Is spoken Danish more difficult to understand than spoken Swedish?

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1. Background
Danish and Swedish:
• Closely related
• In principle mutually intelligible
• Danes understand Swedish more easily than Swedes understand Danish
• During the last century Danish has undergone more phonetic changes than Swedish has

2. Research questions
a. Is Danish intrinsically more difficult to understand than Swedish?
b. Do elderly Danes have more difficulties understanding young people than elderly Swedes?

3. Intelligibility test
Material:
• 12 SUS-sentences (Semantically Unpredictable Sentences), no contextual cues to word identity, e.g.:
  Et æg kræver en tekst som håber (Da)
  Et ågg kräver en text som hoppas (Sw)
  "An egg demands a text that hopes"
Speakers:
• 3 Danish and 3 Swedish male students
• From Copenhagen and Stockholm
Speech manipulations:
• Babble noise (mixed recordings of a large number of speakers)
• Four descending levels in steps of 3 dB from 0 to −9 dB speech-to-noise ratio + original recording
Listen:

Listeners:
• Young (19-27 years):
  18 Danes, 24 Swedes
• Elderly (60-75 years):
  23 Danes, 26 Swedes
Task:
• Listen via headphones and write down in mother tongue

4. Results
a. Spoken Danish is as intelligible to Danes as Swedish is to Swedes ($F=1.428$, $df=358$, $p=.08$): 

  ⇒ Danish is not intrinsically more difficult than Swedish

b. The difference between elderly Danes and young Danes is not larger than between elderly Swedes and young Swedes ($F=1.513$, $df=358$, $p=.06$):

  ⇒ Elderly Danes do not have more difficulties understanding young people than elderly Swedes