INTRODUCTION

• Storytelling closely resembles many aspects of daily human communication exchanges. Although more time intensive to analyze than typical standardized measures of aphasia, such as confrontation naming, discourse such as elicited by picture description, narrative, and procedural discourse may provide a more accurate measure of the functional communication abilities of persons with aphasia (PWAs).

• AphasiaBank (MacWhinney et al., 2011) is an online database of videos and transcripts of narratives produced by controls and PWAs. Despite the immense potential presented by this relatively large sample of aphasic discourse and participant data, no published studies, to date, have tested the relationship between nouns and verbs elicited during the various discourse production tasks and those elicited by the same subjects during confrontation naming tasks.

• The purpose of the current study was to compare the production of nouns and verbs elicited across various tasks in the database to confrontation naming scores in a large sample of fluent and non-fluent PWAs, as well as to the most frequent production of nouns and verbs utilized by control subjects during the same narrative production tasks.

METHODS

Participants

• 142 control participants (n = 73 females; mean age = 65.4; SD = 16.7; range = 23.0-87.8)

• 68 participants with aphasia (n = 28 females; mean age = 56.8; SD = 11.2; range = 30.3-91.9) grouped by classification as indicated by Western Aphasia Battery–Rev. (WAB-R; Kertesz, 2007) AQ scores:

   - 35 with Broca’s aphasia (n = 10 females, mean MPO = 63.1);
   - 22 with Wernicke’s aphasia (n = 5 females, mean MPO = 86.3);
   - 5 with Wernicke–Broca aphasia (n = 3 females, mean MPO = 83.9).

Procedures

• NARRATIVES produced by controls and PWAs included three picture description tasks (Figures 1, 2, and 3), and a procedural discourse task (describing how to make a peanut butter and jelly sandwich), and during the course of Cinderella, after first perusing a wordless picture book. Not all tasks were performed by all participants (see Table 1).

• Side comments, repetitions, revisions, and intended target labels were removed from the counts, and all control transcripts were analyzed with CLAN programs (MacWhinney, 2001).

• Each of the five stories (Cinderella, Cat, Umbrella, Window, and Sandwich) were analyzed, and lists were created of nouns (Table 2) and verbs (Table 3) that were used at least once by at least 10% of the control participants.

• Discourse samples by PWAs were analyzed using CLAN programs to examine to what extent each PWA group used the nouns and verbs from the control 10% lists at least once.

• Pearson’s r was calculated in SPSS 19 to describe the linear interdependence between nouns and verbs produced during picture description and storytelling tasks versus those produced during confrontation naming tasks (BNT and VNT, respectively).

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RESULTS (cont’d)

Table 4 and 5: Correlations between nouns and verbs in confrontation naming (BNT and VNT) and narrative discourse.

• The number of nouns that were accurately produced by all participants (controls and PWAs) during the five narrative discourse tasks were all strongly positively correlated with BNT scores.

• Positive correlations between VNT scores and verbs used in discourse were found only in Broca participants’ narratives of Cat, Rescue, and all PWAs’ Cinderella narratives. This may be due to the high incidence of weak verbs, verbs indicating mental states, and modals/auxiliaries in storytelling – which are different from verbs elicited during action confrontation naming tasks.

• Noun and verb data from the control samples were originally analyzed to look at content units and main ideas in the narratives produced by PWAs. Despite CLAN being an immensely useful discourse analysis tool, at this time, it cannot be easily and efficiently used to count content units and main ideas without trained judges to check all outputted results.

• Elucidation of narrative discourse in this manner may ultimately be a more efficient way of acquiring information about noun retrieval in aphasia, particularly through use of the two “richer” stories, i.e., Cinderella and Cat Rescue.

• It is hoped that this study will provide a foundation for future investigations examining treatment-induced changes in narrative discourse.

REFERENCES


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