UNDERSTANDING COMMUNICATIVE INTENTIONS IN SCHIZOHPRENIA: AN ERROR ANALYSIS APPROACH

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INTRODUCTION

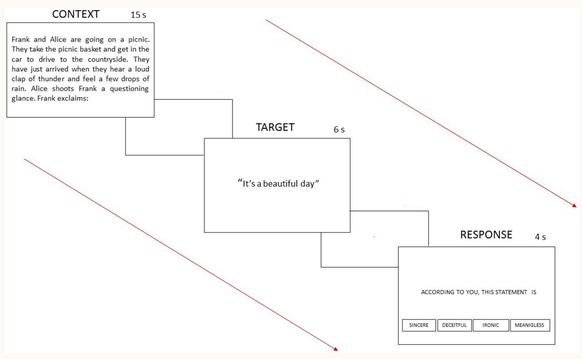
- Individuals with schizophrenia (SCZ) show a severe impairment in the communicative-pragmatic domain, such as difficulties in the comprehension of non-literal, figurative, and deceitful communicative acts (Parola et al., 2018; Parola et al., 2021; Bambini et al., 2016)
- However, few studies provided an analysis of the errors committed in understanding communicative acts.
- Error performance may be highly informative of the clinical and cognitive factors underlying patients' failures in communicative-pragmatic task

AIMS

- We evaluated the ability of patients with SCZ to recognize communicative intentions during the comprehension of different communicative acts (sincere, deceitful and ironic acts).
- We focused on the analysis of error performance by using signal detection analysis to investigate whether patients with SCZ exhibit a specific a priori tendency, i.e., bias, to select a specific response category instead of others.
- We investigated the relationship between sensitivity and response bias and a) cognitive and ToM abilities and b) specific clinical features of the disorder such as: symptom severity, pharmacological treatment, and personal and social functioning.

PARTICIPANTS AND METHODS

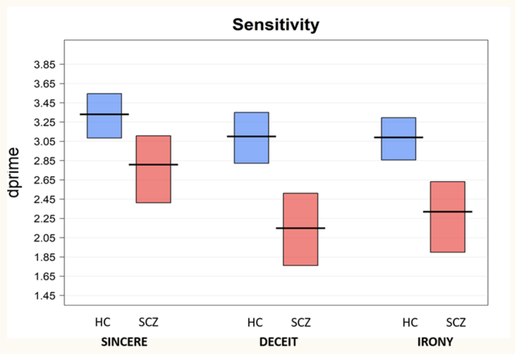
- Twenty-eight Individuals with SCZ and 28 healthy controls matched for age, sex, and education.
- The Positive and Negative Syndrome Scale (PANSS) was used to rate positive (POS) and disorganized/concrete symptoms (DIS).
- Communicative-pragmatic task evaluating the comprehension of different communicative acts. The task consists of 36 short stories followed by a target sentence designed to test participants' comprehension of (1) sincere (2) deceitful (3) ironic communicative acts.

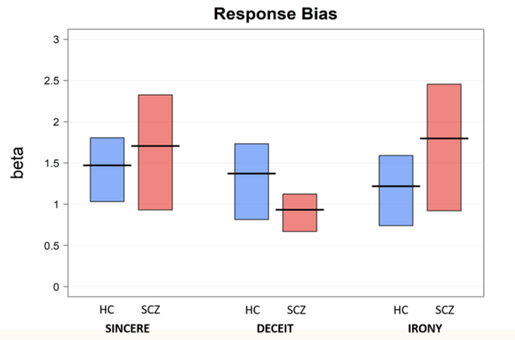


- The responses in the pragmatic task were analyzed using the signal detection theory (SDT) framework
- SDT analysis (Stanislaw & Todorov, 1999) provides quantitative indices of: a) Sensitivity, i.e. the ability of a subject to correctly identify the speaker's communicative intention and b) Response bias, which is the general tendency of a subject to respond by choosing a specific response category (e.g., deceit)

RESULTS

- Patients showed a reduced sensitivity (β= -0.75, p < .01), i.e. lower ability in recognizing the speaker's communicative intention, for all pragmatic phenomena, i.e. sincere, deceitful and ironic acts.
- Patients performed worse in recognizing deceit (β=-0.45, p < .01) and irony (β= -0.36, p < .01) compared to sincere acts.
- Patients also exhibited a stronger response bias for deceitful communicative acts (β= -0.41, p < .05) compared to HC, as they showed a strong tendency compared to HC to respond "deceit" either in deceitful or especially in not deceitful trials.
- Significant correlations between planning and sensitivity for sincere, deceitful and ironic acts (p <.05), between ToM and sensitivity for sincere and deceitful acts (p < .001), and between cognitive flexibility and sensitivity for ironic acts (p <.05).
- We found no significant correlation between response bias and cognitive functions





CONCLUSION

- The ability to understand communicative intentions is impaired in patients with SCZ who showed reduced sensitivity to all pragmatic phenomena
- Crucially, when committing errors, patients selected the "deceitful" category more frequently than the others. This was reflected in a stronger response bias for deceitful communicative acts and indicated a strong a priori tendency for patients to respond "deceit" for either deceitful or non deceitful trials
- The ability to correctly infer communicative intentions is associated to cognitive functions such as planning, cognitive flexibility and ToM. However, we did not find a relationship between response bias and specific cognitive functions

CONTACTS

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