

Outcome Measure	Empathy Quotient
Sensitivity to Change	Not known
Population	Adult
How to obtain	Available from the Autism Research Centre: https://www.autismresearchcentre.com/arc_tests .
Domain	Social Cognition
Time to administer	3-5 minutes
Type of Measure	Self-report scale
Description	The Empathy Quotient (EQ) (Baron-Cohen & Wheelwright, 2004) is a self-report questionnaire with 40 items tapping empathy (approximately half reverse scored) and 20 filler items. On each item the participant is asked to decide whether they strongly agree, slightly agree, slightly disagree or strongly disagree with the statement. They receive a score of 2 for strongly endorsing the empathic response, a score of 1 for mild endorsement and a score of 0 for anything else (maximum score =80). There is also a child version of the EQ available. (B. Auyeung, C. Allison, S. Wheelwright, & S. Baron-Cohen, 2012; Auyeung et al., 2009).
Properties	<p><u>Internal Consistency:</u></p> <p>Cronbach's alpha for the EQ as a whole ranged from 0.78 to 0.92 across studies (Baron-Cohen & Wheelwright, 2004; Vellante et al., 2013; Voracek & Dressler, 2006). A factor analysis of the EQ suggested three factors: Cognitive empathy, emotional reactivity and social skills (Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004).</p> <p><u>Test re-test reliability:</u></p> <p>Following an interval of 12 months, test retest reliability ranged from $r=0.84$ (Lawrence et al., 2004) to $r=0.97$ (Baron-Cohen & Wheelwright, 2004).</p> <p><u>Concurrent Validity:</u></p> <p>The EQ has been shown to be inversely correlated with the two domains of the Autism Spectrum Quotient that measure social sensitivity and sensitive communication, $r = -0.56$ (Baron-Cohen & Wheelwright, 2004). The EQ is not associated with the Global Assessment of Functioning scale in people with schizophrenia, although there was a modest correlation when the emotional reactivity items, only, were examined ($r = .34$) (Konstantakopoulos et al., 2014).</p> <p>Females score slightly higher on the EQ than males, which replicates earlier reports of sex differences (female superiority) on questionnaire measures of empathy (Baron-Cohen & Wheelwright, 2004).</p> <p><u>Convergent Validity:</u></p> <p>The original authors found a strong positive correlation between the EQ and the Friendship Questionnaire, which assesses empathy in close relationships. In non-clinical samples, the EQ has also been found to positively correlate with the Reading the Mind in the Eyes test ($r=.23$; (Voracek & Dressler, 2006), $r= .29$; (Lawrence et al., 2004), the Faux Pas identification ($r= -.35$) and empathy questions ($r=.54$) (Konstantakopoulos et al., 2014) and the empathetic concern ($r=.42$) and perspective taking ($r=.49$) subscales of the Interpersonal Reactivity Index (Lawrence et al., 2004).</p> <p><u>Discriminate validity:</u></p> <p>The EQ has consistently shown to discriminate between those with AS/HFA and controls (e.g. (B. Auyeung et al., 2012; Baron-Cohen & Wheelwright, 2004). It has also been shown to discriminate between people with schizophrenia and controls</p>

	(Konstantakopoulos et al., 2014) and also when using the informant version (Bora, Gokcen, & Veznedaroglu, 2008). <u>Normative data:</u> The authors (Baron-Cohen & Wheelwright, 2004) recommend a cut-off of 30 as indicative of lack of empathy as only 12.2% typically developed adults (N = 90) score below this, whereas more than 80% of people with high functioning autism (N=90) do. They also present means and SD's for normal adults (Males: <i>n</i> = 71, mean age/ <i>SD</i> = 38.8/13.7; Females: <i>n</i> = 126, mean age/ <i>SD</i> = 39.5/12.8, age range 17-73) (Baron-Cohen & Wheelwright, 2004). A basic mean of 45 was reported based on a large sample of 5490 adults, age=18-75 (Cassidy et al., 2016) which is similar to the overall mean of 42.1 (10.6) cited by (Baron-Cohen & Wheelwright, 2004). There is also a child version (7-11 years) (Auyeung et al., 2009) and adolescent version (12-16 years) of the EQ (Bonnie Auyeung, Carrie Allison, Sally Wheelwright, & Simon Baron-Cohen, 2012) (both designed for parents to complete) both with large normative sets (N = 1,256 and 1,030 respectively).
Advantages	
Disadvantages	

References

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