Outcome Measure	**Questionnaire of Cognitive and Affective Empathy (QCAE)**
Sensitivity to Change	No
Population	Adult
How to obtain	Available from the authors
Domain	Social Cognition
Type of Measure	Self-report
Time to administer	**3-5 minutes**
Description	The QCAE (Reniers, Corcoran, Drake, Shryane, & Völlm, 2011) is a self-report measure of both cognitive and affective empathy that is derived from several well established empathy questionnaires: 15 items (15-29) in the EQ (Baron-Cohen & Wheelwright, 2004), 2 items (30-31) in the Hogan Empathy Scale (Hogan, 1969), 8 items (7-14) from the Empathy subscale of the Impulsiveness-Venturesomeness-Empathy Inventory (Eysenck & Eysenck, 1978) and 6 items (1-6) from the Interpersonal Reactivity Index (Davis, 1983) (Davis, 1983). Items were selected from the complete pool of items based on factor analysis in order to produce two coherent subscales for cognitive and emotional empathy. The final version of the QCAE entails 31 statements to which the examinee responds using a 4-point Likert scale from 4 (strongly agree to 1 strongly disagree). This produces scores on Cognitive Empathy with subscales for Perspective taking (10 items) and On-line simulation (9 items – one reverse scored) and Affective Empathy with three subscales: Emotional contagion (4 items) Proximal responsivity (4 items) and Peripheral proximity (4 items, three reverse scored).
Properties	Internal consistency: The final structure of the QCAE suggested 5 factors with perspective taking and on-line simulation (α = .85 and .83) representing Cognitive Empathy and Emotional contagion, Peripheral responsivity and Proximal responsivity (α = .72, .65 and .70) representing Affective Empathy. Independent research has suggested lower internal consistency for some subscales e.g. Peripheral responsivity α = .28. (Horan et al., 2015) and suggested the two factors (cognitive and affective) are best for stability (α = .90 and .77 respectively) (Horan et al., 2015) (also estimated as α = 0.89 and 0.78 (Powell, 2018). Test–retest reliability: r = .84 (3 weeks) (Powell & Roberts, 2017) Construct validity: the subscales correlate r=.31. The QCAE cognitive and affective subscales correlate with the related subscales on the BES (*r* = .61 and .76 respectively) (Reniers et al., 2011). The cognitive subscale correlates with measures of dysfunctional impulsivity, secondary psychopathy, more so than affective empathy. Affective empathy correlated more with empathic anger and expressive aggression than did Cognitive empathy (Reniers et al., 2011). The CQAE cognitive factor correlates with the IRI PT scale (*r* = .63, .53) and the EC scale (*r* = .39, .53) while the Affective factor correlates with the IRI EC scale (*r* = .56, .33) (Horan et al., 2015; Michaels et al., 2014). Predictive validity: Higher Cognitive empathy is correlated with better community functioning (using the Role Functioning Scale) in people with schizophrenia as well as matched control participants (Horan et al., 2015) Discriminant validity: People with Schizophrenia have lower Cognitive empathy than matched controls but higher Affective empathy (Horan et al., 2015; Michaels et al., 2014) Normative data: In the original development of the scale N=925 participants (mean age 23-30; SD 7.3-11, range 17-65 across sub studies). Cognitive empathy: females: M = 59.42 (SD =9.12); Males: M= 56.12 (SD = 15.21) (representing an effect size between genders of d = .41.

	Affective empathy: Females M = 36.76 (SD = 6.08) and Males: M = 32.37 (SD = 9.12) d = .83. Other normative data to compare with people with schizophrenia (N = 45) (Horan et al., 2015) and N = 37 (Michaels et al., 2014) is also available. There is also a large data set of 844 adults- mainly university students (M= 22.3 (5.1) years) completing the QCAE on-line yielding means as follows Cognitive Scale M= 57.14 (SD = 8.28); Affective: M = 33.75 (SD = 5.51) (Powell, 2018).
Advantages	• Has been derived from other established scales based on empirical analysis • Provides a measure of both cognitive and affective empathy
Disadvantages	•
Additional Information	• Norms vary significantly with gender.

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