



# Characteristics of narrative language in autism spectrum disorder: Evidence from the Finnish



Leena Mäkinen<sup>a,\*</sup>, Soile Loukusa<sup>a</sup>, Eeva Leinonen<sup>b</sup>, Irma Moilanen<sup>c</sup>,  
Hanna Ebeling<sup>c</sup>, Sari Kunnari<sup>a</sup>

<sup>a</sup> Faculty of Humanities/Logopedics and Child Language Research Center, PO Box 1000, 90014 University of Oulu, Finland

<sup>b</sup> School of Psychology, University of Wollongong, Northfields Avenue, Wollongong, NSW 2522, Australia

<sup>c</sup> Department of Child Psychiatry, Institute of Clinical Medicine, University Hospital of Oulu, PO Box 26, 90029 Oulu, Finland

## ARTICLE INFO

### Article history:

Received 13 February 2014

Accepted 3 May 2014

Available online 29 May 2014

### Keywords:

Autism spectrum disorder  
Comprehension  
Linguistic structure  
Narratives  
Pragmatics  
Referencing

## ABSTRACT

This study examined linguistic and pragmatic aspects of narrative abilities of children with autism spectrum disorder (ASD), which have not been studied thoroughly and not at all in Finnish. Sixteen five- to ten-year-old Finnish high-functioning children with ASD (mean age 7;7 years) and 16 age-matched typically developing children (mean age 7;5 years) participated in this study. Children's picture-based narrations were analyzed for narrative productivity, syntactic complexity, referential accuracy, event content, use of additional and extraneous information, mental state expressions, and narrative comprehension. Several linguistic- and pragmatic-based measures were used in order to gain a comprehensive picture of strengths and weaknesses that children with ASD might show in storytelling. The use of linguistic structure, referential accuracy and mental state expressions was similar between the groups. However, children with ASD showed difficulties in establishing informative story content, making inferences from story events and an ability not to include extraneous information into their stories. Therefore, the problems seen in their narrative language use can be described as being related to pragmatic aspects of narration.

© 2014 Elsevier Ltd. All rights reserved.

## 1. Introduction

### 1.1. Autism spectrum disorder

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that is characterized by deficits in reciprocal social communication and restricted patterns of behavior, interests, or activities (American Psychiatric Association, 2013). It is well known that children with ASD show problems in social perception such as with theory of mind tasks (Baron-Cohen, 2000) and recognition of emotion (e.g., Kuusikko et al., 2009) as well as in pragmatic understanding of contextually demanding language (Loukusa & Moilanen, 2009). Children with ASD are characterized as having a non-contingent conversational style (Hale & Tager-Flusberg, 2005a) and producing utterances with unclear meanings in conversation (Eigsti, Bennetto, &

\* Corresponding author. Tel.: +358 294 483 299.

E-mail addresses: [leena.makinen@oulu.fi](mailto:leena.makinen@oulu.fi) (L. Mäkinen), [soile.loukusa@oulu.fi](mailto:soile.loukusa@oulu.fi) (S. Loukusa), [leinonen@uow.edu.au](mailto:leinonen@uow.edu.au) (E. Leinonen), [irma.moilanen@oulu.fi](mailto:irma.moilanen@oulu.fi) (I. Moilanen), [hanna.ebeling@oulu.fi](mailto:hanna.ebeling@oulu.fi) (H. Ebeling), [sari.kunnari@oulu.fi](mailto:sari.kunnari@oulu.fi) (S. Kunnari).

Dadlani, 2007). Even though children with ASD may not be as competent as their peers in discourse skills, they show development in reciprocal conversation (Hale & Tager-Flusberg, 2005b) and can initiate new topics in conversational situations (Eigsti et al., 2007) and are able to adjust their language register according to the listener's needs (Volden, Magill-Evans, Goulden, & Clarke, 2007). In addition to difficulties in pragmatic language, children with ASD show impairments in structural aspects of language such as in morpho-syntax (Eigsti et al., 2007) and in linguistic comprehension (Saalasti et al., 2008). However, the variability in linguistic abilities in ASD is wide (Condouris, Meyer, & Tager-Flusberg, 2003) and some children with ASD also show intact linguistic skills (Loucas et al., 2008; Loukusa, Leinonen, Kuusikko, et al., 2007).

## 1.2. Narratives

Narratives are real life or fictive-based depictions of temporally and causally related events that together form a complete wholeness (Boudreau, 2007). Narratives, as well as other discourse skills, are important in everyday social communication situations and in educational settings. Well-formed oral narratives demand semantic abilities in order to use diverse vocabulary to express meanings, syntactical skills to form sentence level expressions, and linguistic devices to connect sentences and to express relations between them. Moreover, the narrator must build a mental model of the story utilizing the given context (e.g., physical context and world knowledge), express the story coherently and take the listener's needs into account. Thus, the narrator should use sufficiently accurate expressions and references and tell neither too much nor too little (Grice, 1975). Narratives seem to integrate both linguistic and pragmatic aspects of language (e.g., Cummings, 2009) and therefore they offer a rich sample of connected language for assessment.

## 1.3. Narrative skills in ASD

### 1.3.1. Narrative productivity and syntactic complexity

The linguistic structure of narration can be analyzed by assessing narrative productivity and syntactic complexity. Children with ASD have been shown to perform similarly to their language- and age-matched peers in narrative productivity, when measured by the number of words (Novogrodsky, 2013), clauses or syntactic or communication units (C-unit) (Losh & Capps, 2003; Norbury & Bishop, 2003; Young, Diehl, Morris, Hyman, & Bennetto, 2005), whereas opposite results have also been found (Norbury, Gemmel, & Paul, 2013; Rumpf, Kamp-Becker, Becker, & Kauschke, 2012). Narratives of children with ASD may be sparse, consisting of short utterances (Smith Gabig, 2008) or containing a reduced number of different words (Norbury et al., 2013). Some studies have found that the syntactic complexity of narratives of children with ASD is comparable to their age- and language-matched peers (Losh & Capps, 2003; Novogrodsky, 2013; Rumpf et al., 2012; Young et al., 2005) whereas other studies have found that children with ASD may use simpler syntax (Norbury & Bishop, 2003; Norbury et al., 2013).

### 1.3.2. Narrative cohesion

The use of cohesive ties creates connectivity and clarity between and within sentences. Even though cohesion is created and expressed through linguistic devices, pragmatic aspects such as utilization of previous verbal context are also essential. Referential cohesion has been of particular interest in narrative studies. Since narratives typically contain events with different characters, the narrator must be able to accurately introduce characters and maintain the reference. The narrator should also simultaneously take the listener's needs into account by distinguishing between new and already given information (Baltaxe & D'Angiola, 1992).

While narrating, children with ASD may use more ambiguous pronouns compared to their peers (Norbury & Bishop, 2003; Norbury et al., 2013). On the other hand, children with ASD may also use precise references, but they choose a more pedantic strategy since referencing tends to be carried through explicit noun phrases instead of pronominal references (Arnold, Bennetto, & Diehl, 2009; Rumpf et al., 2012). Novogrodsky (2013) discovered that reference use may be influenced by the elicitation method, since in her study, children with ASD used more ambiguous pronouns in a story generation task in comparison to their counterparts but the differences were not evident in a retelling task. A similar pattern was not seen in typically developing children.

### 1.3.3. Event content of narratives

In addition to gaining a view of narrative productivity, complexity and cohesion, narrative analysis should take into account the content of narration and explore how the meaning of the story is developed. This can be done by analyzing the hierarchical structure of the story in terms of story grammars, or by assessing the amount of relevant information included in the story using semantic- and pragmatic-based information units. Some researchers have found that children with ASD produce a similar amount of information in their narratives to typically developing language-matched children (Norbury et al., 2013; Norbury & Bishop, 2003; Young et al., 2005), but there are also contradictory results (Losh & Capps, 2003; Rumpf et al., 2012; Smith Gabig, 2008). Volden and Johnston (1999) found that children and adolescents with ASD produced significantly fewer core elements of script narratives compared to the developmentally matched control group. However, they were better able to produce the core elements when asked to predict the next element of a script in a more structured video-recorded scenario, which implies that individuals with ASD have knowledge about social scripts but do have problems when narrating them.

Download English Version:

<https://daneshyari.com/en/article/370138>

Download Persian Version:

<https://daneshyari.com/article/370138>

[Daneshyari.com](https://daneshyari.com)