

# Emotional and linguistic prosody recognition in schizophrenia patients

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Background: Schizophrenia patients have been found to exhibit deficits in both emotional and linguistic prosody (Lucarini et al., 2020; Kucharska-Piechura et al., 2003; Pawełczyk et al., 2021). While emotional prosody deficits have been extensively researched across various languages, linguistic prosody and its subtypes, such as phrasing, information structure interpretation, turn-taking, and speech act recognition, have received relatively less attention. Our study aimed to design a comprehensive battery of receptive prosody tests to assess the strengths and weaknesses of schizophrenia spectrum patients compared to healthy controls in a range of ecologically valid emotional and linguistic prosody subtests.

Method: The battery, developed in Psychopy3, consisted of 9 tasks, including tests for emotion recognition in words, pseudo-words, narratives, and requests, on the emotional side, as well as turn-taking, phrasing, information structure, and question/statement distinction on the linguistic side. So far 45 patients with schizophrenia diagnosis and 45 controls took part in the study.

Results: Schizophrenia patients had slightly lower scores in all tasks, however, only half of the differences, predominantly regarding emotion recognition, were statistically significant. Years of education, age, PANSS scores (positive and negative schizophrenia symptoms in the experimental group), self-reported musical abilities, and gender did not correlate with any of the prosody scores in the sample. There was a consistent gradation in the difficulty of the tasks reflected in results of both groups.

Conclusions: Contrary to expectations, most schizophrenia spectrum patients did not show severe receptive prosody deficits as compared to healthy controls. Our results support the qualitative difference between emotional and linguistic prosody skills in schizophrenia spectrum patients, consistent with Caletti et al. (2018) and other studies, but contradicting Pawełczyk et al. (2020) and other studies.

## References

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