Common areas of speech problems in Persian speaking autistic children

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Abstract— In this study the common areas of speech problems in autistic children is categorized into three main groups worldwide. Regarding each group the most salient researches are mentioned and instances of the similar observed problems in Persian autistic children are also given. However, it is believed that there is a unique feature in the speech of Persian children which is due to the syntactic structure of Persian, a pro-drop language, and that is the wrong inflections applied in the verbs. This feature is also discussed separately using examples.

Keywords- autism spectrum disorder, language impairment, pro-drop language

I. INTRODUCTION

Language impairment is a salient feature of autism spectrum disorder (ASD). However, little research has so far been devoted to defining and identifying language impairment in children with known or suspected ASD. This is the main reason why a research has been carried out on Persian speaking autistic children in a specialized center in Tehran. A few areas of language impairment in high functioning autistic children –who have a relative advantage in communicative competence over other autistic children - were identified due to the observations in the aforementioned center. In the meantime, some investigations about foreign research conducted in the same area have been carried out. Making use of our own observation and the research already done in the area, we came to the conclusion that language impairment among autistic children is common regardless of their native language. Nonetheless, although the similarity in language impairment among them is significant, it is to be noted that there exist minor differences too. These minor differences are due to differences in syntactic structures of various languages. Given that the present research was carried out in an Iranian context, this research aimed at identifying differences among Iranian autistic children and autistic children of other languages. The universal language impairment was classified in three major areas of:

1. Pronoun use
2. Unusual prosody
3. Pragmatic difficulties

Regarding the Persian speaking autistic children we have to add a unique subcategory to the category of pronoun use which is pronoun-verb agreement. The reason why this feature is unique among Persian speaking autistic children is because Persian is a pro-drop language. It is worth mentioning that in pro-drop languages the omission of pronoun is accepted grammatically because all the verbs of different tenses are conjugated by means of an additional suffix to the verb which eventually has to agree with the subject pronoun.

II. METHODS

First, the aforementioned universal categories will be further discussed and examples of Persian speaking autistic children will be given. Later the unique features of these children's speech (pronoun-verb agreement) will be analyzed.

A: Pronoun use

A great deal of research has shown that ASD negatively impacts Theory of Mind's ability, a cognitive ability that may affect use of pronouns. Regarding this issue, two researches can be referred to. One is about person deixis and the other about personal pronouns. It is to mentioned, however, that numerous researches have been conducted in the same areas, but the aforementioned ones are good representatives of the gist of what has already been discovered in the area of pronoun use.

In the research regarding person deixis, by Rita R. Jordan, on the understanding and use of speaker-addressee personal pronouns in autistic children results revealed that autistic children use incorrect case pronouns or proper names for self or other references. Results are interpreted in the light of significant difficulties in the acquisition of person deixis in autistic children [1]. The same problem has been observed in the speech of Persian autistic children; for instance, when Ali, an autistic child, wants to say that he wants some water, he says:

/aeli/   /a:b/ /mikhad/

Subject which is a proper name
He uses a proper name in this case, while he should in fact use a pronoun.
The second research regarding personal pronoun has been carried out by Lee et al. a group of autistic children were tested with series of tasks that involved the comprehension and use of personal pronouns "I," "you," and "me". Results indicated that autistic children were significantly less likely to employ the pronoun "me" in a visual perspective-taking task and lower ability subjects were more likely to use their own proper names rather than personal pronouns in certain photograph-naming tasks. There were also circumstances in which autistic subjects were less likely to employ the pronoun "you" too refer to the experimenter [2]. The same problem has been observed in Persian autistic children. For instance, when Ali is shown his own picture, and is asked "who is the person in the picture?" he doesn't reply "it is me", but rather he says "It is Ali".

B: unusual prosody
In a research by Peppe et al. the expressive prosodic abilities of high-functioning autistic children were compared to those of typically developing children. The results showed that HFA group showed impairment relative to age matched controls on all the prosody tasks assessed: affect, sentence type, contrastive stress, phrasing and imitation. The researchers concluded that impairment in prosodic skills may therefore be a reliable indicator of autism spectrum subgroups at least as far as communicative functioning is concerned [3]. This is also a relevant issue regarding Persian speaking autistic children. For instance when they want to ask someone to give them a glass of water, they ask without using proper intonation for a request and use a monotonous voice, rather than varied intonations to perform their tasks.

C: pragmatic difficulties
A review paper by Loukusaa et al. summarizes studies involving pragmatic language comprehension and inference abilities in individuals with Asperger syndrome or high-functioning autism. The pragmatic comprehension and inference abilities measured across the studies varied from homograph comprehension to ability to understand non-literal statements. Pragmatic inference weaknesses were found throughout the studies. The most commonly suggested explanations for pragmatic inference deficits were Theory of Mind and Central Coherence [4]. This is the case with Persian speaking autistic children as they show little understanding of idioms (understanding the non-literal meaning of the utterances)and they also have difficulties regarding expressive speech acts such as thanking and apologizing, although they are told countless times that they are supposed to observe them in their utterances.

The unique features of Persian speaking autistic children's speech
The most salient research that has been so far carried out in the area of pronoun –verb agreement is the one by Helen Tager-Flusberg et al. which focuses on tense marking in children with autism in the United States. This study used experimental probes designed to elicit third person and past tense morphology with a large heterogeneous sample of children with autism. The subgroup of children with autism who were language impaired showed high rates of omission of tense marking in the experimental tasks [5]. This research indicates that English speaking autistic children have problems agreeing the third person singular verb with the subject by adding an "s". By having a closer look at English verbs in the present tense, we understand that autistic children prefer to use unmarked form of the verb which is the one without "s". A problem with the same nature also exists in Persian speaking autistic children with a relatively more complex surface. Since Persian is a pro-drop language, the inflections that have to be inserted in the verbs play a more important role due to the fact that the pronoun is usually omitted. Persian speaking autistic children also tend to use the third person singular form of the verb when they are talking about themselves or others as the third person singular is the most unmarked form of the verb, especially in the past tense, in Persian. An example is given to clarify the concept:
In this example the autistic child wants to talk about something that he did in the past. The unmarked verb in this case has to take an additional part "m" in order to agree with the subject which is first person singular.
Correct statement:
/naha:r/   /khordam/   meaning: I ate lunch..
   Object   verb which takes final "m", this "m" is a suffix added to the verb to make it agree with the subject (which is usually omitted in Persian).

Autistic child's statement (he still wants to talk about himself not someone else):
/naha:r/   /khord / meaning: She/he ate lunch.
   Object   verb: the autistic child uses the third person singular form of the verb which can only grammatically agree with a 3rd person singular.

III.   CONCLUTION

The autistic high-functioning children, compared to normal children, suffer tremendously from a cognitive deficit in Theory of mind and Central Coherence, and this has an immediate effect on the correct use of pronouns, understanding of non-literal meaning of utterances (pragmatic inference weakness) and the correct use of expressive speech acts. With regard to Persian-speaking autistic children what seems unique in their speech problems is the use of wrong inflections in verbs. It is believed by the researcher that implementing proper psycholinguistic interventions which are in the form of cognitive tasks has the potential to enhance

autistic children's Theory of Mind and Central Coherence and thus improve their linguistic problems.

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