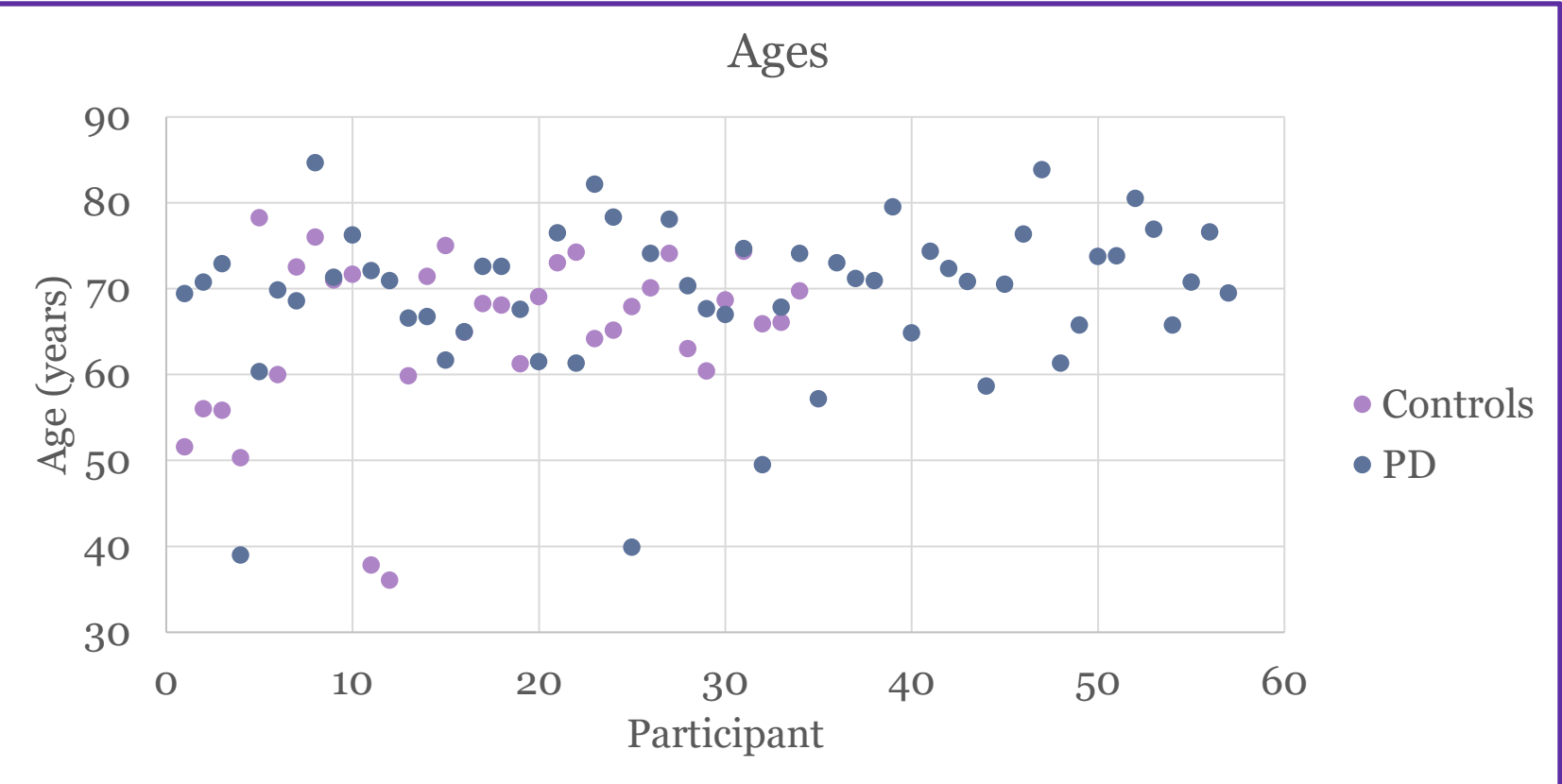
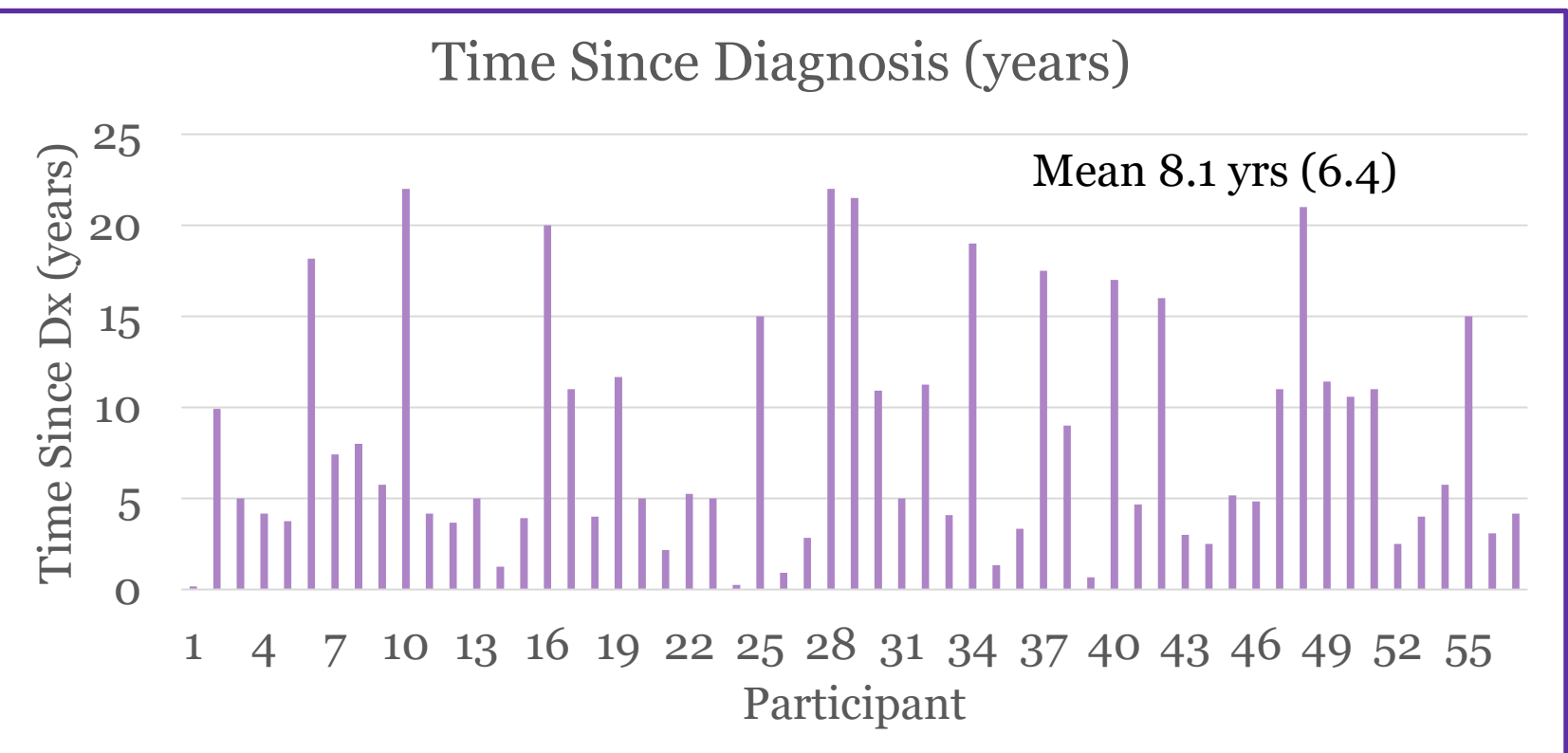


People with PD demonstrate a clear prosodic deficit in intonation (melody of speech)

People with PD did not demonstrate large differences in vocal intensity or speech rate

There was no difference in performance across sessions. One session can serve as a marker of performance.

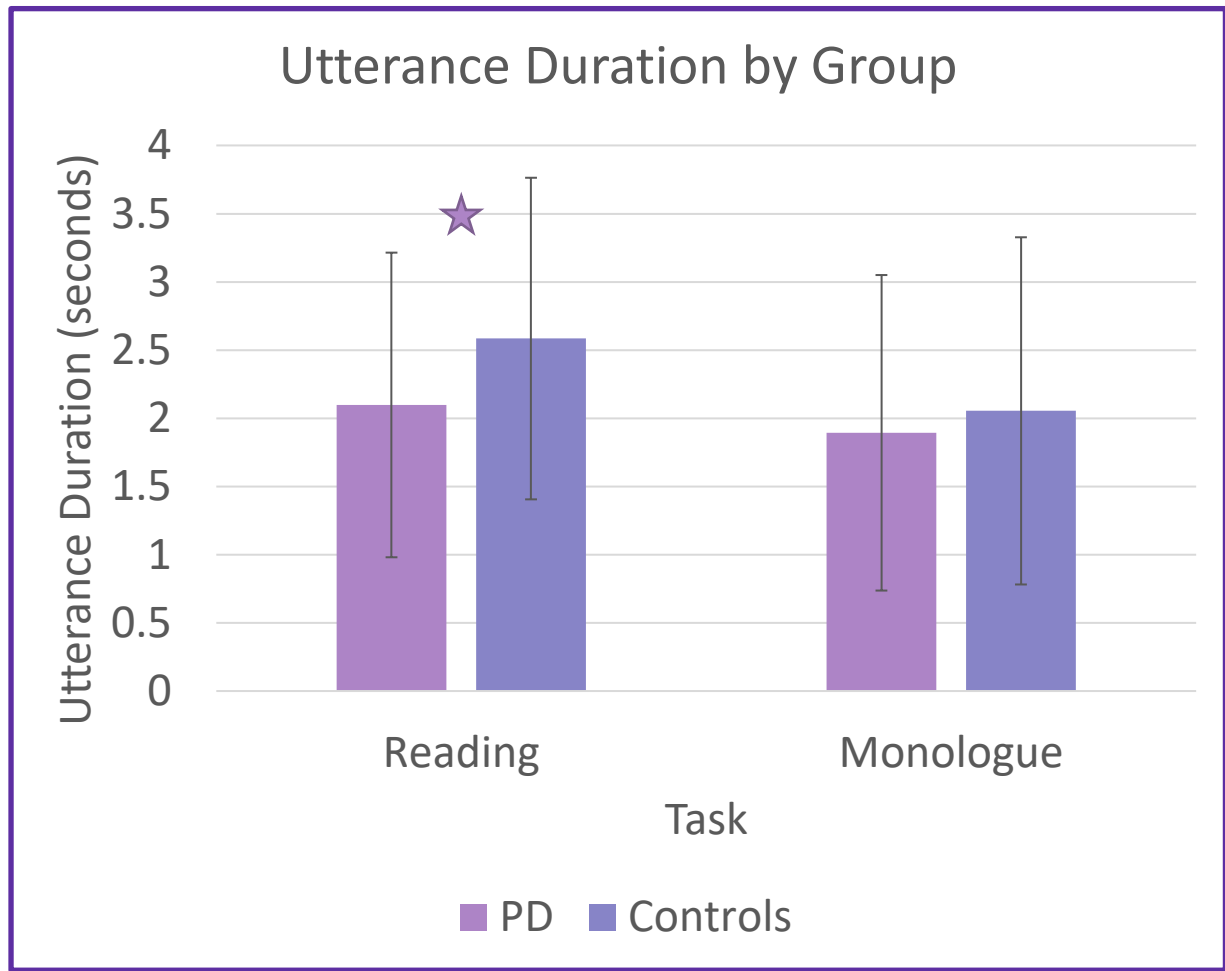
- Significance:
- Over 80% of people with Parkinson disease (PD) will develop speech difficulties
 - Most studies have examined speech using perceptual ratings and in smaller cohorts, resulting in mixed findings
 - Little research into day-to-day variability in these symptoms has been conducted
- Aims:
- Determine how well commonly used speech assessment metrics differentiated people with PD from controls of similar age and gender
 - Examine the consistency of performance from week to week in these outcomes
- Participants:
- 19 Women and 24 Men with PD
 - 19 Women and 6 Men without PD (age-matched)



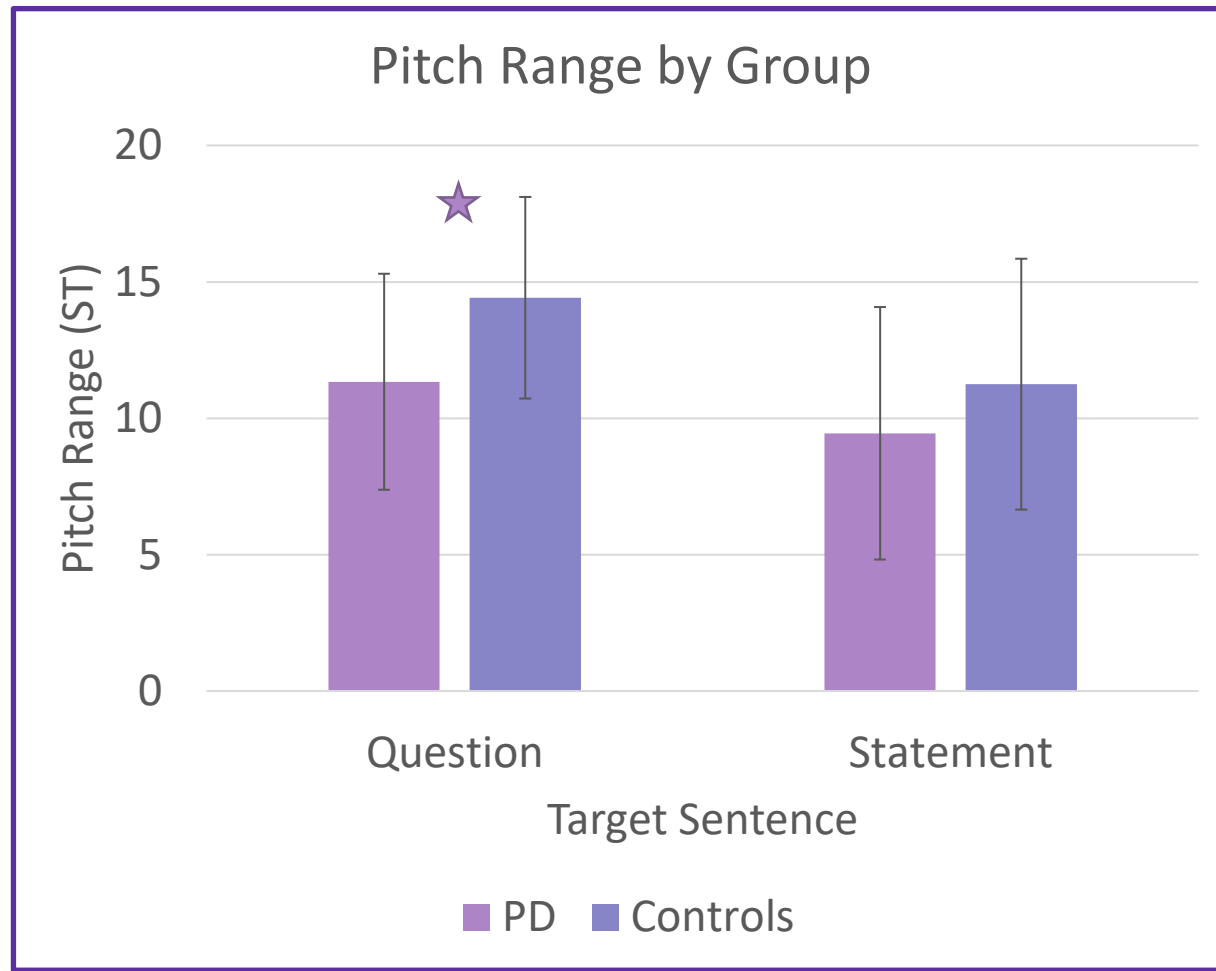
- Data Collection:
- Participants independently completed a standardized speech assessment on 1-4 occasions, each 1-2 weeks apart
 - Data collected using Modality.AI dialog agent platform

Speech Tasks: Reading (Rainbow Passage), Monologue, Contextual Intonation Task

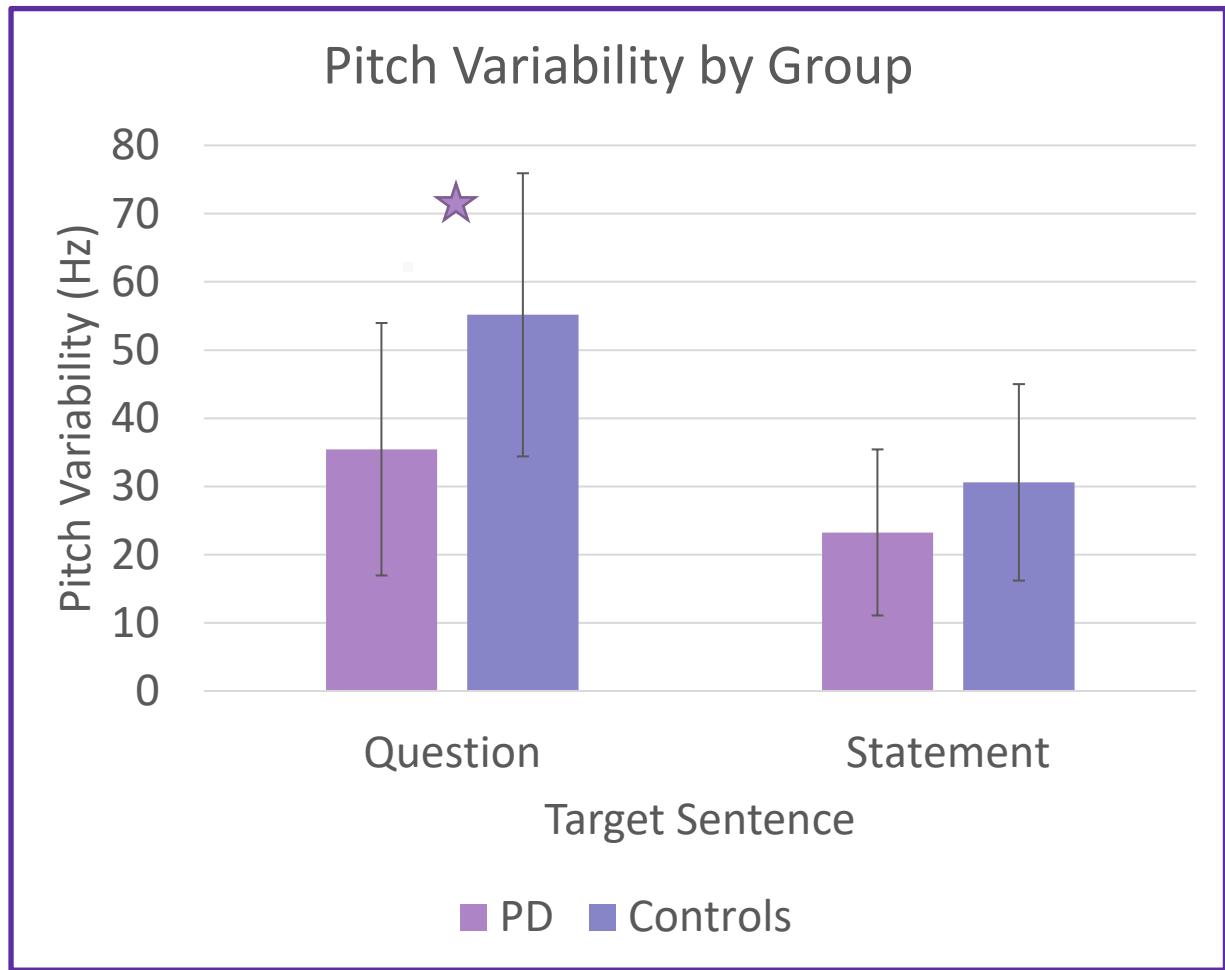
- Tina: “You just got back from holidays in Florida. Jane asks if the weather was nice. Now you say...”
- Target: “It was hot.” (Statement)
- Tina: “Jane says her vacation to Alaska was too hot. Now you say...”
- Target: “It was hot?” (Question)



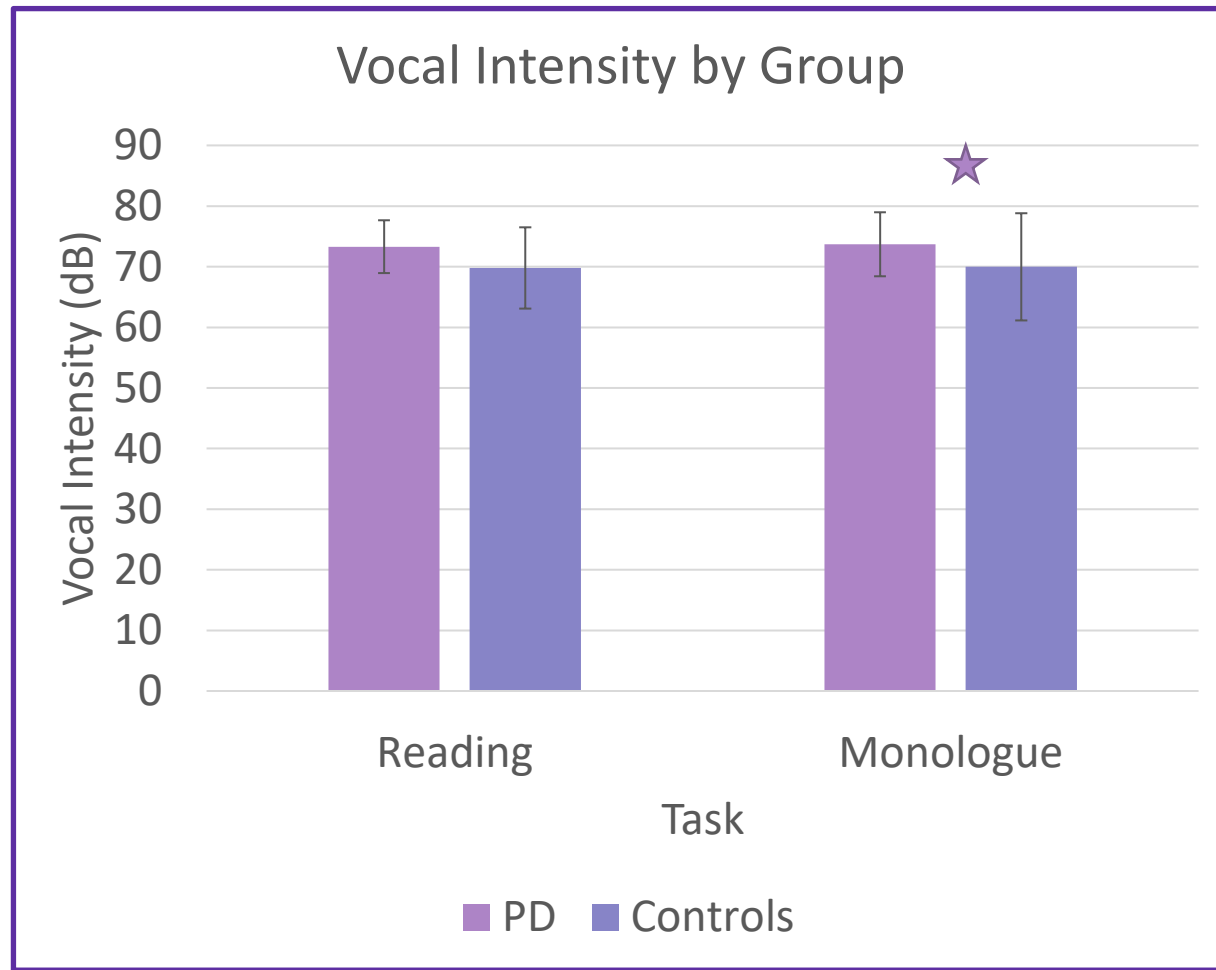
PD shorter utterance duration than controls in reading but not monologue or intonation task (p=0.018)



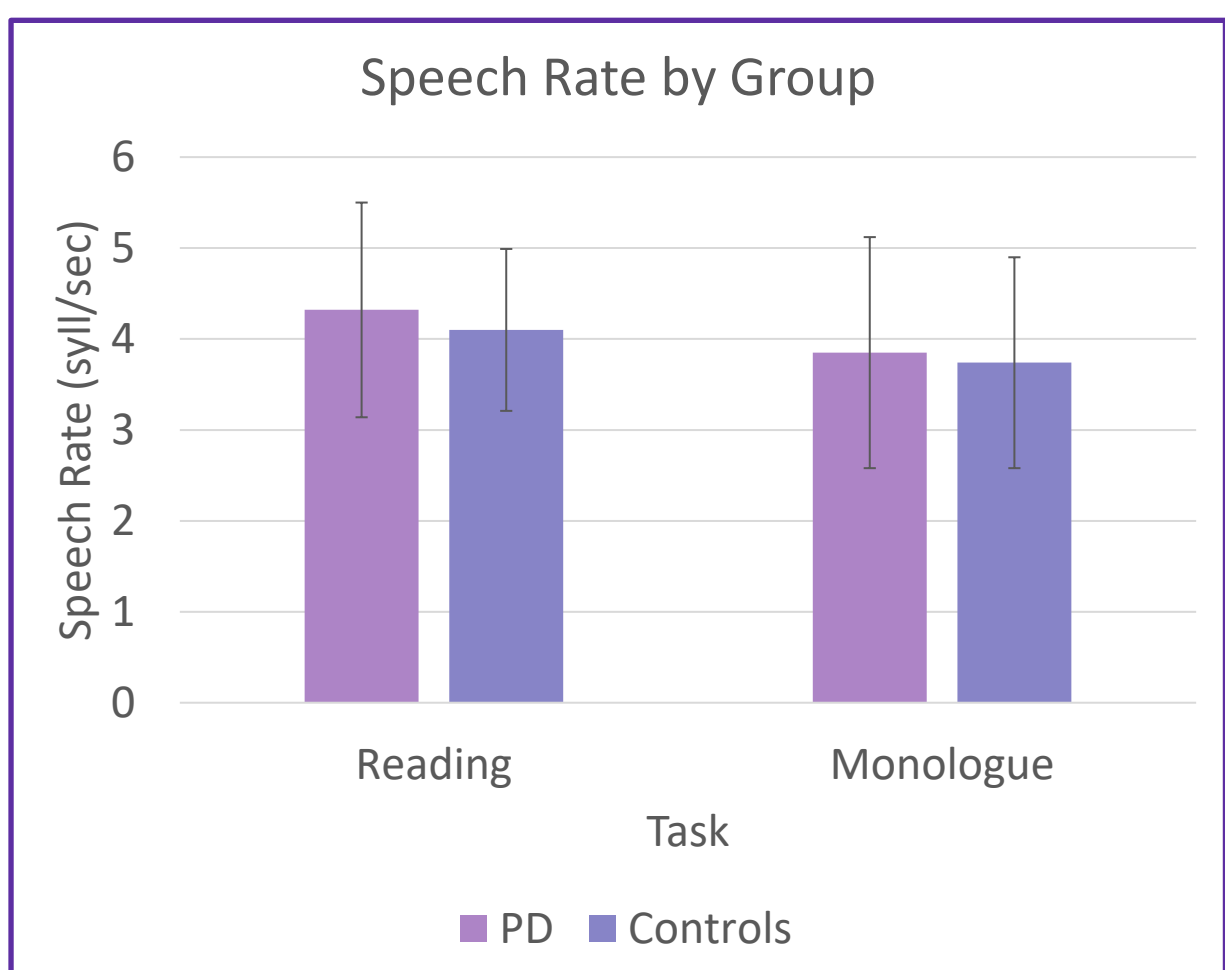
PD less pitch range than controls in questions but not statements (p=0.001)



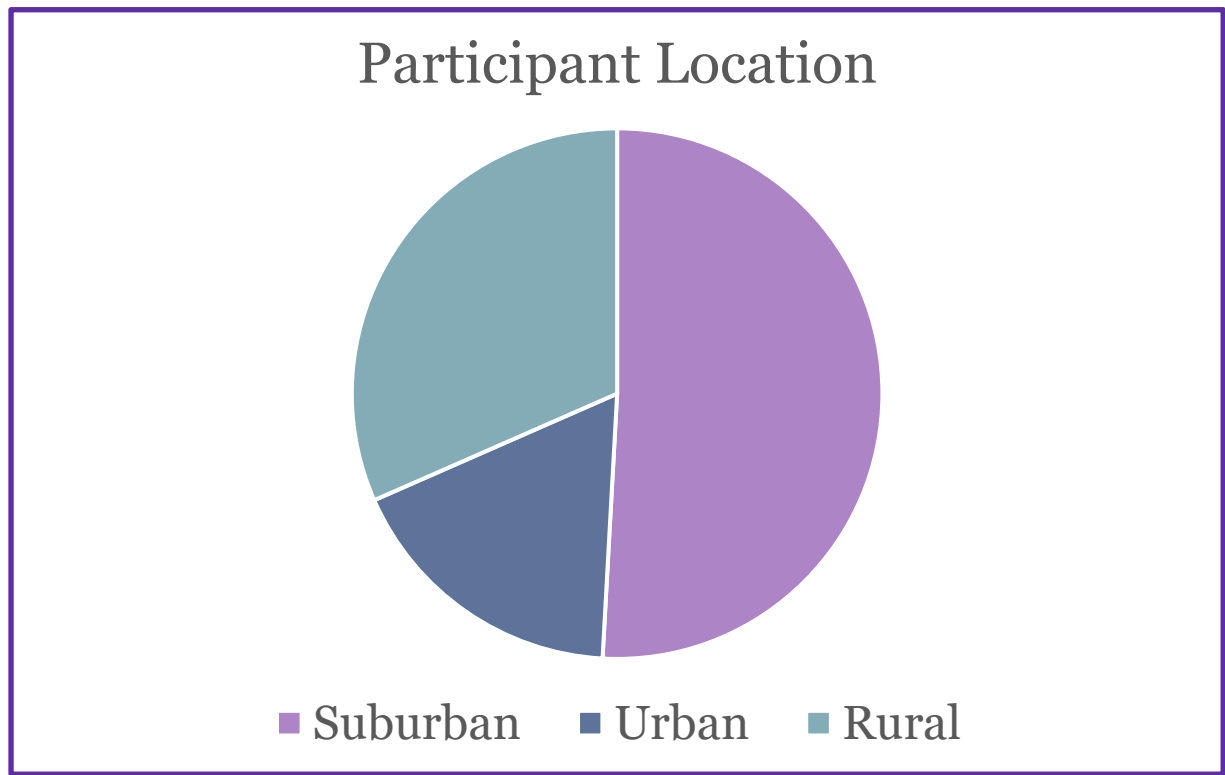
PD less pitch variability than controls in questions but not statements (p=0.001)



PD higher intensity than controls in monologue but not reading (p=0.018)



No group differences



Measure	ICC	Agreement Across Sessions
Reading Passage		
Number of Syllables	0.872	Good
Utterance Duration	0.870	Good
Vocal Intensity	0.986	Excellent
Speech Rate	0.916	Excellent
Intonation Task		
Minimum Pitch	0.957	Excellent
Maximum Pitch	0.938	Excellent
Pitch Variability	0.863	Good
Pitch Range	0.891	Good