



**Baron-Cohen et al (2001) ~ The 'Reading the Mind in the Eyes' Test revised version: a study with normal adults, and adults with Asperger syndrome or high-functioning autism**

**Short Answer Question – suggested answers**

1. State the main aims of Baron-Cohen's revised study. (2 marks)

To see if adults with HFA or AS were impaired on the 'reading the mind in the eyes' test and to see if there was an association between performance on the revised 'Eyes test' and measures of autistic traits/ sex differences in those without autism.

2. Give the five hypotheses. (5 marks)

(1) Participants with autism will score significantly lower on the 'eyes test revised' than the controls.

(2) Participants with autism will score significantly higher on the AQ test.

(3) Females in the 'normal' group will score higher on the 'eyes test' than males.

(4) Males in the 'normal' group will score higher on the AQ measure than females.

(5) Scores on the AQ and 'eyes test' would be negatively correlated.

3. Baron-Cohen used four groups of participants in this study, name each group? (4 marks)

Group 1 – HFA/AS adults

Group 2 – Normal adults

Group 3 – Students

Group 4 – Normal adults matched on IQ with group 1

4. Give two reasons why this study was a revised version of his previous eyes test. (2 marks)

In the 1997 original test there were only two possible options on the eyes test giving participants a 50/50 chance which could have been guessed, so this was changed to four possible options. Also there was an imbalance of male and female faces in the original, so Baron-Cohen changed this to make it equal (18 female and 18 male) in the revised version.

5. Why was this study classed as a quasi experiment in the lab? (1 mark)

The participants were naturally autistic in group 1 and the procedure was carried out under controlled conditions where possible.

6. What were the two dependent variables? (2 marks)

The score on the revised 'eyes test' (out of 36)

Score on the AQ test (out of 50)

7. Briefly outline the procedure used for the participants in this study; from the moment they entered the experiment to being debriefed at the end. (4 marks)

Baron-Cohen recruited four groups of participants (15 HFA/ AS adults, 122 adults from education classes/public library in Exeter, 103 students from Cambridge University and 14 adults who were matched on IQ with the autistic group) and all participants completed the revised eyes test. All except group 2 (normal adults) did an Autism Spectrum Quotient test (AQ) in addition. Firstly they were shown 36 sets of eyes each with four choices of emotion and asked to select an appropriate option (one correct answer and three foils). They were given a glossary of words to help, they were also asked to judge if they thought the eyes were male or female. A high score on the AQ test indicated more autistic traits and poor performance on the eyes test indicated a lack of theory of mind.

8. Why did all the participants except group 2 (general public) do the AQ test? (2 marks)

Group 2 were believed to be non-autistic from a normal sample within the general public, so they did not need to complete the AQ test to look for autistic traits.

9. Why was a glossary made available to participants during the procedure? (2 marks)

In the original test it was thought that some participants may have struggled with understanding the words, so again would have perhaps guessed their answers giving invalid results. In the revised version they wanted to offer a glossary to reduce this and increase the validity of the findings.

10. Give one quantitative finding from all groups for their performance on the eyes test. (4 marks)

The HFA/ AS adults in group 1 scored an average of 21.9 which was significantly lower than the other groups; general public/ normal adults 26.2, students 28, and normal adults matched on IQ 30.9.

11. State one conclusion about participant differences on the eyes test. (2 marks)

One conclusion is that adults with HFA/ AS lack a theory of mind as they fail to read the emotion in the eyes of the faces tested. This tells us that all autistic adults are likely to have this impairment.

12. Describe how the ecological validity of this study could be questioned for the AS/ HFA group? (2 marks)

The ecological validity suggests that the study reflects real life, in this case the autistic adults were asked to do a task that was unfamiliar (select an emotion from a list to explain the eyes), and their answers may not reflect how they process faces and emotions in real faces.

13. Give one reason why this study may be unethical. (2 marks)

The adults in group 1 with HFA or AS may not fully comprehend the commitment required in such a study and may not understand that they have a right to withdraw at any point.

14. How do the conclusions from this study provide us with useful information? (2 marks)

The conclusions have helped to consolidate the idea that cognitive deficits such as a lack of theory of mind continue from childhood into adulthood. This means we can offer help and support to adults with HFA or AS when reading the emotion of faces, perhaps help them communicate more effectively in the future.

