), Brown (1973), de Villers & de Villers (1973), Paul & Alforde (1993), Clark (2001), Owen (2008) and Kuder (2018), among others are classical examples of studies in the acquisition of grammatical morphemes especially in English. Little or no work at all exists in the morphological abilities of children with developmental or acquired language disorders in Nigerian languages or the English language spoken in Nigeria. This research

certainly addresses the gap in the literature. It specifically examines the acquisition of plural formation of nouns and verb inflections and the morphosyntactic abilities of children with the neurodevelopmental disorder of autism who are learning to speak the Nigerian English.

Investigating inflectional morphology involves the examination of the morph-syntactic (the choice of inflection based on the syntax of the sentence), and morpho-phonological properties of language. This work, however, concentrates on the morphosyntactic behaviour of ASD children. The children whose speeches are analyzed in this work are learners of the English language. The choice for the English language is due to the fact that the special schools with such learners as well as the hospitals where the patients with this disability are found are predominantly situated in Port Harcourt where the English language is dominantly used for all forms of daily endeavors. This work provides insightful information in the inflectional abilities of minimally verbal children with autism in Port Harcourt metropolis. It also provides relevant guidelines to clinicians, speech-language therapists, teachers and care givers, for language intervention and management. The study therefore, is a springboard for further research in speech-language therapy in autistic children generally.

2.1 Morphology in language acquisition

Akmajian et al (2006), Owen (2008), Shaffer (2007) and O' Grady & Cho (2011) posit that language development occurs in all children with normal brain function, regardless of race, culture, environment or general intelligence. Similarly, Anderson (2007) affirms that the development or acquisition of language is born outside of the unconsciousness of the learners' introspection. Noam Chomsky argues that language acquisition cannot be accounted for without postulating a linguistically specific system of principles and parameters that every normal child is innately endowed, adding that language development in children happens spontaneously and does not entail conscious instruction or enforcement on the part of the learner or adult.

Morphology is an important aspect of language. No discussion of language development would be complete without a mention of morphology. In linguistics, morphology is the study of the internal structure of words and how they are formed, including parts such as roots, bases and affixes (Nippold, 2016). Morphology is traditionally divided into inflection – the processes of forming variant forms of a word to signal grammatical functions, and derivation the processes of creating new words with new meaning. And according to Bloom and Lahey (1978), language acquisition involves gaining knowledge of the form (phonology, morphology, and syntax), meaning (semantics) and use (pragmatics) of language.

The development of morphology in children refers to the gaining of the knowledge of morphemes, their form, meaning and formation in language (Kuder 2018). Scholars in child language acquisition believe that the holophrastic or the one-word stage (12- 18 months) marks the onset of this aspect of language development in children, that is, when children begin to say their first words. Their early speech comprises largely lexical items usually of the noun and verb categories. As their vocabulary increases, they begin to add grammatical and derivational morphemes such as affixes, clitics, preposition, articles, and others. The ability to analyse the form of words and assign grammatical functions to them, as well as the ability to form new words from existing ones is a prerequisite in morphological acquisition. Recent studies have shown that children come to acquire this knowledge early in life. Owen (2008) notes that the period of greatest morphological acquisition is between 4-7 years at which stage the child has gained form, meaning and use of simple, complex and compound words. Child language acquisition scholars believe that inflectional morphology begins to emerge before word formation. Derivation and compounding are rarely observed before the age of two.

Two approaches to the morphological analysis of language acquisition have been identified. They are the additive and the deconstructivist, Behrens (2009). In the additive method, the child starts with learning the base of the word and goes to adding inflected and derivational affixes, and in the deconstructivist, the child first acquires the complex word and thereafter begin to analyse the internal constituency of the word. He argues that whereas, additive morphology is typical of languages with little inflection, the decostructivist is popular with richly inflectional languages. In consonance with this view, Dressler (2010: 109) notes that children are sensitive to the typology and properties of the language they acquire, that is, they are sensitive to 'the structure of the linguistic patterns in their verbal interactions'. This situation raises the question: How does language typology affect language acquisition? To answer this question Fromkin (2000) argues that the production of single words in children is determined by the morphological typology of the target language - inflectional, agglutinating or isolating. Children from different language types know whether a bare root constitutes a well-formed word. Thus, children learning English and Igbo, first produce simple roots in isolation without any bound morphemes. On the other hand, in the Turkish or Italian language, a bare root is rare or non-existent and so, children do not produce bare roots because they are ungrammatical.

2.2 Typical development of inflection in children

Acquisition of inflections by children has been studied for the most times and for a variety of different languages of the world especially English. Research into the development of inflectional morphology in children has made rapid progress in the recent past as a large

number of evidence-based experimental studies with insightful and relevant findings have been published. Most studies have investigated the order, ease and complexity of acquisition grammatical morphemes within and across languages. Brown's (1973) study of the acquisition of 14 obligatory grammatical morphemes of English has aroused a lot of interest in child morphological studies. The morphemes investigated include the present progressive *-ing*, prepositions (at 19-28 months) *'in'* and *'on'* (27-30), the regular plural *-s* (27-33 months), irregular past, possessive *'s* (26-40), regular past (26-48) and others. They reveal that children follow this order in their acquisition process. Other researches in English have also revealed that the progressive verb form is acquired earliest by children learning to speak English. Okonkwo (2015) and Oweleke and Nwaru (2020) corroborate this fact. Their studies of acquisition of verb inflection in 2 - 6-year-old children learning to speak Igbuzo-Igbo and Ikwere respectively shows that the progressive verb-form emerges earliest among the children.

In addition to Brown's study, Owen (2008) explains that normal children between ages 4-5 years with Mean Length of Utterance (MLU) of 4.5 should have acquired all the morphemes. Similarly, Deen (2009) posit that typically developing children acquire a high degree of control over the inflectional system of their language early, about age 5 years or earlier. Normal children at this stage can mark number contrast on nouns correctly; they can produce verbal inflections of tense, aspect and negation appropriately, Stoll (2009), Clark (2001) and Owen (2008). Children at this stage too, have gained knowledge of subject-verb agreement, they can produce a third -person singular subject. Clark (2001) argues that order of acquisition of inflection is determined by first, semantic complexity of morphemes and notes that the mastery of inflectional paradigms of tense, aspect, gender, number etc. takes several years to achieve. Diakogiorgi et al (2005), Kuo and Anderson (2006) posit that the awareness of inflectional morphology is acquired in the first school years. Investigating the ease and complexity of morphological acquisition Clark (2001), Fromkin (2000) and Dressler (2010) have argued that children will develop morphologically faster with a richer target morphology and slower with a language with impoverished morphology. Similarly, cross-linguistic studies have also shown that the more uniform and productive the morphology of the target, the faster the acquisition.

Inflectional morphology is language specific and rule governed. Researches from cross-linguistic perspective, Clark (2001) Behrens (2009), Deen (2009), Stoll (2009), Austin (2010), have shown that nominal and verbal inflections show considerable variations across languages both in terms of complexity of paradigms and the time it takes for children to master it. Austin (2010) notes that in the acquisition of inflection, there is a correlation between production of tense markings or finiteness, and the presence or absence of inflection. Spanish for example uses six different verb forms for six present tense person-

number combination whereas, English uses only two, the basic form and the third person singular. Furthermore, bilingual studies in acquisition of inflections also claim that languages such as Spanish, Italian and Hebrew, with rich inflections facilitate early morphological production. They report that children acquiring languages with rich inflections usually acquire verbal morphology earlier than children learning languages with impoverished inflections. They reason that many-to-one mappings of inflectional forms to syntactic features as those in English and Swedish make these languages more difficult to acquire than languages with richer morphological forms. The researchers have argued that children learning Spanish produce inflectional morphology earlier than children learning English. Inflectional errors in early children's speech output are an indication of rule – governed morphology. Overgeneralization and mis-categorization are typical errors of inflection common in children speech

2.3 Atypical morphological development

Language disorders are disorders that affect the processing of linguistic information. The American Psychiatric Association (2013) has defined language disorders as communication disorders in which a person has persistent difficulties in learning and using various forms of language (that is spoken, written or sign language). Language disorder can be developmental, acquired or functional; it can be receptive affecting comprehension, or expressive affecting production of speech

Even though all aspects of morphological operations can be impaired, researches in disorders of child morphological have focused largely on the acquisition of grammatical morphemes. Penke (2011) explains that inflectional deficits have been the subject of intense research in Broca's Aphasia and Specific Language Impairment (SIL) during the last 20 years and that other disorders like Down syndrome and autism have only recently come into focus. He adds that our knowledge of morphological difficulties is still very limited. More literature exists for the investigation of inflectional deficits in aphasia and SIL than in autism. Studies in the inflectional deficits of both individuals with developmental disorders like (SIL), Down syndrome, autism and adult acquired language disorders have frequently reported a display of, among this population the common feature known as agrammatism characterized by the excessive use of content words and omission of inflectional morphemes (affixes, function words like articles, preposition, auxiliaries, conjunctions, etc) Furthermore, Mash and Wolfe (2005) have observed that Developmental Language Disorder (also known as SLI) is often marked by severe difficulties acquiring verb inflections. Some other studies have shown that impairment in the production of verbal inflections (tense markings or finiteness) is a diagnostic criterion used by speech-language therapists for language impairment, Modyanova, Perovic & Wexler (2017) and Deen (2001). They claim that the production of target inflectional morphemes in less than

50% of obligatory contexts by 4 -.5½ years children is an indication of the presence of a language impairment.

Crosslinguistic analysis of inflectional deficits also support the fact that inflectional systems of languages vary widely. Whereas, omission of inflectional markers (agrammatism) is a frequent deficit in Broca's Aphasia, in English it does not occur in aphasics speaking Russian and Italian languages. Using the 14 grammatical morphemes studied by Brown (1973), Paul & Alforde (1993) investigated the inflection ability of children with normal, impaired and late -developing language and found that language impaired children acquired the Brown's 14 morphemes in a similar order as normal children.

2.4 Development of inflectional morphology in ASD

Autism is beginning to attract the attention of linguists, clinicians and educators in areas of creating awareness, management of the disorder, language behaviours and therapy of the individuals with the disorder in Port Harcourt, Nwankwo (2015), Ogwuazor (2017), Oweleke (2018), Esu (2019), among others. Language acquisition research in autism has traditionally focused on semantic and pragmatic abilities of the children. Not much attention has been given to their morphosyntactic abilities. Corroborating this fact, Eigsti, Bennetto, & Dadlani (2006:1007) observe that language descriptions in autism have focused on these four areas – (High-level discourse and pragmatic abilities, absence of verbal abilities, that is, inability to acquire spoken language, early language delays and atypical features of language production, (especially echolalia and jargon) to the exclusion of morpho-syntactic abilities of the children. Whereas, typical morphological development begins at about one year for normal children, Howlin (2003) remarks that children with autism produce their first word at an average age of 38 months.

The language difficulties of children with autism are implicated in their profound display of semantic and pragmatic difficulties, Paul & Alforde (1993) and Oweleke (2018), rather than with sound, words or their grammar, hence studies have focused on discourse and pragmatic skills. Even children with high-functioning Asperger's syndrome who perform well in other areas of language acquisition still exhibit significant impairments in pragmatic skills. Early indicators of language problems in autism have been reported; they include late language development, little, late or absence of canonical babbling, in the first year, absence of early pragmatic cues or inconsistent use of early preverbal communication such as facial expression, gestures, and absence of joint attention skills. Mash and Wolfe (2005) have argued that deficits in joint attention which is a major impairment in infants with autism at 20 months usually predict problems of language and communication in later years. He adds that children who develop language usually do so before age 5.

Inflectional deficits have been the most studied aspect of morphological difficulties in children with autism. Austin (2006) notes that no investigation has been done the derivational morphology of children with autism. Studies show that the deficits in the production of verb and noun inflections are the defining criteria of autism. Their study of children with ASD and typically developing children reveal that children with autism omitted inflectional morphemes more than the normal children, Austin (2006) and Paul and Alforde (2013). They produced *play* instead of *plays, played* or *playing* in the which shows outright omission of grammatical morphemes. Furthermore, poor performance in morpheme acquisition (involving regular/irregular plural and allomorphic variations, tense inflections, use of present progressive *-ing*, regular past tense marking, 3rd person singular present marker *-s*, and others) characterize the difficulty of children with autism as well as children with SLI, Weiss & Paul (2013) and Penke (2011). They report that individuals with autism used an increased number of incorrect verb forms in context that require past tense (for example, look, dance or sing, instead of looked, danced or sang).

However, there are variations in the findings relating to inflectional morphology in autism. Some researchers believe that inflectional verbal morphology is not impaired at all especially in high-functioning autism whereas others report significant and persistent deficits in the production of verbal inflection. This result is expected owing to the fact of extreme heterogeneity among the population of individuals with autism. Penke (2011) and Paul and Alforde corroborate this fact. Note that while some children with ASD acquire language comparable to their typically developing peers, approximately 25% remain minimally verbal, never acquiring functional language.

3. Methodology

The work adopts a descriptive survey research design. Fifteen (15) children within the ages of 4 and 12 years form the research population for this work. Subjects for the study are individuals with autism (learning to speak English as their first language) from three special schools visited within Port Harcourt metropolis to ascertain their use of grammatical morphemes in marking plural nouns, past tense, future tense and the present progressive verb-form.

Data for this research were collected from both primary and secondary sources. The primary sources of data collection were participant observation, joint play sessions organized for the children, teachers and care-givers, controlled and uncontrolled interviews, and focus group discussions. Data were elicited using a wordlist containing 60 basic items (30 nouns and 30 verbs), language chart showing pictures of persons performing different actions and some sentence/question frames targeting the production of inflectional markings of number, tense and aspect of some English nouns and verbs. The

children were asked to produce the inflected forms in the past, future tense and the progressive picture/sentence contexts. Eg.. *"What is the girl doing?"*; "*What did the girl do yesterday?"* or "*Tomorrow, the girl will* _____". Speech output elicited during these sessions were recorded and transcribed. A focus group is defined as a well-structured discussion group organized with the aim of obtaining in-depth information from a group of people about a particular topic. Oweleke (2020) observes that children with autism most of the times have deficit in attention which is critical for early cognitive and social communication development and therefore supports other scholars view on the inclusion of this strategy as a method of data elicitation from children with autism. Finally, the secondary sources were also consulted for data collection for this research, which were basically through library design approaches that are not limited to textbooks, articles in journals and other publications relevant to the topic understudy. The abbreviation RALS stands for - Respondent's Average on Likert Scale)

Research data on their own convey little or no meaning until they have been analyzed or described. Two methods were adopted for data analysis for this research. They are quantitative and qualitative methods. The qualitative aspect of the work describes the acquisition of grammatical morphemes of number contrast, past tense and the present progressive form in the participants, rather than prescribe what they ought to say. Quantitative analysis was done on the response of the subjects to sample of twenty-five (25) sentence frames on each of the aspects of inflectional form understudy by calculating the average of the total responses of learners based on a Likert scale of 'poor', 'average', above average' and 'excellent'. In this case, the scale of 'poor' (where the respondent makes unrelated sound/vocalization as response) is 1 point; points (repetition of whole or part of the question or statement) average is 2; above average (where the child omits some or part of the inflected forms) is 3 points, and excellent (indicating accurate or expected response) is 4 points. From the analysis, the learners' overall language average performance with respect to morphosyntactic features was realized, and remark was given based on their performance. Analysis: 2.50 was taken as the mean criterion for judgement, that is, the weight points were added together and divided by the number of response set (i.e., 4+3+2+1=10/4=2.50).

4.1 Data presentation and analysis

This subsection presents the data and gives the descriptive and quantitative analysis of the speech output of the 15 children to show their use of some verb and noun inflections in the English language. The analysis was done using the Likert scale and simple percentage. Performance of the children in the speech production tasks is given in the Tables 1-4.

4.2.1 Number Marking in Nouns

This section describes the acquisition of number marking in nouns exhibited by the 15 autistic children investigated.

Table 1: Children speech output of plural marking in English

Respondents	Sum of Responses	RALS	Remark
Respondent 1	37	1.48	**Poor**
Respondent 2	33	1.32	**Poor**
Respondent 3	30	1.2	**Poor**
Respondent 4	33	1.32	**Poor**
Respondent 5	34	1.36	**Poor**
Respondent 6	32	1.28	**Poor**
Respondent 7	29	1.16	**Poor**
Respondent 8	28	1.12	**Poor**
Respondent 9	29	1.16	**Poor**
Respondent 10	28	1.12	**Poor**
Respondent 11	29	1.16	**Poor**
Respondent 12	30	1.2	**Poor**
Respondent 13	34	1.36	**Poor**
Respondent 14	30	1.2	**Poor**
Respondent 15	30	1.2	**Poor**
Total	**31.07**	**1.24**	**Poor**

Table 1 shows the participants' performance on elicited production tasks probing plural noun formation in English which reveals extensive noun inflectional deficits. The sum scores of the children revealed the total grade of each of the respondent on the entire questions on plural marking on nouns while the average score demonstrated the average ability of the respondents based on the rating scale of poor, average, above average and excellent in the formation of plural nouns. The data showed that all the respondents performed poorly in distinguishing between singular and plural nouns in English either for regular or irregular nouns. The children's performance (Sum of Responses =30.07, Average performance=1.24) is an indication that the minimally verbal autistic children between the ages of 4-12 years for this study have difficulty inflecting for number.

4.2.2 Past-tense

Table 2: Children speech output of past-tense marking in English

Respondents	Sum of Responses	RALS	Remark
Respondent 1	33	1.32	**Poor**
Respondent 2	27	1.08	**Poor**
Respondent 3	26	1.04	**Poor**
Respondent 4	30	1.2	**Poor**
Respondent 5	32	1.28	**Poor**
Respondent 6	27	1.08	**Poor**
Respondent 7	30	1.2	**Poor**
Respondent 8	35	1.4	**Poor**
Respondent 9	27	1.08	**Poor**
Respondent 10	30	1.2	**Poor**
Respondent 11	33	1.32	**Poor**
Respondent 12	32	1.28	**Poor**
Respondent 13	35	1.4	**Poor**
Respondent 14	29	1.16	**Poor**
Respondent 15	32	1.28	**Poor**
Total	**30.53**	**1.22**	**Poor**

Table 2 showed the production difficulties of significant omissions of the past tense inflectional suffix *-ed* and incorrect attachment of allomorphic variants as well as mispronunciation encountered by autistic children. The sum scores of the autistic children revealed the total grade of each of the respondent on the entire questions on the past verb form while the "average" score demonstrated the average ability of the respondents based on the rating scale of poor, average, above average and excellent in the functional use of the past verb form. The table demonstrated that all the respondents performed poorly in the functional use of the past verb form. This showed that autistic children between ages of 4-12 years find it difficult inflecting to mark the past verb form (Sum of Responses = 30.53, Average performance =1.22).

4.2. 3 Progressive verb form

Table 3: Children speech output of present progressive marking in English

Respondents	Sum of Responses	RALS	Remark
Respondent 1	31	1.24	**Poor**
Respondent 2	29	1.16	**Poor**
Respondent 3	32	1.28	**Poor**
Respondent 4	30	1.2	**Poor**
Respondent 5	32	1.28	**Poor**
Respondent 6	30	1.2	**Poor**
Respondent 7	28	1.12	**Poor**
Respondent 8	29	1.16	**Poor**
Respondent 9	29	1.16	**Poor**
Respondent 10	30	1.2	**Poor**
Respondent 11	31	1.24	**Poor**
Respondent 12	31	1.24	**Poor**
Respondent 13	29	1.16	**Poor**
Respondent 14	30	1.2	**Poor**
Respondent 15	32	1.28	**Poor**
Total	**30.20**	**1.21**	**Poor**

Table 3 is a representation of the challenges that children with autism face learning to inflect verbs to mark the present progressive form. The sum scores of the autistic learners revealed the total grade of each of the respondent on the entire questions on the progressive verb form while the average score demonstrated the average ability of the respondents based on the rating scale of poor, average, above average and excellent in progressive verb form. The table demonstrated that all the respondents performed poorly in the use of the progressive verb form. Hence, from the table, it is observed that autistic children between ages of 4-12 years find it difficult using the inflection to mark the progressive verb form (Sum of Responses=30.20, Average performance=1.21).

4.2.4 Future verb form

Table 4: Children speech output of the future tense marking in English

Respondents	Sum of Responses	RALS	Remark
Respondent 1 ▼	35	1.4	**Poor**
Respondent 2	31	1.24	**Poor**
Respondent 3	31	1.24	**Poor**
Respondent 4	31	1.24	**Poor**
Respondent 5	33	1.32	**Poor**
Respondent 6	28	1.12	**Poor**
Respondent 7	30	1.2	**Poor**
Respondent 8	35	1.4	**Poor**
Respondent 9	31	1.24	**Poor**
Respondent 10	31	1.24	**Poor**
Respondent 11	33	1.32	**Poor**
Respondent 12	32	1.28	**Poor**
Respondent 13	35	1.4	**Poor**
Respondent 14	29	1.16	**Poor**
Respondent 15	32	1.28	**Poor**
Total	**31.80**	**1.27**	**Poor**

Table 4 above showed the difficulties encountered by autistic children in marking the future verb form. The sum scores of the autistic children revealed the total grade of each of the respondent on the entire questions asked on the future verb form while the "average" score demonstrated the average ability of the respondents based on the rating scale of poor, average, above average and excellent in the future verb form. The table demonstrated that all the respondents performed poorly in the use of the future verb form. This showed that autistic children between ages of 4-12 years find it difficult inflecting to mark the future verb form Sum of Responses=31.80, Average performance=1.27).

4.3 Discussion of Findings

The study described the use of inflections by ASD children based on their responses to evaluation questions and found among others that the children have qualitative difficulties in the use of plural form of nouns. This is observed from the poor performance that

revealed the fact that they are unable to provide the plural suffix *-s* in all the regular nouns identified in the sentence frames and inability to identify idiosyncratic plural forms. The reason for the poor performance could be due to the inability of these autistic children to process linguistic information occasioned by the presence of delay in their brain maturation. Between ages 3 - 5 years, most normal children can perfectly accomplish this task. Another reason for the poor understanding and performance on plural marking in nouns is also based on the fact that the autistic children between the ages of 4-12 years have very limited vocabulary of nouns. The sum of Responses was 31.07 and Average performance 1.24. Paul & Alforde (1993), Austin (2010) Penke (2011) and Wittke et al (2017) Wittke et al (2017) have confirmed that grammatical errors of the plural marker *-s* are a hallmark of ASD, SLI and aphasia.

The study also revealed that children with autism have problems with English verbal inflections to mark the past-tense, progressive and future verb forms. The major focus was on the regular verbs that take the suffixes *'-ed'* to mark the past verb form, *'-ing'* to mark the progressive verb form and the use of *'will'*/ *'shall'* to indicate the future verb form. Tables 2, 3, and 4 show that all the respondents performed poorly in the functional use of the past-tense, future and present progressive verb-forms which implied that autistic children between ages of 4-12 years have difficulty these grammatical morphemes. However, the performance of the elicitation task for the progressive showed slight awareness of this form. Though they omitted other inflectional suffixes, their production of the *-ing* suffix either as remote or immediate echolalia was noted. The difficulty is due to their inability to coordinate their thoughts to be able to differentiate between events that is happening at the moment of speaking and events that happened in the past or events to happen in the future as cognition is also a major challenge experienced by autistic learners. Paul & Alforde (1993), Austin (2010) Penke (2011), Modyanova, Perovic & Wexler (2017) and Wittke, et al. et al (2017) believe that morphosyntactic deficits are a diagnostic criterion used by speech-language therapists language impairment in autism.

5. Conclusion

This study investigated the use of inflections in fifteen autistic children whose production of plural noun formation, past tense, future tense and present progressive verb forms are significantly impaired. All elicited speech samples of the children showed abnormalities in the acquisition of inflectional morphology of English. In consonance with other studies in relation to the order of morpheme acquisition, Brown (1973), Paul & Alforde (1993) and Owen (2008), the participants for this study showed that the progressive verb form is the earliest to be acquired by children learning to speak English. Whereas they omitted the other inflectional forms they were able to produce the progressive without the accompanying auxiliaries. The findings of this study implicate that more researches in this

area be encouraged and conducted to expose the challenges associated with the language disabilities. The study therefore recommends awareness programmes mothers on the early indicators of autism probably during anti-natal and other members of the community as done in other parts of the world, the setting up of more effective, well-equipped and affordable special centres by the government for children with autism spectrum disorders. This will help in reduce the incidence, discomfort and effects of the disability on both the children and their family members.

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