

Background

In aircrafts, passenger announcements are the only way to give information to passengers about the general situation of the flight, destination information, and information about unexpected situations.

Pilots with lower pitch are thought to give more trust to the passengers in comparison to the ones with higher pitch.

Objectives

- Evaluate the effect of flight pilots' voice pitch on passengers' trust perception.

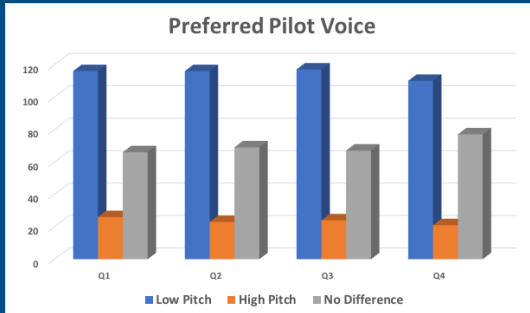
Methods

- The voice records of 4 men and 4 women were taken making a passenger announcement.
- The Pitch-synchronous Overlap Add (PSOLA) method was used with Praat 2 software to create lower and higher-pitched versions of the original recording.
- The voice recording was changed ± 0.5 equivalent rectangular bandwidths (ERBs).
- They were asked to choose one of three options blindly (lower-pitched; higher pitched; they don't differ) for 4 questions to evaluate trust perception.

Q1	Which pilot Would you trust more if you were in the aircraft?
Q2	With which pilot would you have less fear of flying if you were in the aircraft?
Q3	Which pilot do you think is more experienced in his professional life?
Q4	If there was an unexpected emergency situation (bad weather conditions, technical problems etc.), which pilot do you think could manage the situation better?



People finds low pitched version of the pilot voices more trustworthy



Results

- 26 participants (19 male and 7 female) with and without fear of flying, and with different levels of education, listened to these higher and lower-pitched versions of the passenger announcement.
- The results revealed that participants of different educational levels preferred the lower-pitched pilot voice very significantly over higher pitch pilot voice in four trust related questions ($p < 0.001$, $p < 0.001$, $p < 0.001$, $p = 0.004$).
- Age, Genders and the fearful flight event status has no significant effect on their preferences. ($p > 0.05$)

Conclusion

- The lower-pitched pilot voice influences enhancing trust among passengers.
- Other factors like speech rate, articulation should be targeted in future studies to have a more complete understanding of the perception of voice on passengers.

References

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- 2) Boersma P. Praat, a system for doing phonetics by computer. Glot Int. 2002.

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