# Belief Analysis

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# Data Analysis

### Data Prep

## Descriptives

Participants: 85

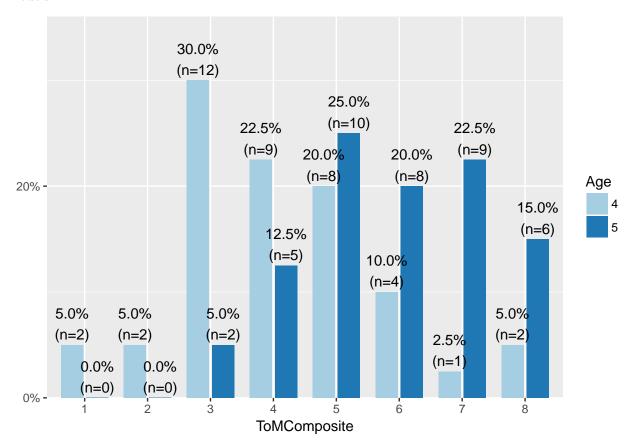
Mean Age (in Months): 60.5 (43 4-year-olds, 42 5-year-olds)

Gender: Males: 38 Females: 47

## Group Differences building the model

#### Group differences predicting ToM performance

There are differences between ages groups and their performance on ToM tasks: Age is included in future models.



(8 is passing all ToM tasks, 0 is failing all TOM tasks)

We do not see similar patterns for gender or experimenter

There are differences between task order and ToM performanc: Task Order is included in future models.

#### Group differences predicting working memory performance

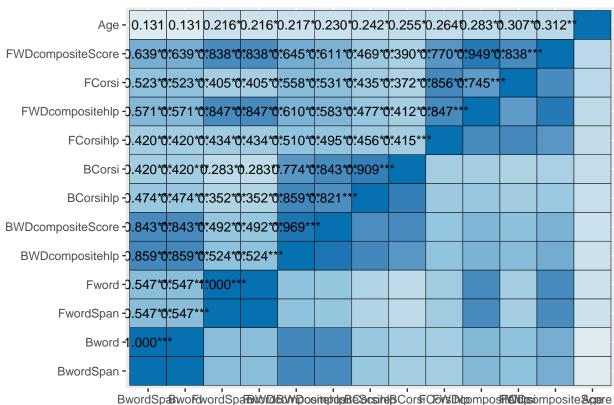
There are differences in working memory performance (in both Corsi block task and word span task) between task orders and age. There are no differences between gender or experimenter.

#### How are the measures correlated?

```
## Warning in data.row.names(row.names, rowsi, i): some row.names duplicated:
## 2,3,4,5,6,7,8,9,10,11,12,13 --> row.names NOT used
```

## Computing correlation using pearson-method with pairwise-deletion...

#### Correlation between WM measures



Correlation between WM is strong. Due to existing literature, backward counting tasks are a more reliable measure of WM. BWDcompositeSocre will be use. This is derived averaging zScores from backward corsi and backward word scores.

#### How does WM correlate with other measures?

Age

BWDcompositehlp
BWDcompositeScore
ToMCompositeC
ToMCompositeL
TBComp
PARC
PARL
ToMC
ToML
TB
Age
0.039
0.217*
0.230*
0.419***
0.382***
0.126
-0.022
0.059
0.236*
0.220*
0.126
TaskOrder
0.039
-0.219*
-0.238*
-0.212
-0.170
0.121
0.007
-0.030
-0.258*
-0.211

TaskOrder

0.121
BWDcompositehlp
0.217*
-0.219*
0.969***
0.202
0.151
-0.139
0.030
0.216
0.237*
0.182
-0.139
BWD composite Score
0.230*
-0.238*
0.969***
0.231*
0.174
-0.127
0.034
0.194
0.267*
0.206
-0.127
${\bf ToMCompositeC}$
0.419***
-0.212
0.202
0.231*
0.278*
0.051

0.044

0.963\*\*\*

0.238\*

0.051

# ${\bf ToMCompositeL}$

0.382\*\*\*

-0.170

0.151

0.174

0.278\*

0.331\*\*

-0.053

-0.274\*

0.242\*

0.971\*\*\*

0.331\*\*

## $\operatorname{TBComp}$

0.126

0.121

-0.139

-0.127

0.051

0.331\*\*

-0.521\*\*\*

-0.634\*\*\*

0.039

0.321\*\*

1.000\*\*\*

PARC

-0.022

0.007

0.030

0.034

0.044

- -0.053
- -0.521\*\*\*
- 0.250\*
- 0.030
- -0.065
- -0.521\*\*\*
- $\operatorname{PARL}$
- 0.059
- -0.030
- 0.216
- 0.194
- 0.200
- -0.274\*
- -0.634\*\*\*
- 0.250\*
- 0.178
- -0.297\*\*
- -0.634\*\*\*
- ToMC
- 0.236\*
- -0.258\*
- 0.237\*
- 0.267\*
- 0.963\*\*\*
- 0.242\*
- 0.039
- 0.030
- 0.178
- 0.271\*
- 0.039
- $\operatorname{ToML}$
- 0.220\*
- -0.211



0.206

0.238\*

0.971\*\*\*

0.321\*\*

-0.065

-0.297\*\*

0.271\*

0.321\*\*

TB

0.126

0.121

-0.139

-0.127

0.051

0.331\*\*

1.000\*\*\*

-0.521\*\*\*

-0.634\*\*\*

0.039

0.321\*\*

Computed correlation used pearson-method with pairwise-deletion.

Is there a difference in WM performance between belief, reality and PAR reasoners controlling for age, and task order?