Non-autistic versus autistic children: Why should I say "*um*" if I'm not talking to anybody?

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BACKGROUND

- When speakers use "*um*," they may be pausing to plan an utterance, and/or intending to take a turn in the exchange.[1,2]
- Research has reported that autistic individuals use "*um*" less often than non-autistic (NonAu) individuals when they answer questions during diagnostic testing,[3] describe how to play a sport,[4] and describe pictures.[5]
  - These authors argue that differences in "*um*" use are due to autistic individuals' general pragmatic challenges.
- However, a recent study reported no difference in "*um*" usage between NonAu and autistic children during dyadic conversation.[6]
- This suggests that differences in "*um*" use may not persist in all contexts.

OBJECTIVE: To compare "*um*" use by Autistic & NonAu speakers across datasets that utilize different discourse elicitation tasks

PARTICIPANTS

	SITE A		SITE B	
	Autistic Group (n = 16)	NonAu Group (n = 15)	Autistic Group (n = 21)	NonAu Group (n = 22)
Chronological Age	13.5 (2.3)	13.4 (2.1)	11.6 (2.2)	12.5 (2.3)
ADOS Total Score	10.3 (2.4)	---	9.3 (3.3)	---

NOTE: NonAu groups from both sites did not receive the ADOS-2

METHODS

SITE A

Figure 1. Screenshot of judges on video call from the TSST

- Participants narrated a fictional story for three-uninterrupted minutes to a panel of judges (on a video call) who did not backchannel or comment (i.e., Trier Social Stress Test, or **TSST**, Kirschbaum et al., 1993; Figure 1)
- Participants also engaged in **conversation with an adult research assistant (RA)**, where they answered questions about their family and hobbies

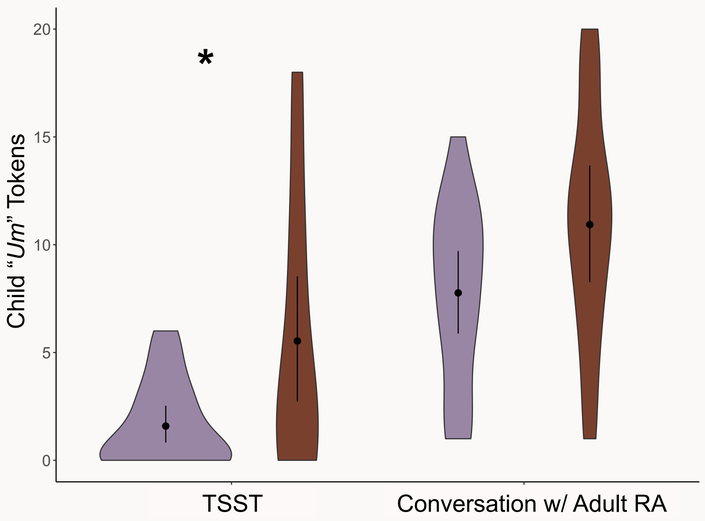
SITE B

Figure 2. Virtual reality paradigm with peer avatars

- Participants viewed a virtual classroom filled with "peer" avatars (Figure 2)
- Participants answered questions about their lives (e.g., favorite vacation, holiday, etc.) and were instructed to direct their responses to the peer avatars (i.e., **conversation with virtual peers**)

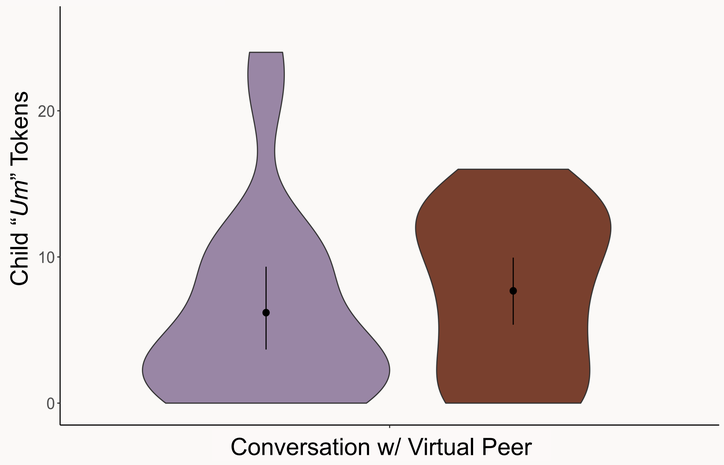
- Audio recordings from each site were transcribed and analyzed using CLAN.[7]
- In each language sample, "um" tokens were tallied.

RESULTS



SITE A:
Autistic < **NonAu** in TSST
(*p* = 0.043),
but **not** in conversation task

Both groups:
TSST < Conversation
(*p*s < 0.05)



SITE B:
No significant difference between groups in conversation task,
p = 0.159

DISCUSSION

- Findings suggest that **"*um*" use differs depending on the nature of the discourse context** (i.e., monologic vs. conversational).
- Further, both **autistic and non-autistic participants at site A used "*um*" significantly more often during conversation**, suggesting they recognize its usefulness as a turn-taking device.
  - This function of "um" is unnecessary in a context like TSST, where speakers are asked to talk for a specified amount of time without interruption.
- Overall, findings reveal **pragmatic strengths** for autistic speakers, including not only their use of "*um*" in the first place, but also their ability to vary their frequency of "*um*" use across contexts.

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