Narrative abilities in a sample of premature children born in an Official Language Minority Community (OLMC)

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CONTEXT

In Sudbury ON, Canada, we find communities of people living in a geographical region where their first language is a minority. Most often, they are French-speaking individuals living in an English majority context. Very little is known about these Official Language Minority Communities (OLMC) and findings from studies that were conducted elsewhere in Canada or abroad cannot be extrapolated to these populations due to linguistic differences. The speech-language evaluation of these bilingual children is thus a complex task for Speech-language pathologists due to a lack of standardized tools and regional standards.

The goal of this study was to determine if bilingual French-English premature children born in an OLMC had delays in their narrative abilities in comparison to their geographical peers born at term, as well as compared to other premature children born in a majority linguistic context.

GOALS

1. To evaluate the narrative abilities of premature children from the Greater Sudbury Area (Ontario, Canada).

1. To determine the influences of prematurity the linguistic context on premature children's narrative abilities.

HYPOTHESIS

1. Given the risk of prematurity on language development, the performance of the premature participants will be inferior to those of their geographic peer born term age.
2. Given the impact of living in an OLMC on linguistic development, the performance of the premature participants in this study will be inferior to those of Grooteclaes & al. (2010), born prematurely in a linguistic majority context.

METHOD

Participants

The participants in this study were selected from two previous studies completed in Sudbury, ON, Canada. Five (5) French-English bilingual premature children (mean age: 6.2 years) (Bélanger, 2013) were compared to a group of typically developing children (n = 42; mean age: 4.5 years) (Langlois & Mayer-Crittenden, 2014).

The scores of the five (5) premature children were also compared to the results of a study completed in Belgium and published by Grooteclaes & al. (2010). This study included twenty-three (23) premature Belgian children who completed two tasks: a spontaneous language task as well as a descriptive task. The descriptive task had the children tell a story by simply looking at black and white pictures. Since the population and the task used in this study was similar to the present study, the results for certain measures between the two studies were compared.

Procedure

All children in the Canadian studies completed a hearing assessment as well as a non-verbal IQ test (Brief IQ – Leiter International Performance Scale-Revised; Roid & Miller, 1997). All children had an IQ in the mean, between 85 and 115. The participants were evaluated at the University Clinic or in their school by a Speech Language Pathologist or a bilingual research assistant.

1) Edmonton Narrative Norms Instrument (ENNI)

The ENNI was used to assess narrative abilities. The guidelines established by Schneider & al. (2002-2006) were followed and every child was assessed individually. Participants were required to narrate a story by looking at a series of black and white cartoons; the complexity of the stories increased progressively. During the evaluation, the SLP or the research assistant first asked the child to familiarize himself with the stories by silently looking at each page. The child was then asked to tell the story one page at a time and recorded with an iPad. Once all evaluations were completed, research assistants completed the transcriptions of the stories using the Systematic Analysis of Language Transcripts software (SALT).

The ENNI includes scoring sheets and norm tables. Every concept (character, setting, item) is scored with a number in connection with the preciseness of the concept given by the child and the reality of the picture. The Story Grammar component of the ENNI was used to measure the macrostructure, while the First Mentions component was used to measure microstructure. For the bilingual participants (n = 3), scores were compared to those of the previous study completed by Langlois & Mayer-Crittenden (2014). Results were therefore divided according to ENNI components: semantic (i.e. narrative precision), lexical (i.e. word revision & omissions, use of pronouns, verb tenses, code switching & Ontario dialect), as well as morphosyntactic (i.e. MLU, TTR). For the English participants (n = 2), scores were compared to ENNI established norms.

Edmonton Narrative Norms Instrument
(Schneider & al., 2002-2006)

2) Systematic Analysis of Language Transcripts (SALT)

The Systematic Analysis of Language Transcripts is software that manages the process of eliciting, transcribing and analyzing language samples. The adapted French version of SALT was used for this research. Certain codes were created and added to reflect linguistic tendencies found in northern Ontario, Canada (Elin Thordardorttir, 2005; Mayer-Crittenden, 2013).

RESULTS/CONCLUSIONS

Semantic

French-English bilingual participants: Results indicated that premature children (mean age: 6.2 years) showed a **weakness** in regards to their narrative abilities as their results were similar to those of the younger control group (mean age: 4.5 years).

English participants: When compared to test norms, **mixed results** were found for this measure as one participant was situated above the mean for his age group while the other was situated under the mean.

Lexical

French-English bilingual participants: Results indicated that premature children (mean age: 6.2 years) showed a **weakness** in regards to their narrative abilities as their results were similar to those of the younger control group (mean age: 4.5 years). These results support those of previous studies that have shown that premature children tend to speak in a simplified manner, using less complex verb tenses, a limited vocabulary and a shorter MLU (Bonifacio, 1998).

Morphosyntactic

Regarding narrative abilities, our results were different than those of Grooteclaes & al. (2010), who reported no differences between the two Belgian groups: those born prematurely and those born at term age. In the present study, the scores of the premature bilingual French-English children were similar to those of the younger control group, demonstrating once again a **weakness** in morphosyntactic skills. As for the mean length of utterance (MLU), our results were comparable to those of Grooteclaes & al. (2010) and showed that the scores of the premature children were **lower** than the scores of the premature children.

LIMITATIONS/FUTURE TRACKS

1. The participants of the two Canadian studies (Bélanger, 2013 & Mayer-Crittenden, 2013) used the same evaluation tool (ENNI), whereas the participants in Belgium (Grooteclaes, Docquier & Maillart, 2010) completed the same type task, but while using a different tool (Frog, where are you?).
2. Since the number of participants was limited, we could not determine if the differences found were statistically significant. For this reason, only qualitative comparisons were completed and all conclusions must be interpreted with caution.
3. Due to the limited number of participants, biological variables (i.e. gestational age, birth weight) as well as sociodemographic variables (i.e. gender, SES, linguistic dominance) could not be interpreted.

In order to complete these goals, we anticipate launching
phase 2 of this project in September 2015.

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