Impact of Discourse Elicitation Procedures on Use of Reported Speech

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Introduction

Discourse Measurement
- Measurement of discourse is notoriously complex[1]
- Discourse performance can vary significantly depending on task demands (e.g., conversation vs. picture description), participants (e.g., traumatic brain injury vs aphasia), and elicitation techniques[2,3,4,5]

Discourse Elicitation Techniques and Social Communication Impairments
- Protocols differ in focus of language produced (isolated productions of an individual vs collaboratively produced discourse in interaction), the variables of interest (language structure vs language use), and the materials chosen[6,7]
- Variability presents challenges for clinicians making diagnostic decisions and for researchers seeking to capture deficits and characterize underlying nature and mechanism of language impairment in neurogenic populations
- For example, social communication impairments in traumatic brain injury (TBI) are often observed in social interaction but can be elusive in clinical settings and on standard discourse protocols[8]

The Current Study
- Examines use of reported speech (RS), an interactional discourse resource, across two discourse elicitation protocols in healthy participants and individuals with TBI
  - MDEP – focus on social use of language/interaction; discourse co-constructed[7]
  - TalkBank – focus on language structure; minimal clinician input[9]
  - RS – representation of speech and thought from other times and places, bringing together in one utterance multiple speakers and contexts; key resource for displaying interactional involvement[10]
- **Prediction**: Given interactional nature of MDEP and RS, we predict more RS in MDEP than in TalkBank
- **Significance**: Increased understanding of how different discourse elicitation protocols shape distinct patterns of language; may guide clinical decision making

Methods

PARTICIPANTS

Healthy participants: 11 healthy participants with no history of psychiatric or neurological disease or injury

	Sex	Age	Education
3617c	M	41	16
3622c	M	19	14
3625c	M	32	18
3632c	M	21	15
3641c	M	66	18
3642c	M	44	14
3656c	F	43	16
3691c	M	56	15
3694c	F	53	13
3696c	F	56	14
3702c	M	65	16

Participants with Traumatic Brain Injury (TBI): 9 participants with TBI drawn from the Iowa Traumatic Brain Injury Registry

	Sex	Age	Education	Etiology	Chronicity	Severity[11]
3617	M	46	13	MVA	1	Mod-Severe
3622	M	24	16	Fall	3	Mod-Severe
3625	M	38	11	MVA	3	Mod-Severe
3642	M	50	12	Fall, MVA	25 and 5	Mod-Severe
3656	F	48	18	MVA	2	Mod-Severe
3691	M	59	12	Fall	5	Mild
3694	F	53	14	Fall	6	Mod-Severe
3696	F	60	14	Fall	2	Mod-Severe
3702	M	63	15	MVA	3	Mild

Clinicians: Six women who were either a practicing SLP or in an SLP training program. Received training on the protocols but were blind to study hypothesis (i.e. clinicians received no training or information about RS).

Data set: Each of the 20 participants interacted with a clinician to complete both the TalkBank and MDEP protocols. Order of the protocol administration was counterbalanced across participants.

Methods

DATA COLLECTION AND ANALYSIS

TalkBank Protocol
- Clinician role: focus on moving client through tasks; offers limited verbal or non-verbal feedback.
- Tasks include: 2 personal narratives, 1 story retell, 1 picture description, 1 procedural discourse task

Mediated Discourse Elicitation Protocol (MDEP)
- Clinician role: focus on being appropriate conversational partner; is not limited in verbal or non-verbal contributions.
- Tasks include: 2 personal narratives; 1 story retell, 1 picture description; 1 procedural discourse task

DISCOURSE SAMPLES

	Narrative	Picture Description[12]	Procedural Discourse
MDEP	Tell me about a frightening experience Tell me a family story Retell the story of Snow White		Tell me how to make your favorite sandwich
TalkBank	Tell me about an injury you've had and how you recovered Tell me a story about something important that happened to you Retell the story of Cinderella		Tell me how to make a peanut butter and jelly sandwich

REPORTED SPEECH CODING
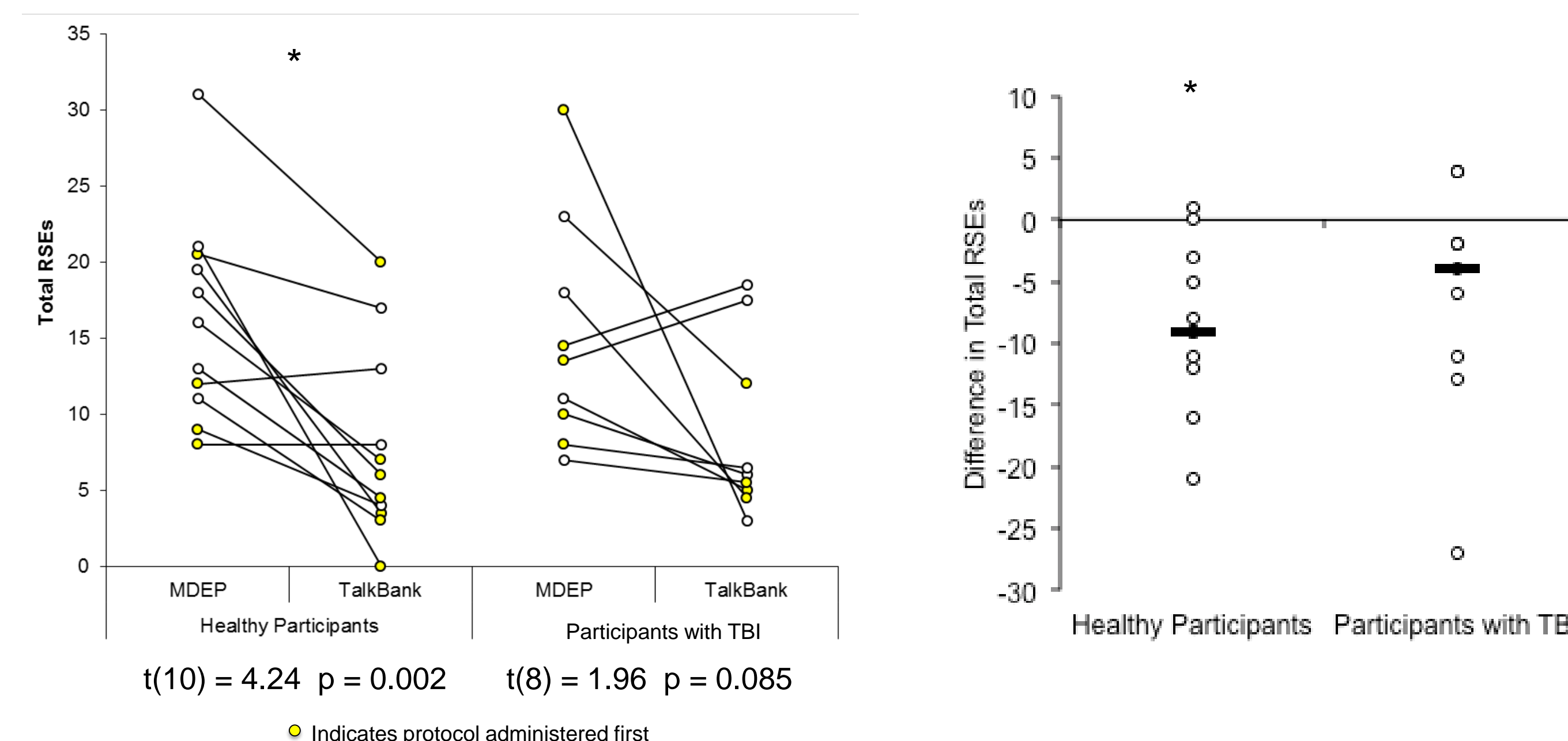
RS analysis consisted of 3 phases.
- 1) Using a broad definition of reported speech, 2 coders reviewed and marked transcripts for all reported speech events (RSEs)
- 2) Recoded RSEs to omit those that were simply reading (e.g., clinician reading instructions), non-explicit representations of other's speech (e.g., "We talked for hours."), and miscodings.
- 3) Categorized the remaining RSEs into one of five explicit types and identified the resources used to signal reported speech (e.g., linguistic markers, voicing shifts).
- 4) 2 coders met and compared RSE coding, discussed discrepancies and came to consensus

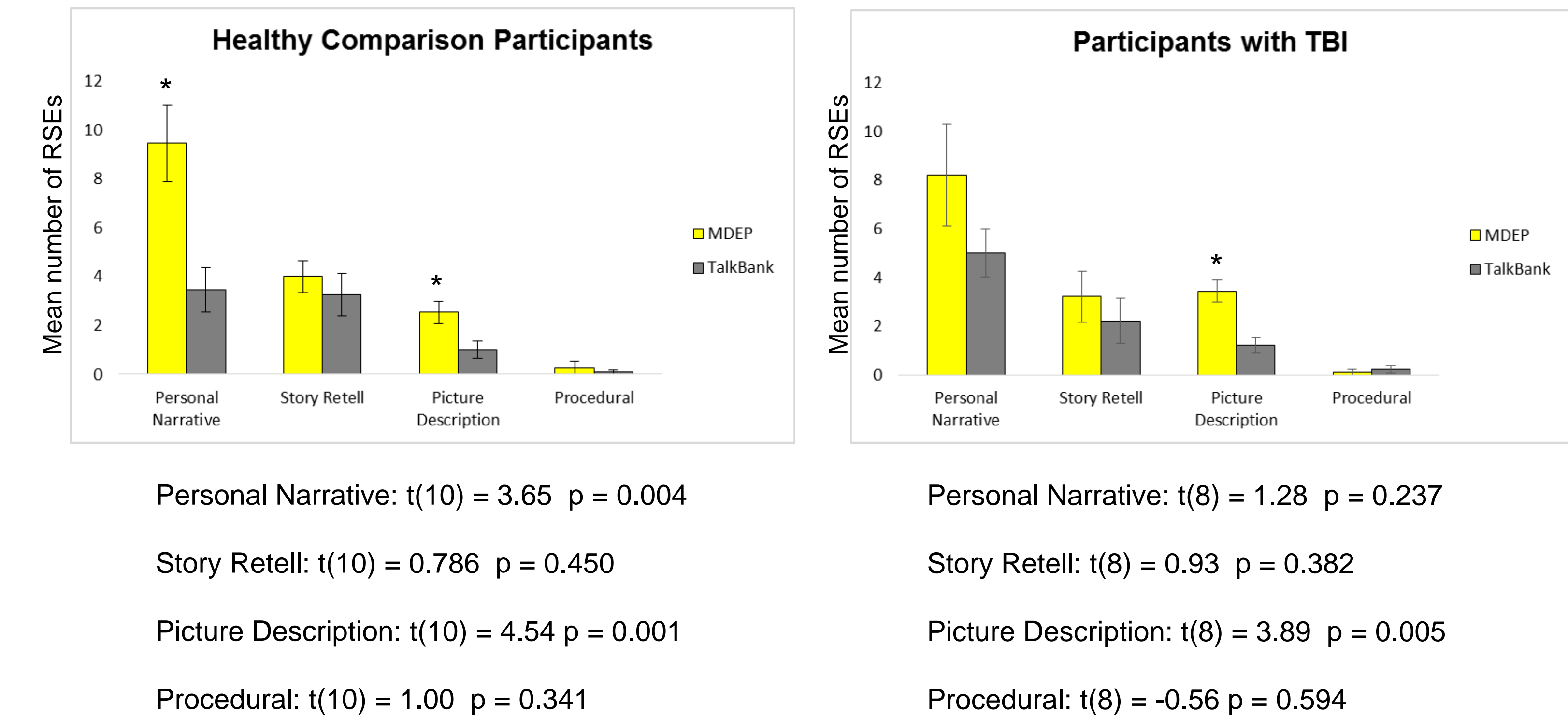## Results

REPORTED SPEECH USE ACROSS SESSSIONS

Total Words Elicited
Healthy comparisons: MDEP mean = 1,410 TalkBank mean = 1,551 t(10) = -0.48 p = 0.64
Participants with TBI: MDEP mean = 1,420 TalkBank mean = 1,484   t(8) = -0.22 p = 0.83

Total Reported Speech Use
Healthy comparisons: MDEP mean = 16.27 SD = 6.69   TalkBank mean = 6.73 SD = 5.61
Participants with TBI: MDEP mean = 15 SD = 7.53   TalkBank mean = 8.67 SD = 5.83

t(10) = 4.24 p = 0.002   t(8) = 1.96 p = 0.085

○ Indicates protocol administered first

Results

REPORTED SPEECH USE ACROSS DISCOURSE TYPES

Healthy Comparison Participants

Participants with TBI

Personal Narrative: t(10) = 3.65 p = 0.004

Story Retell: t(10) = 0.786 p = 0.450

Picture Description: t(10) = 4.54 p = 0.001

Procedural: t(10) = 1.00 p = 0.341

Personal Narrative: t(8) = 1.28 p = 0.237

Story Retell: t(8) = 0.93 p = 0.382

Picture Description: t(8) = 3.89 p = 0.005

Procedural: t(8) = -0.56 p = 0.594

Discussion and Future Directions

Impact of Discourse Elicitation Procedures on Use of Reported Speech
- Use of RS varied across elicitation protocols (MDEP vs TalkBank)
  - Healthy participants and participants with TBI produced more RS in MDEP than in TalkBank sessions, a difference that was statistically significant in the healthy group. The increased use of RS may suggest that the interactive nature of the sessions creates an opportunity to observe more interactional aspects of discourse and language use such as reported speech. These effects were most evident in the personal narrative and picture description tasks.
- Reported speech use varied across discourse tasks
  - Across participant groups, more instances of RS in personal narrative, followed by story retell, and very few RSEs in procedural discourse tasks.

Reported Speech, Discourse Elicitation, and Traumatic Brain Injury
- Results here consistent with previous work[13] showing unimpaired RS use in individuals with TBI.
- Current findings extend this work to show that RS in individuals with TBI follows similar trends across discourse tasks and elicitation protocols as healthy comparison groups.

Implications
- Elicitation of a social-communicative phenomenon, RS, is influenced by choices in the role of the clinician and/or elicitation materials
- Results suggest that researchers and clinicians can maximize the opportunities to elicit RS (and possibly other social-communicative behaviors) through selection of interactive protocols and materials with high social salience.

Future Directions
- Future work should confirm these findings in a larger sample size and determine the influence of factors such as age and severity
- A between-subjects approach with a large sample size, where elicitation materials are held constant, will disentangle the respective roles of clinician interactivity and elicitation materials.

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