

Mindreading Quality vs. Quantity: A Theoretically and Empirically Motivated Two-Factor Structure for Individual Differences in Adults' Mindreading

Christina Pomareda (CXP997@bham.ac.uk), Rory Devine, Ian Apperly (School of Psychology, University of Birmingham)

BACKGROUND

Mindreading: Attribution of mental states (thoughts, feelings, desires) to others

Mindreading motivation (MRM):

Individual's willingness to take others' perspective

Mental State Terms (MST): words referring to mental states

- Theoretically & empirically unclear how & why mindreading varies in healthy adults who have mental concepts
- Existing methods often have insufficient psychometric properties
- Adults might vary independently in (a) *motivation* for mindreading and (b) in the degree to which their answers on mindreading tasks are *appropriate* (APP)
- Confounded in existing coding schemes?

AIMS

- Examine if APP / MST are
 - separable constructs**
 - related differentially to different outcome measures** (MRM, religiosity, authoritarianism, loneliness, social network size, anthropomorphism)

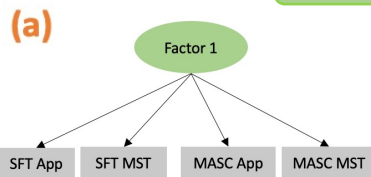
METHOD

- Pre-registered Qualtrics online study ($N = 128$, 5 exc., $Age = 19.47$ years, range 18 – 28)
- Response appropriateness & MST coded from: Movie for the Assessment of Social Cognition (MASC; Dziobek et al., 2016); Silent Films Task (SFT; Devine & Hughes, 2013)
- Coding Scheme: 2, 1, 0 points/ item (max 20); no MST required to score 2; no ceiling effects
- For each item, question asked: *"What do you think happened during this clip?"*
- Outcome (b) & control measures (age, education, personality, verbal ability, English native)

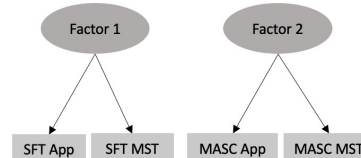


MODELS

1-Factor Model



2-Task Model



2-Factor Model

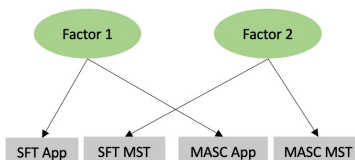


Table 1. Goodness of fit statistics and information on the factor loadings of the individual models that were tested.

Goodness Fit Indices	RMSEA (<.08)	CFI (>.90)	TLI (>.90)	Factor Loadings (range)
Model 1-Factor	.032	.937	.927	.115 - .679
2-Factor	.031	.943	.933	.132 - .733
2-Task	.044	.884	.866	-.029 - .669

Note. RMSEA = Root Mean Square Error Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index

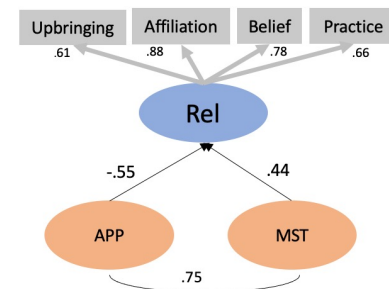
RESULTS

(b)

Table 2. Regression Summary Statistics of SEMs assessing how APP and MST relate to outcome variables, controlling for demographics (age, gender, education, verbal ability) and personality

Outcome	Model	Factor Loadings (SE)	P-value
Religiosity	1-Factor	-.049 (.046)	.602
	2-Factor	MST .438 (.133) APP -.532 (.143)	.001** .001**
Author	1-Factor	.032 (.067)	.736
	2-Factor	MST .202 (.107) APP -.244 (.114)	.159 .091

Note. **p < .001. SEMs = Structural Equation Models, SE = Standard Error.



CONCLUSION

- Distinctiveness of Quantitative (Frequencies of MST) vs. Qualitative (response appropriateness) assessment tool for IDs in mindreading
- Unclear what drives distinction; MRM is not predicted by either response appropriateness or MST



UNIVERSITY OF BIRMINGHAM



Economic and Social Research Council