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Introduction

Discourse analysis provides important insight into linguistic and cognitive function and can provide clinicians insights into functional communication abilities that standard assessments do not. Until recently, discourse analysis procedures have relied on timely transcriptions for analysis. However, recent research (Dalton, Hubbard, & Richardson, 2020) has established the utility of main concept analysis (MCA) and core lexicon analysis (CoreLex) in clinical language assessment. MCA compares the completeness and accuracy of story concepts to a normative sample, while CoreLex compares typicality of word choice. The current study presents the normative MCA and CoreLex checklists for the original (Kaplan, et. al, 2001) and modern (Berube, et al., 2019) cookie theft pictures.

Methods

Forty-five transcripts for the original cookie theft stimulus were retrieved from the AphasiaBank database, and an additional 48 transcripts for the modern cookie theft stimulus were contributed by author SB. Development of main concepts followed previously published procedures (Richardson & Dalton, 2015). Briefly, a list of all relevant concepts was created from the transcripts for each task. We then tallied the number of times a relevant concept was produced across transcripts. All relevant concepts that 33% of the sample or more produced were considered main concepts. Similarly, to identify the core lexicon for the two tasks the procedure outlined in Dalton & Richardson (2015) was followed. Lists of all lemmas in each transcript were created. The frequency of occurrence of lemmas across transcripts was calculated, and any lemma that was produced by 50% or more of the sample was included as a core lexicon item.

Results

Main concept analysis for the modern and original cookie thefts yielded 9 and 14 individual main concepts, respectively. Six out of nine concepts for the original cookie theft were also present in the modern cookie theft (see Table 1), while the modern cookie theft yielded eight additional, unique concepts. CoreLex lists were generated for both stimuli (see Figure 1). Twenty-six and forty-one lexical items were identified from the normative samples for the original and modern cookie theft, respectively. Nineteen lexical items were shared across the lists.

Conclusions

The modern cookie theft stimulus incorporates new characters and actions and is visually richer. The instructions also differ from the original, where participants describing the modern scene are asked to talk about the picture as if describing to a person who was blind. This instruction seems to be effective in eliciting longer descriptions, made up of more main concepts and core lexical items. This work demonstrates that image complexity and task instructions impact task performance in a normative sample.

MCA and CoreLex are sensitive across clinical populations and are quick, functional assessments of communicative ability (e.g., Dalton & Richardson 2019; Dalton, Hubbard, & Richardson, 2020). The creation of MCA and CoreLex checklists for the original and modern cookie theft images will allow researchers and clinicians to compare performance between various clinical populations as well as directly compare performances across stimuli, which is important given the extensive use of the original cookie theft for comparison to previous research.

References

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Table 1

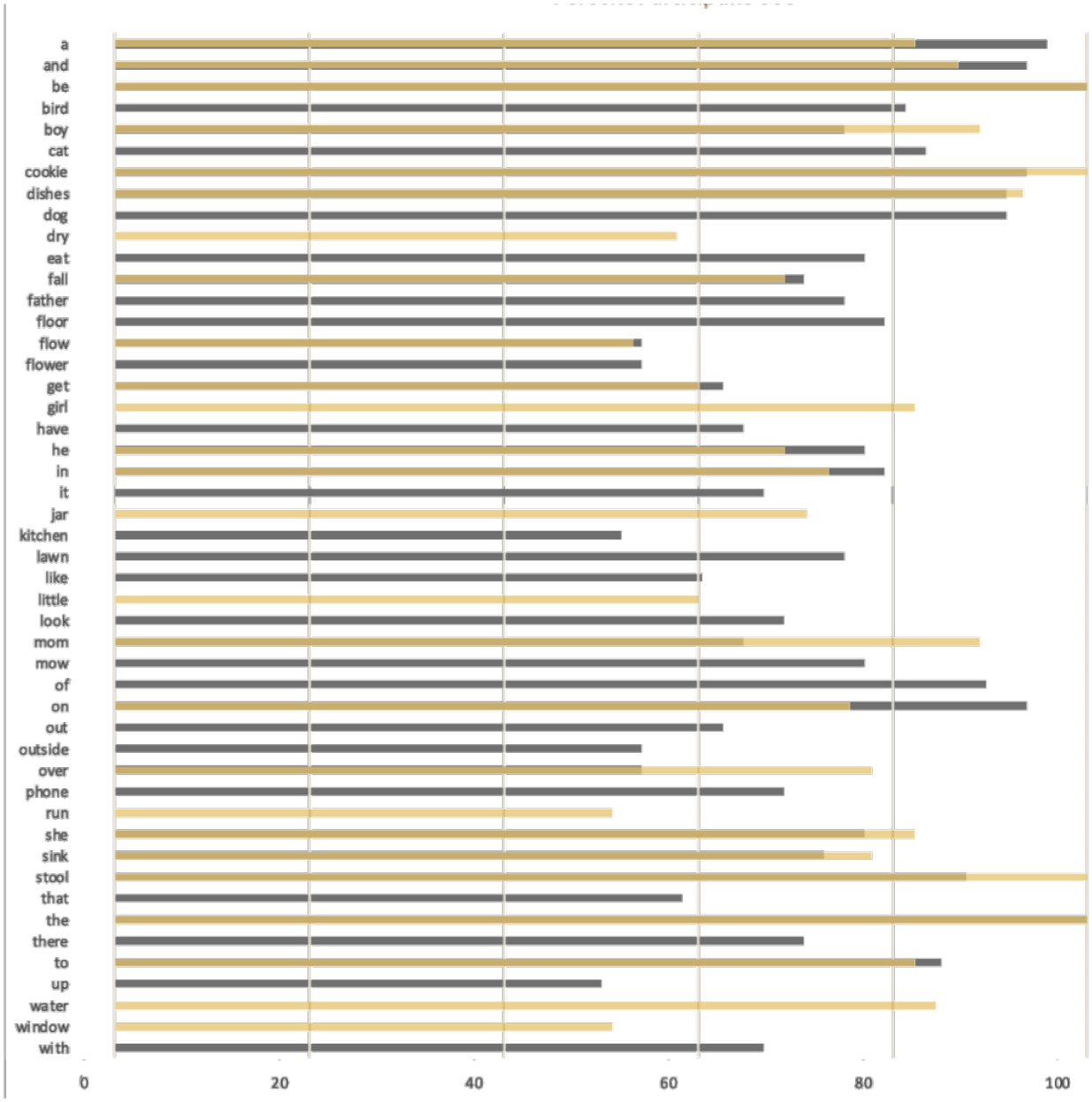
Main Concept List for Original and Modern Cookie Theft

	Original Cookie Theft Stimulus		Modern Cookie Theft Stimulus
MC1	The woman is doing the dishes	**MC1**	The father is washing the dishes
MC2	The water is overflowing in the sink	**MC2**	The sink is overflowing onto the floor
MC3	The mother is standing in the water		
		MC3	The mother is outside
		MC4	The mother is mowing the lawn
		MC5	She is on the phone
		MC6	She is mowing the flowers
		MC7	The cat is chasing birds
MC4	The boy is getting cookies out of the cookie jar	**MC8**	The little boy is getting cookies out of the cupboard
MC5	The boy is giving a cookie to the girl		
MC6	The boy is on the stool	**MC9**	He is standing on the stool
MC7	He is falling off / The stool is tipping over	**MC10**	He is falling off the stool
MC8	The little girl is reaching for a cookie	**MC11**	The little girl is eating a cookie
MC9	The girl has her finger to her mouth		
		MC12	The cookies are falling on the floor
		MC13	The dog is eating cookies
		MC14	There are other buildings outside

Main concept lists generated for the Original and Modern Cookie Theft from 45 and 48 (respectively) healthy controls. When corresponding concepts resulted for both stimuli, items are listed in-line with one another.

Figure 1

CoreLex List for Original and Modern Cookie Theft



CoreLex items listed in alphabetical order. The precent of participants who used the lexical item are represented by overlapping yellow (for items used during original cookie theft) and gray bars (for items used during modern cookie theft).