

Definitions for variables in the dataset Thornton et al_ Replacement experiments with young people

Data collected under ESRC grant ES/M006042/1 - The cognitive requirements of cumulative culture: experiments with typically developing and autistic people

Grant awarded to Alex Thornton, Francesca Happé & Christine Caldwell

PARTICIPANT: Identifier for each participant

CENTRE NUM: Identifier for each school/community group where participants were tested

GROUP: Identifier for each group of 8 participants (note ASD_6 had only 5 participants)

DIAGNOSIS

1 = Autism Spectrum Disorder (ASD)

2 = Typically Developing (TD)

SCORE

The SCORE indicates how many marbles were carried by a pipecleaner implement that was constructed when the participant was (a) the Naïve Participant, (b) the Experienced Participant and (c) The Teacher.

FB_TOT

This is the total score in response to five False Belief Questions. One question tapped first order false belief and four questions tapped second order False Belief (using the Birthday Puppy Narrative - Sullivan, Zaitchik, & Tager-Flusberg, 1994). All, except four, participants scored 5. Three participants (1TD, 2ASD) scored 4. Two of these answered the initial first order question incorrectly – rushing to answer and then realising they were wrong. The other answered a different question to what he was asked for one of second order questions. One female with ASD scored 3 – although it was felt that this score did not represent her true understanding, but rather her motivation to listen to the narrative that day (she also performed well underneath what teachers stated was her true ability on the IQ score)

TOWER

Height (in mm) of tower constructed, within 5 minutes, from plasticine and spaghetti.

SCQ

Score on Social Communication Questionnaire (Berument, Rutter & Lord, 1999) – Lifetime Version - ASD participants only.

This is a parent-report screening measure that taps the symptoms associated with ASD. In clinical settings it is used as a screening tool, whereby children who receive scores above a certain cut-off point may be referred for clinical assessment. It also gives a meaningful measure of severity of ASD symptoms. For the purpose of research it is used to confirm an existing diagnosis of ASD.

The average score in the general population is 5 and the average score of individuals with ASD is 24. A score of 15 or higher would generally indicate a possible ASD.

Scores in red indicate those that are below 15 (two participants).

SAS

Score on the Social Aptitudes Scale (Liddle, Batty & Goodman, 2009) – ASD participants only

This questionnaire taps skills in social understanding and behaviour that are usually markedly under-developed in individuals with ASDs. The items focus on complex interactive skills rather than on relatively easily coached skills (such as remembering to say “please” and “thank you” or introducing oneself by name). This scale works in the opposite direction to the SCQ, in that the *lower* the score the more likely an individual is to be diagnosed with an ASD.

Liddle et al. (2009) found that the modal score in the general population is around 20. They also found that nearly all individuals with ASD score 16 or less, 75% of individuals with ASD score 11 or less, and approximately half of individuals with ASD score 5 or less.

Scores in red indicate those that are above 16 (two participants).

FSIQ-2

IQ was tested using the Wechsler Abbreviated Scale of Intelligence - Second Edition (WASI-II, 2011). Participants responded to two subcomponents of the scale - Matrix Reasoning and Vocabulary.

NOTES

Note that participants each had a turn at being the Naïve P, Experienced P and Teacher, EXCEPT:

The participant in Chain Position 1 is first a Naïve P and then a Teacher (never an Experienced P)

The participant in Chain Position 7 is a Naïve P and an Experienced P, but does not become a Teacher – as the chain then comes to an end.

The participant in Chain Position 8 is a Naïve P only. He/she does not become an Experience P - as the chain comes to an end after his/her first turn.

Participants from ASD and TD groups were matched in terms of Age, Gender and IQ. The group correspondences are as below. The matching was at the level of the individual – e.g., the participant in Chain Position 1 for ASD_1 was matched with the participant in Chain Position 1 for TD_1 and so on.

ASD_1 -> TD_1

ASD_3 ->TD_3

ASD_4 ->TD_4

ASD_5 ->TD_5

ASD_6 ->TD_6

References

Berument, S., Rutter, M., & Lord, C. (1999). Autism screening questionnaire: Diagnostic validity. *The British Journal of Psychiatry*, 175, 444–451.

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Sullivan, K., Zaitchik, D., & Tager-Flusberg, H. (1994). Preschoolers can attribute second-order beliefs. *Developmental Psychology*, 30(3), 395.

Wechsler, D. (2011). Wechsler Abbreviated Scale of Intelligence, Second Edition (WASI-II). San Antonio, TX: NCS Pearson.