Scandinavian Journal of Psychology, 2010, 51, 534–539 DOI: 10.1111/j.1467-9450.2010.00822.x

Health and Disability

Patterns of language and discourse comprehension skills in school-aged children with autism spectrum disorders

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Åsberg, J. (2010). Patterns of language and discourse comprehension skills in school-aged children with autism spectrum disorders. *Scandinavian Journal of Psychology 51*, 534–539.

The present study examined patterns of language and discourse comprehension skills in Swedish school-aged children with autism spectrum disorders (ASD) (n = 16) as compared to a slightly younger group of typically developing children (n = 16) matched for non-verbal cognitive ability. Results suggested significantly lower abilities in narrative discourse comprehension for the ASD group, but not in oral receptive vocabulary or reception of grammar. This difficulty with discourse-level comprehension appeared to be of a general nature, as no evidence was found for the hypothesis that participants with ASD would find comprehension of inferential discourse information disproportionally more difficult than stated information, or for the hypothesis that discourse processing in ASD would be characterized by an elevated processing of explicitly stated narrative details. The study has clinical and educational implications, as the findings suggest that children with ASD would benefit from being offered specific support for discourse-level comprehension.

Key words: Discourse comprehension, inferences, autism spectrum disorders, language comprehension.

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INTRODUCTION

Autism spectrum disorders (ASD) are neurodevelopmental conditions defined by difficulties in the areas of social functioning and communication with repetitive and stereotyped behaviors and interests (American Psychiatric Association [APA], 1994). In addition, poor oral or written discourse comprehension appears common among children with ASD (e.g. Åsberg, Kopp, Berg-Kelly & Gillberg, in press; Minshew, Goldstein, Taylor & Siegel, 1994; Nation, Clarke, Wright & Williams, 2006; Norbury & Bishop, 2002; Saldaña & Frith, 2007). The term hyperlexia is sometimes used when comprehension difficulties appear alongside stronger or normal word reading skills. Prior research has indicated that the hyperlexic profile of strengths and challenges is overrepresented in samples diagnosed with an ASD (cf. Grigorenko, Volkmar & Klin, 2003), but the nature and background of the comprehension difficulties is still an ill-understood topic (Saldaña & Frith, 2007).

Comprehension of connected text or discourse is a tremendously complex cognitive skill. Studies have demonstrated that oral and written discourse comprehension entails cognitive processes that range from fully automatic memory-based resonance to a goal-directed and strategic search for meaning (Long & Lea, 2005). There is also a general agreement that at least two levels of representations are involved in discourse comprehension. In conjunction with a representation of the *text itself*, the successful comprehender also appreciates the *state of affairs* described, which from a cognitive perspective means to build a coherent mental representation of the situation: a so-called situation model (Graesser, Singer, Trabasso, 1994; Kintsch, 1998; Zwaan & Radvansky, 1998). Such a representation is assumed to consist of an amalgamation of world knowledge possessed by the comprehender and information from the text. It is interesting to note that the idea of an impairment in discourse comprehension appeared already in the original descriptions of autism by Kanner (1943) in which his cases are reported to experience a story in ''unrelated portions rather than in its coherent totality'' (p. 250). More recently, Wahlberg and Magliano (2004) stated that ''a growing body of research suggests that readers with autism have trouble constructing a situation model for discourse'' (p. 122).

Despite these suggestions there is a need to more thoroughly consider the specificity of such a proposed difficulty in discourse comprehension in ASD, and to do this from two different perspectives. First, it is important to examine whether discourse comprehension presents a *particular* challenge for school-aged children with ASD or if difficulties with connected discourse is mirrored in poor comprehension of individual words and sentences, that is, poor basic language comprehension skills. This issue is difficult to decide based on previous research as these studies typically have been designed to impose limits to the range of basic verbal abilities through the matching variable adopted, for example verbal IQ (cf. Minshew *et al*., 1994). Moreover, previous research on comprehension in ASD has typically utilized a mixture of written and orally administered tests, for example oral receptive vocabulary and written text comprehension (e.g. Saldaña & Frith, 2007), which make it more difficult to decide if the findings obtained are due to levels of linguistic processing. It is also important to learn more about this issue in view of the fact (1) that the language phenotype among children with ASD is highly heterogenic (Snowling & Hulme, 2008), (2) that an unevenness among psycholinguistic skills is presumed to be common in individual children with ASD, and (3) that a robust body of research on children without ASD proposes a close relationship between basic language comprehension skills, on the one hand, and oral or

written discourse comprehension, on the other (cf. Cain & Oakhill, 2007; Snowling & Hulme, 2008; Verhoeven & van Leeuwe, 2008).

Second, it is not clear whether all aspects of the discourse comprehension ability are equally challenged in ASD. Specifically, the idea of an ''integration deficit'' has been proposed in previous research on comprehension difficulties in ASD. This integration deficit has been operationalized by studying inferencing skills, as such processing implies ''integrating different sources of information in context'' (Norbury & Bishop, 2002, p. 244). An example of a piece of discourse that demands an inference to be made was provided by Åsberg *et al.* (in press): ''Lucy climbed to the top of the roof. When she woke up she was at the hospital.'' To fully comprehend this short story the listener or reader needs to integrate information within the text and also use his or her world knowledge to infer that Lucy probably fell down. Research studies have suggested that individuals with ASD perform poorly on questions that specifically tap comprehension of implied or inferential meaning as compared to the performance of matched controls (Jolliffe & Baron-Cohen, 1999, 2000; Young, Diehl, Morris, Hyman, & Bennetto, 2005) and compared to ASD participants' own comprehension of stated discourse information (Norbury & Bishop, 2002).

The proposed integration difficulties in ASD have typically been framed within the theory of Weak Central Coherence (WCC; Jolliffe & Baron-Cohen, 1999; Norbury & Bishop, 2002), although other frameworks have also been proposed (e.g. Minshew *et al*., 1994; Williams, Goldstein & Minshew, 2006). The WCC theory was originally launched by Frith (1989) and refers to a cognitive style characterized by detached and detail-focused processing at the expense of attention and memory for global and context-based meaning (see Happé & Frith, 2006, for a review on this research). However, apart from the inferencing or integration deficit, there is also another possible prediction from the WCC theory, which has to do with the effect of information saliency. According to the construction-integration model of discourse processing (Kintsch, 1998) the extraction of a texts macrostructure, or gist information, is an essential feature of successful comprehension. It appears reasonable to assume that a detailed-focused processing style in ASD could be in conflict with such gist processing, but to date only anecdotal or autobiographical information is available regarding a potentially overly detail-focused style of discourse processing (cf. Kluth & Chandler-Olcott, 2008).

The current study

The present study had two aims. The first aim was to examine skills in basic language comprehension and narrative discourse comprehension in a sample of school-aged children with ASD. To get a better view of the specific versus global nature of any proposed difficulties in language and discourse comprehension, their performance was compared to a group of typically developing children matched on a strict non-verbal cognitive measure. The current study was also consistent in that it examined only orally presented language and discourse comprehension tasks. In accordance with prior research, it was hypothesized that children with ASD would display difficulties in discourse comprehension, but there were no *a priori* hypotheses of the specificity or otherwise of any such difficulties. The second aim was to examine inferential and stated discourse comprehension skills as a function of narrative information saliency. This was made possible by adopting a test paradigm that, besides the global discourse comprehension score, provides specific scores for comprehension of explicitly stated main ideas, inferential main ideas, stated details and inferential details. From the WCC theory it was hypothesized that children with ASD, as compared to the comparison group, would show particular difficulties when comprehending inferential meaning that relates to main ideas, but that the same pattern would not arise for comprehension of stated main ideas or for inferential meaning relating to narrative details. It was furthermore predicted that comprehension of explicitly stated narrative details would be a psycholinguistic strength in ASD.

METHOD

Participants

The study was carried out in Sweden. Sixteen participants (5 girls) with ASD were recruited from different schools for children with ASD and other developmental disabilities as well as from a mainstream school. Their age ranged between 10 years 9 months and 15 years 8 months. All had a previous ASD-related diagnosis: autistic disorder (n = 6), Asperger's disorder (n = 8) or autism-like condition[1] (n = 2). One participant had an additional AD/HD diagnosis. [2] None had hearing difficulties according to a questionnaire filled in by parents. One child had been excluded as he had Swedish as a second language.

The comparison group consisted of 16 children (5 boys) who went to regular schools in the western part of Sweden. Their age ranged between 7years 7 months and 14 years 8 months. These participants had no known disabilities according to parents and/or teachers, and all had Swedish as a first language.

Participant data is presented in Table 1. The groups were matched on non-verbal ability according to raw scores on the matrices subtest from Wechsler Abbreviated Scales of Intelligence (WASI; see the Material and testing section for information on this test). The ASD group was slightly, but not significantly, older. The groups were roughly equivalent also on age-referenced WASI matrices T-scores, with both group means approaching the normative value of 50. The standard deviation on the T-scale is 10. None of the participants in either group scored more than 2 standard deviations below the normative mean on the matrices, i.e. below a conventional cut-off for intellectual disability.

Material and testing

Testing was done individually by the author in a silent room at the children's schools, homes or at the Department of Psychology in Gothenburg, partly depending on preferences of the child and his/her parents. Practice trials were used for all tests and tasks, to ensure that participants understood the tasks properly.

Non-verbal cognitive ability. The matrices subtest from WASI (Wechsler, 1999) was used as a measure of non-verbal cognitive ability. This subtest has norms for ages 6–89 years, and is a pattern completion task.

Basic language comprehension skills. A Swedish translation of the Peabody picture vocabulary test (PPVT) (Dunn & Dunn, 1997) was used to assess oral receptive vocabulary knowledge. Swedish norms are not available for this test. For the purposes of sample descriptions, results were converted into standard scores around a mean of 100 and a standard deviation of 15 based on norms reported in the American manual. While this procedure by necessity is common in both research and clinical practice

Table 1. *Sample descriptives and group comparisons according to independent* t*-tests*

	Group		
Measure	ASD (n = 16)	Comparison (n = 16)	t-value, p-value (df = 30)
Chronological age	13 yrs 0 mths (1 yr 6 mths)	12 yrs 0 mths (2 yrs 4 mths)	t = 1.39, p = 0.17
WASI matrices, raw[a]	22.37 (5.46)	22.06 (5.32)	t = 0.16, p = 0.87
WASI matrices, T-score	46.19 (9.35)	48.87 (7.93)	t = −0.88, p = 0.39

Note: Results are expressed in means and standard deviations. Age is expressed in years and months.
[a] Matching variable.

in a small language like Swedish, proper caution should be taken when interpreting these standard scores. For the analyses, raw scores were also used. A Swedish translation of Test for the Reception of Grammar-2 (TROG-2; Bishop, 2003) was used to assess reception of grammar. A standardized Swedish version of TROG-2 was not available on the market at the time of testing. Instead of administrating the full booklet, a shortened version containing the two first items of each block was used in the present study. The number of correctly solved items was registered, with a maximum score of 40. This shortened version was chosen due to combination of time constraints at the schools and to avoid fatigue, which appeared to be a risk during pilot testing (where all 80 items were used).

Discourse comprehension. Eight texts with comprehension questions from the Discourse Comprehension Test (DCT; Brookshire & Nicholas, 1993) were translated into Swedish and audiotaped by a female native speaker for listening comprehension testing. The test stimuli in the DCT consist of stories of about 180–210 words in length. As the test was originally developed in the field of adult neurolinguistics, texts were chosen carefully in the present study, with the aim of only using stories on topics assumed to be familiar for Swedish school-aged children. A story about a man watching television, for example, was included for this reason, while a story about baseball was not. Modifications were done to the stories by changing names on places and characters to Swedish ones. Two parallel versions (A and B) of the DCT were created containing four texts each. The data collection for most children in the ASD group also included the pre-condition testing session of a training study in which the two DCT versions were counterbalanced over the pre- and post conditions (see Åsberg & Dahlgren Sandberg, in press). Therefore participants received either version A or B in the present study. An equal number of participants in the ASD group and the comparison group were presented with each version (n = 9 and n = 7 for A and B, respectively), and results for the two versions are therefore collapsed within groups in the present study. In addition, an independent t-test confirmed that versions A and B were parallel in terms of difficulty, t (30) = < 1, p > 0.7, n.s. Eight questions of four different types follow the presentation of each story in the DCT. An example story with comprehension questions is provided in Appendix A. The questions tap comprehension of narrative details or main ideas that are either implied by the text or explicitly stated. Narrative details are defined as referring to one content unit only, whereas main ideas refer to information that is elaborated upon throughout the story. For implied meaning, inferential processes are needed, while this is not necessary for stated meaning. According to the manual, the difficulty level is rising in the following order for non-impaired individuals: main ideas stated, main ideas implied, details stated and details implied. Prior research has demonstrated main effects for both salience and explicitness, with stated meaning being easier than inferential, and main ideas being easier to comprehend than details. Also an interaction effect has been described with the effect of explicitness (i.e. stated versus implied meaning) being larger for details than for main ideas (for an overview on research using the DCT, see Ferstl, Walther, Guthke & von Cramon, 2005). The comprehension questions in DCT are of a yes/no-character, but the scoring was modified somewhat in the present study to lessen the chance of receiving a high score by guessing. The experimenter asked the child to provide the correct answer after each correctly answered no-reply. For example, when a child correctly answered "no" to the question "Did the fire go out by itself?", the child was asked "how was it then?" to which she/he was expected to answer "the fire men came". In a majority of cases the participants delivered the correct answer spontaneously, e.g. "no, the fire men came". There are an equal number of "yes" and "no" questions for every story, and for every question type. Raw scores could therefore be used. One point was accredited for a correctly answered reply to a yes/no question, and an additional point was accredited if the child could provide the correct answer to a correctly answered no-reply. Scorings were done by the author at the time of testing. Answers were audiotaped and the answers on the "no-questions" from a random 25 percent of the participants, for each group, were subject to reliability coding. An independent researcher scored verbatim transcriptions without knowledge of the group belongings of the transcript. Eight answers could not be included in the reliability coding as the child either spoke too low or because of other difficulties during audio uptake. This left a total of 120 reliability-coded answers. The agreement was 97% (116/120) between the independent rater and the author (95% and 98% in the ASD and comparison group, respectively). The maximum score on the Discourse comprehension test was 48 points with 12 points for each subscore.

Statistical analysis and power considerations

Within and between group differences, as well as interaction effects, were evaluated with t-tests or analysis of variance techniques. The significance-level was set to $p < 0.05$, and all comparisons were carried out two-tailed. A power calculation indicated that the study had 81% power to detect a two-tailed between-group difference of 1 *SD*, and 29% power to detect a two-tailed between-group difference of 0.50 *SD*. It should therefore be remembered that the study has rather low power to detect small differences, which nevertheless might be clinically meaningful.

RESULTS

First, group differences on the measures of basic language comprehension abilities were evaluated by means of independent t-tests. The two groups were highly similar on PPVT receptive vocabulary raw scores (M_{ASD} = 148.94, SD = 24.82 versus $M_{COMPARISON}$ = 150.37, SD = 31.27), t(30) = –0.14, p = 0.89. The ASD group scored close to normative performance on the PPVT according to age-referenced standard scores (M_{ASD} = 102.81, SD = 19.81) and not significantly lower than the comparison group ($M_{COMPARISON}$ = 108.19, SD = 16.10), t (30) = –0.86, p = 0.40. Neither on the modified TROG-2 raw score did the groups differ significantly (M_{ASD} = 35.56, SD = 3.48 versus $M_{COMPARISON}$ = 36.81, SD = 1.90), t (30) = –1.26, p = 0.22. These findings on the basic language comprehension measures were in contrast to the result on the global discourse comprehension test score on which the ASD group (M = 32.18, SD = 7.95) scored significantly lower than the comparison group (M = 38.37, SD = 5.26), t (30) = –2.60, p = 0.014. The difficulty with discourse comprehension in the ASD group was further confirmed when the group difference remained in an ANCOVA in which TROG-2 and PPVT raw scores were entered as covariates, F(1, 28) = 8.01, p = 0.009, η_p^2 = 0.222.

Next, results were analyzed with the global discourse comprehension test score broken down for subscores, that is, specific scores on comprehension of stated main ideas, inferential main

ideas, stated details and inferential details. Patterns of ability were analyzed using a mixed factorial ANOVA with salience (main ideas versus details) and explicitness (stated versus inferential information) as within subject factors and group as between-subjects factor. Besides a main effect of group in which the ASD group scored generally poorer, as indicated in the analyses above, significant main effects were also found for *salience*, F (1, 30) = 98.07, $p < 0.001$, $\eta_p^2 = 0.77$, with main ideas ($M = 9.91$) being easier to comprehend than details ($M = 7.73$), and for *explicitness,* F (1, 30) = 54.31, $p < 0.001$, $\eta_p^2 = 0.644$, with stated information ($M = 9.75$) being easier to comprehend than inferential information ($M = 7.89$). In addition, a significant interaction effect emerged between salience and explicitness, F (1, 30) = 22.04, $p < 0.001$, $\eta_p^2 = 0.424$. The source of this interaction was traced with paired t-tests. These analyses demonstrated that there was a large difference between stated and inferential discourse comprehension when the information related to narrative details *(*$M_{\text{STATED DETAILS}} = 9.28$, $SD = 1.84$ versus $M_{\text{INFERENTIAL DETAILS}} = 6.19$, $SD = 2.40$), t (31) = 7.83, $p < 0.001$, but that the difference between stated and inferential comprehension was not statistically significant when the information related to main ideas *(*$M_{\text{STATED MAIN IDEAS}} = 10.22$, $SD = 2.31$ versus $M_{\text{INFERENTIAL MAIN IDEAS}} = 9.59$, $SD = 2.15$), t (31) = 1.95, $p = 0.06$. The tendency for ceiling effect for questions relating to stated main ideas must be minded when interpreting this result. However, in the context of the aims of the current study, the hypothesized interaction effects with group are of greater importance as such effects would indicate that the relative pattern of difficulty for salience and/or explicitness is varying as a function of group. But contrary to predictions, none of these interaction terms (group * explicitness; group * saliency; group * saliency * explicitness) were significant (all Fs < 1, n.s.). Figure 1 provides a clear picture of the roughly similar profiles of discourse comprehension ability in the two groups, but with a lower performance overall for the ASD group.

DISCUSSION

The current study demonstrated that school-aged children with ASD present with poor discourse comprehension even with close control for non-verbal cognitive ability. Furthermore, children with ASD did not differ from the comparison group on receptive vocabulary or reception of grammar. Thus, while basic language comprehension skills were on par with non-verbal cognitive ability, discourse comprehension skills lagged considerably. Obviously, this does not exclude the possibility that some school-aged children with ASD also experience basic language comprehension difficulties, but it appears to rule out basic language comprehension and/or non-verbal ability as full causes of the discourse comprehension difficulties often seen in children with ASD.

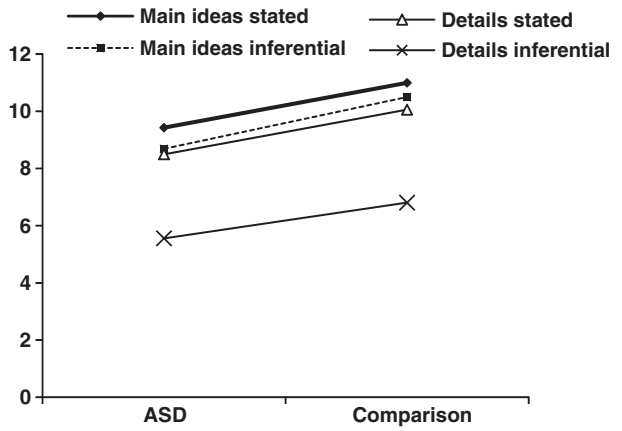

Fig. 1. Mean number correct responses (max = 12) on subscores of the Discourse comprehension test.

Some previous studies have moved beyond the analysis of global indexes of the discourse comprehension ability by separately examining skills in answering comprehension questions relating to inferential as opposed to stated text meaning. Such research has shown that inferencing appears to be an area of disproportional weakness in ASD (e.g. Jolliffe & Baron-Cohen, 2000; Norbury & Bishop, 2002). The present study attempted to confirm and also extend this research by examining inferential and stated discourse comprehension as a function of narrative information saliency. A number of predictions, derived from the weak central coherence theory of ASD, were tested for this purpose. However, in contrast to expectations, none of the interaction terms involving group were significant in these analyses. Obviously, null results are hard to interpret, but as the results relating to inferential comprehension partly diverged from prior findings it may nevertheless be meaningful to discuss them more thoroughly. Potentially, characteristics or limitations of the present study may be responsible for the results obtained.

One possible reason for the null results in the group interactions with discourse comprehension subscores could be related to the instrument used to assess patterns of the discourse comprehension ability. The Discourse comprehension test, that was translated and modified for the purposes of the present study, was not originally created for assessing skills in Swedish school children but in American adults, and there is therefore a possibility that this measure was insensitive for picking up patterns of comprehension skills in the study groups. There were also a rather low number of items tapping each of the four sub-processes (maximum score = 12), which could be a potential threat to the reliability. However, it was in this context interesting to note that the present study replicated the overall pattern of relative difficulty on the subscores as they are reported in the American manual. Specifically, both groups tended to have little problems with stated meaning that related to main ideas but considerable difficulties with inferential details. Inferential main ideas appeared to be slightly easier than stated details. Furthermore, the pattern and types of obtained main and interaction effects for salience and explicitness mirrored those reported in prior research (Ferstl *et al*., 2005). These findings make it less likely that the null results in the group interactions can be dismissed as an artefact due to an inappropriate instrument. However, there was a tendency for ceiling effect for stated main ideas (across both groups), which potentially could have affected the interaction terms in the ANOVA. This is a weakness of the present study, but it appears difficult to construct a *valid* instrument that could circumvent such a result (cf. also Ferstl *et al*., 2005).

Another possibility, which is theoretically interesting, is that the findings in the present study are related to the *format* for assessing inferential comprehension abilities. Recently, Saldaña

and Frith (2007) used an implicit priming paradigm in a study on adolescents with ASD. With this paradigm, Saldaña and Frith found intact inferencing abilities in the ASD group, although the participants performed poorly on a test of written discourse comprehension. That finding was in contrast to the results reported by, for example, Jolliffe and Baron-Cohen (2000), who used open-ended comprehension questions when finding inferencing difficulties in their ASD samples. The current study utilized, with some modification, a ''yes-no''-format to assess inferential comprehension, and it thereby appears to be somewhat less challenging, in terms of explicit expressive responding, than the approach used by Jolliffe and Baron-Cohen. Considering the diverging findings obtained in these studies, one is inclined to wonder if individuals with ASD perhaps have no *specific* difficulties with inferencing *per se*, but that they are being disproportionally punished in their performance when such skills are assessed in a complex, explicit and/or unstructured format (cf. Saldaña & Frith, 2007). However, there are also other differences between these studies. For example, the paradigm by Saldaña and Frith targeted bridging inferences between sentence pairs, while the study by Jolliffe and Baron-Cohen examined global inferencing abilities, the latter which appear to be more closely related to the abilities assessed with the ''inferential main ideas'' questions in the present study. Clearly, more research is needed with reference to the findings in the present and previous studies, and whether, and in what way, the format of assessing comprehension processes matter for the outcome of students with ASD.

What are the implications of the current study for the WCC account of autism? The finding of difficulties in discourse comprehension, despite normal basic language comprehension skills, indicates a difficulty in processing linguistic information in context and/or in the process of constructing a situation model for discourse (Wahlberg & Magliano, 2004). This finding would appear to be broadly consistent with the WCC theory. However, no support was found for the WCC theory when particular patterns of the discourse comprehension ability were examined. Clearly, it would be highly premature to dismiss the WCC theory based on the data presented in the second part of this study. Yet, it is also interesting that the current study is not unique in failing to find consistent support for WCC in the area of comprehension in ASD (cf. Norbury, 2005; Brock, Norbury, Einav & Nation, 2008).

Conclusions and implications

The participants with ASD in the present study scored significantly lower in narrative discourse comprehension, but not in receptive vocabulary or reception of grammar, as compared to the comparison group. Thus, discourse comprehension appears to be particularly difficult for school-aged children with ASD, which is a finding that has important educational and clinical implications. Specifically, the findings suggest that children with ASD would benefit from being offered specific support for discourse-level comprehension during listening and reading. We are currently exploring efficient ways of delivering such support in schools (see Åsberg & Dahlgren Sandberg, in press; see also Chiang & Lin, 2007). Finally, this difficulty with discourse-level comprehension appeared to be of a general nature, and no evidence was found for the hypothesis that participants with ASD would find comprehension for inferential and gist-related discourse information disproportionally more difficult than stated information, or for the hypothesis that discourse processing in ASD would be characterized by an elevated processing of explicit details.

Limitations

At least three limitations of the present study need to be mentioned. First, a rather small sample of children participated in the study, with the risk for low statistical power (see the method section for a discussion). Second, the ratio of girls and boys were uneven in the study groups, which might be an important fact to consider. Third, the TROG-2 test of receptive grammar was used in a shortened version, which potentially threatens the reliability of this measure.

This research was partly financed by grants from the Swedish Council for Working Life and Social Research. Thanks are due to Marek Meristo for assistance with reliability assessment, and Annika Dahlgren Sandberg, Ingvar Lundberg and David Saldaña for providing valuable comments on versions of this paper. I also wish to thank participating children and their families and teachers for help and cooperation.

NOTES

[1] This term is used synonymously with ''pervasive developmental disorder-not otherwise specified'' (APA, 1994) or ''atypical autism'' (World Health Organization, 1992) in Sweden. Unfortunately, I do not have access to the children's medical records, hence it is not known which manual had been used when diagnosing the children; both DSM and ICD are used by medical doctors in Sweden.

[2] Based on an increasing recognition in research and clinics (cf., for example, Kopp, Berg-Kelly & Gillberg, in press) of the high incidence of clinical levels of AD/HD-behaviors in samples diagnosed with ASD, this figure could be an underestimation. However, there is currently also a lack of a general agreement of the meaning of such symptoms when present in a child with ASD.

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Received 23 September 2009, accepted 18 January 2010

APPENDIX

Example story from the Discourse comprehension test (Brookshire & Nicholas, 1993). Printed with kind permission from Robert H. Brookshire and Linda Nicholas.

The storm

Mrs Wilson lived alone on a small farm in Kansas. She was a strong-willed person and refused to leave the farm, even though her son kept after her to move to town. He wanted her to rent an apartment near his house. Whenever he told her that she should move, she just answered that the Lord would take care of her. One hot muggy day, there was a terrible thunderstorm. Suddenly there was a bright flash and a loud crashing noise. When Mrs Wilson looked out the bedroom window, she saw flames coming from the barn. She ran to the kitchen to call the fire department, but the phone was out of order. Just as she was headed out the door to go to the neighbors, two fire trucks raced into the yard. In a few minutes the fire was out, and none of the cows had been hurt. When her son heard about the fire, he told her again that she should move into town, because she wasn't safe alone on the farm. "But", she answered, "I told you that the Lord would take care of me. The same lightning bolt that started the fire also hit the fire alarm box on the corner and called the fire department".

Questions:
(1) Did Mrs Wilson live alone on a farm? (Yes)
(Main idea - stated)
(2) Did Mrs Wilson live in Kansas? (Yes)
(Detail – stated)
(3) Did Mrs Wilson's son want her to move in with him? (No)
(Detail – stated)
(4) Did lightning strike the barn? (Yes)
(Main idea – implied)
(5) Was Mrs Wilson's phone in her bedroom? (No)
(Detail – implied)
(6) Did the fire go out by itself? (No)
(Main idea – implied)
(7) Were there cows in the barn? (Yes)
(Detail – implied)
(8) Did Mrs Wilson call the fire department? (No)
(Main idea – stated)