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Оценка нарративов у дошкольников: от группового анализа к индивидуальному профилю

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Assessing Narrative Language in Preschoolers: From Group Analysis to Individual Profile

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Аннотация

Публикация посвящена анализу макро- и микроструктуры в нарративах у дошкольников с первичным недоразвитием языка и речи (ПНЯР) с помощью авторской методики RAIN. Исследование показало, что на индивидуальный профиль макро- и микроструктуры продуцируемого текста достоверное влияние оказывают способ создания текста, когнитивная сложность истории и последовательность предъявления заданий.

Abstract

The paper deals with linguistic and structural limitations in narrative of language-impaired preschool children. The individual profile of narrative macro- and microstructural measures is highlighted. Dynamic analysis of narrative production evidenced an impact of narrative mode, story complexity, and task order on group and individual profile of narrative structure and language.

Ключевые слова: нарратив, недоразвитие речи, индивидуальный профиль.

Keywords: narrative, language impairment, individual profile

Introduction

It is well known that some children fail to acquire language rules and their speech production does not follow usual developmental milestones.This problem

is caused by specific language and speech mechanisms' weakness and thus it is treated as the primary (specific) speech and language developmental disorder.Since discourse skills are one of the most important intervention targets in specifically language-impaired (SLI) children, diagnostic tools should deal with both an acquisition of formal language rules and their application in discourse. Narrative analysis (NA) could serve as such a complexand ecologically valid tool (Botting2002, McCabe, Bliss2003) and as an informative predictor for written language acquisition and literacy development (Westerveld et al. 2008). Our previous studies (Kornev, Balčiūnienė 2015) have evidenced a huge individual variability in narrative macro- and microstructure in dyslexic children. The aim of a current study was to pilot the «Russian Assessment Instrument for Narratives – RAIN» (Balčiūnienė, Kornev 2014) in the SLI Russian preschoolers and to explore its diagnostic discriminative value for language impairment.

Methodology

To apply a dynamic approach to NA, quantitative analysis of a group average and individual measures was carried out. The subjects were 12 clinically-referred monolingual 6-year-old SLI children who had received a two year course of speech therapyand 12 typically-developing (TD) peers. Nonverbal IQ (accordingRaven Colored Matrix test) in both groups was at normal range. The subjects performed storytelling and retelling according wordless picture sequences. The order of tasks (1st vs. 2nd session) was counterbalanced with regard to narrative mode (telling vs. retelling) and complexity (less complex vs. more complex story). The stories were recorded, transcribed, and coded for linguistic and statistical analysis.

Results

Statistical one-way Anova evidenced that narrative **macrostructure** story structure (SS) and episode completeness (EC))in the SLI group was significantly less elaborated than in the TD one, in both telling and retelling ($F=8.0$; $p\leq0.03$ and $F=15.0$; $p\leq0.02$, respectively). General linear model of dispersion statistical analysis revealed a significant influence of narrative mode on the SS in the SLI group: structure of the retold stories was much more elaborated if compared to the self-generated (told) stories. Retelling procedure was the most discriminating between the groups ($F=6.4$; $p<0.016$). For the SS, significant determinant was story complexity ($F=5.3$; $p<0.028$) interacted with the group (SLI vs. TD) ($F=10.5$; $p<0.003$).

As it might be expected, narrative **microstructure** in the SLI group was less developed than in the TD one, but the limitations were observed only in a few measures. The SLI subjects were significantly backward in syntactic complexity ($F=10$; $p<0.01$) and lexical diversity ($F=15.6$; $p<0.003$) but the limitations were different in telling and retelling: syntactic weakness (shorter mean length of utterance (MLU) and lower clause/communication unit ratio)was observed in only the telling mode, while a productivity (total number of words),noun lemma/token ratio, and total number of verb and adjective tokenswere lower in only the retelling mode. Also, the SLI subjects were relatively overproductive in a number of nouns in the telling, but they did not differ from the TD subjectsin retelling. Following van Dijk (1975), the more nouns prevail over verbs, the more descriptive the text is, and thus the noun-

verb ratio (NVR), as a measure of narrativity, was further calculated.

To estimate individual patterns of narrative language measures, the row score was converted into Z-score and then individual profiles of narrative language in the SLI and TD groupswere developed. It should be particularly emphasized that quite distinctprofiles were obtained within the SLI subjects. E.g., in the subject #1, Z-score for SS, EC, internal state terms (IST), NVR, and MLU were respectively 0.16; -0.17; -0.7; 0.34[1]; -0.70 (i.e., the SS and the ECscore wereclose to the group mean, IST and MLU rate were below the group mean but NVR was above the group mean). In the subject #2,a profile wasrespectively -1.44;-0.52;1.2;0.03;-0.22; i.e. the SS score was significantly below the group mean, the EC score was slightly below the group mean, the IST rate was significantly above the group mean but the NVR and the MLU rates were close to the group mean.Such unexpected discrepancy in both cases between the SS and EC on the one hand and the IST on the other hand might be explained by individual SLI features. The subject #1 produced relatively well-structured text but its animation was obviously poor thus the text was rather descriptive than narrative: *Bylo tri ptenca. Zdes' on uletel. Ptency. Tam. Kotprishel. Ptencysmotreli.*'[There] were three chicks. Here he flied away. The chicks. There. The cat came. The chicks watched.'.The subject #2 produced many ISTs that implied his ability to understand protagonists' intentions and relations; still, the subject was not able to verbalize these implications properly in a well-structured text: *Ptichkaieereb'ata, onavylupilas' sgnezda. I kot. I kotxotelsxom'achit' reb'at. Reb'atamstalostrashno.* 'A mother-bird and her babies, she got of [her] nest. And a cat. And the cat wanted to eat the babies. The babies were scared.'.Presumably, cognitive recourse limitation forced him to simplify discourse structure and to shorten the utterances.

Such discrepancy was not frequent in the TD subjects.

[1]NVR group mean was 1.0 and thus the Z-score abovethe zero referred to more descriptive text condition, i.e. its negative characteristic.

Conclusions

Results of the study evidenced that the RAIN enables for evaluating narrative language in balanced telling and retelling conditions controlled for narrative complexity, task order and priming effect. Moreover, by means of Z-scoring analysis, group profiles of narrative language were constructed. The latter is crucial not only for diagnosing language impairment but also for selecting speech therapy targeting individual linguistic limitations.

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