

INTRODUCTION

The human body functions as an entity, despite consisting of several different body systems (e.g., nervous, endocrine and cardiovascular systems). Thus, to understand human behaviour comprehensively, the interaction between different bodily systems needs to be considered. Body-brain interaction provides a novel approach to understand neuropsychiatric and neurodevelopmental conditions, such as autism spectrum disorder (ASD) more comprehensively. Although there is a vast amount of literature regarding autonomic [1] and central nervous system (ANS and CNS, respectively) atypicalities [2], [3] among individuals with ASD, less is known about the interaction between ANS and CNS systems and their contribution to social information processing difficulties. Hence, investigating body-brain interaction in the context of social information processing could give a more elaborated understanding of the characteristics related to social functioning among individuals with ASD.

RESULTS

- 1892 studies identified through database searching
- 6 eligible studies included in the synthesis



ANS and CNS functional atypicalities related to social information processing prevalent among individuals with ASD



Altered contribution of ANS on CNS among individuals with ASD during processing of socially relevant information

PURPOSE OF THE STUDY



To assemble the empirical evidence regarding coexisting differences in ANS and CNS activation during social information processing between individuals with ASD and typically developing individuals



To investigate whether ANS activation is associated with the processing of social information in the CNS differently among individuals with ASD and typically developing individuals

DISCUSSION



This systematic review demonstrates coexisting but context-dependent ANS and CNS atypicalities during processing of socially relevant information among individuals with ASD

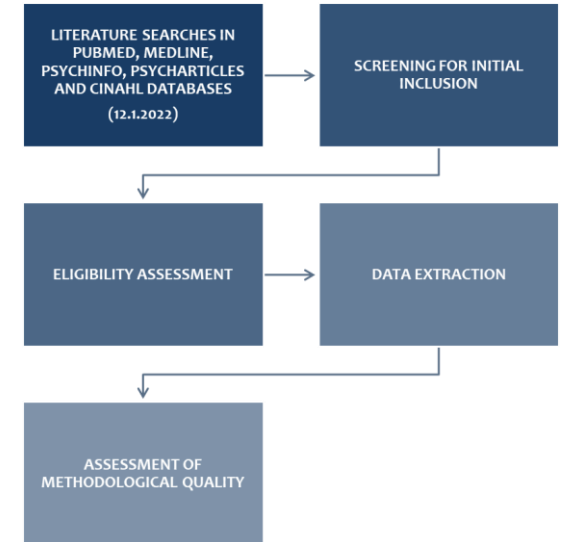


There is indication of altered reactivity and/or trait features in ANS activity among individuals with ASD that may contribute to social information processing by influencing the perception and processing of socially relevant stimuli in the brain



Limitations: small number of studies, small sample sizes, high variability in methodology and experimental designs, vaguely defined inclusion and exclusion criteria, lack of baseline measurements

METHODS



REFERENCES

- [1] Arora et al., 2021.
<https://doi.org/10.1016/j.neubiorev.2021.02.041>
- [2] O'Reilly et al., 2017.
<https://doi.org/10.1371/journal.pone.0175870>
- [3] Pardo, & Eberhart, 2007.
<https://doi.org/10.1111/j.1750-3639.2007.00102.x>

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