

Neurodiverse Team Mental Model: Development of the Conceptual Model and Its Empirical Validation in Relationship to Performance and Satisfaction



A **two-staged** mixed-methods research aimed to 1) develop the **Neurodiverse Team Mental Model (NTMM)** and 2) examine its relationship with team satisfaction and performance



A **team mental model** is a shared cognitive representation of the key elements, relationships, and processes essential to a team's effective functioning, and it provides a theoretical lens for the study



A **neurodiverse team** is a group of two or more individuals who work together on a day-to-day basis, in which at least one member either self-identifies as neurodivergent or has a formal diagnosis of one or more conditions encompassed by the neurodiversity umbrella



STAGE 1 – a qualitative research

based on semi-structured interviews with **20 neurodiverse team members and leaders** in Poland (15 neurodivergent), representing a range of industries and neurotypes

The analysis identified the key factors shaping shared mental models within neurodiverse teams

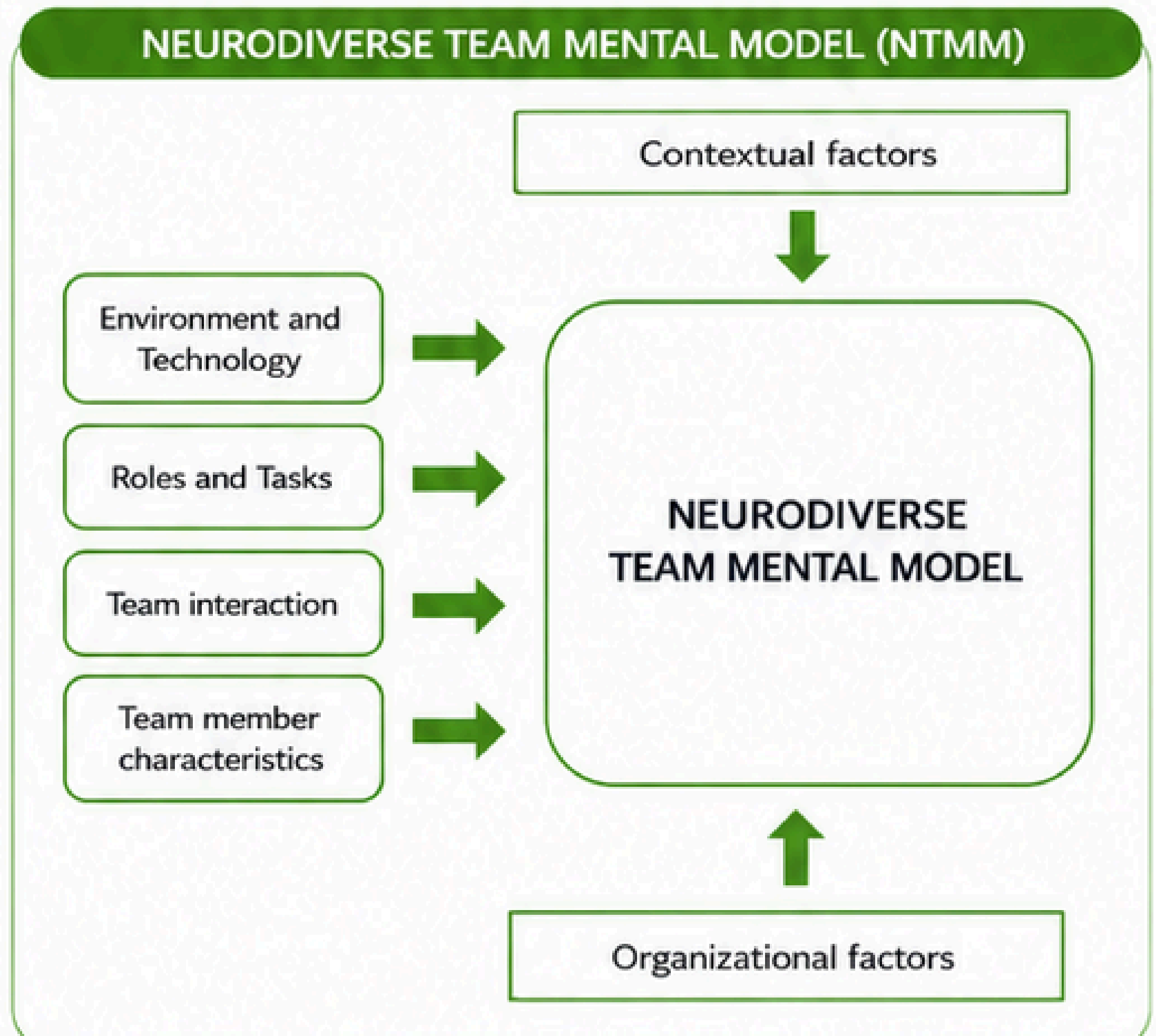


STAGE 2 – a quantitative research

using a CAWI questionnaire among 164 members of **neurodiverse teams** in Poland on the relationship between team mental model congruence and two key team outcomes: **team satisfaction** and perceived **team performance**

The final sample comprised 91 respondents working in 25 teams (M = 3.6 respondents per team, range 2–8)

58% of the respondents were neurodivergent, including: ADHD – 78,8%; Autism – 44,2%; Dyslexia – 13,5%; Dyspraxia – 13,5%



- The questionnaire consisted of **18 items rated on a 5-point Likert scale (1–5)**, assessing participants' perceptions of team functioning across several dimensions
- To measure the congruence of team mental models, we used the Mean Absolute Deviation (MAD) approach. The index ranged from 0 (no agreement among team members) to 1 (complete agreement).

$$\text{Congruence} = 1 - \left(\frac{\text{average MAD}}{4} \right)$$

- Perceived team effectiveness** was measured using three items (Cronbach's $\alpha = 0.91$)
- Team satisfaction** was measured using four items (Cronbach's $\alpha = 0.93$)
- Individual responses were averaged within each construct and then aggregated to the team level to create composite variables.

KEY FINDINGS



- Most teams achieved a team mental model congruence score ranging from **0.61 to 0.95**
- The correlation between **team mental model congruence** and **team performance** was statistically significant, indicating a moderate **positive relationship** ($r = .61, p=.001$)
- The correlation between **team mental model congruence** and **team satisfaction** was also statistically significant, indicating a moderate **positive relationship** ($r = .57, p=.003$)



The study provides empirical support for the NTMM framework and highlights the importance of fostering shared understanding among team members as a mechanism for enhancing collaboration and outcomes in neurodiverse work environments.