Differences in Rate of Speech in Male, Female, and Male-to-Female Transgender Speakers: A Replication Study

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INTRODUCTION

Background

- The literature exploring rate of speech (RoS) as a communication-based cue to gender has been inconclusive, with some studies finding no difference[1,2,3] and some concluding that cisgender males speak at a faster rate than cisgender females.[4,5]
- Only one study has examined gender differences in RoS and included a group of transgender participants. It revealed no significant differences between gender groups. [3]

Rationale

- The above study measured rate of speech during a reading task.
- Measuring RoS within a narrative may be more ecologically valid and informative for communication feminization training, since individuals may speak differently during a reading task as opposed to generating a narrative or having a conversation. [6]

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Purpose

- To determine whether there is a difference in rate of speech (RoS) between gender groups in a conversation-like context.

METHODS

Participants

Inclusion Criteria

- All participants were fluent English speakers
- All participants were free from neurogenic communication disorders
- Transgender participants identified as transsexual or transgender
- Transgender participants must have been living in the female gender role at least 80% of the time for at least 6 months

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Procedures

- Participants watched the cartoon “In the Pink of the Night”[7] and were audio-recorded while re-telling the story
- Each cartoon description was transcribed and syllables subsequently were counted using the Tally Counter App.[8]
- 50% of the transcripts were randomly chosen to be examined by a second researcher for reliability. Any discrepancies were then counted together and an agreement was made.
- The length of the sample was measured using a media player.

$$RoS = \frac{Total\ \#\ Syllables\ in\ Sample}{Length\ of\ Sample}$$

RESULTS

Table 1. *Participant Demographics*

Participant Group	All Participants	Transgender Women	Cisgender Women	Cisgender Men
Mean Age (SD)	40.93 (14.48)	41.20 (14.38)	40.90 (14.76)	40.40 (15.93)
Receiving Hormone Treatment (%)	NA	90	NA	NA
Had Gender Affirmation Surgery (%)	NA	40	NA	NA
Mean Years Since Began Transition (SD)	NA	9.08 (11.71)	NA	NA
Mean Years Living Full-Time (SD)	NA	7.63 (11.72)	NA	NA
Mean Months of SLP Services (SD)	NA	1.46 (3.42)	NA	NA

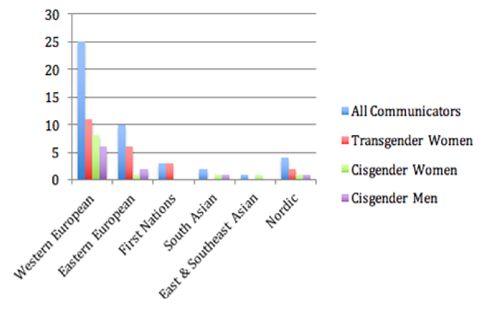

Figure 1. *Participants' Ethnic Background*

- A one-way between subjects ANOVA revealed no statistically significant difference in mean RoS between any of the gender groups $F(2,37) = .978$, $p = .385$

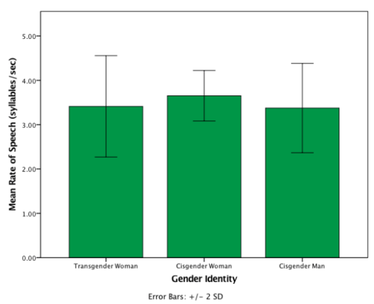

Figure 2. *Mean rate of speech across gender groups*

CONCLUSIONS

- These results are consistent with those of Van Borsel & De Maesschalck (2008) in that there were no significant differences in RoS between gender identity groups.
- These results extend on previous findings by using a conversation-like speaking task.

Future Research

- Both studies are limited in that they only examined RoS as a function of gender identity.
- Future research should explore differences in RoS between groups differing in perceived gender as this may be a more meaningful measure to inform communication feminization training
- This study is part of a larger line of research investigating how different aspects of communication predict gender perception.[9]

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