A one group pre–post test design investigated the impact of identifying character strengths using the Values In Action Inventory of Strengths (VIA-IS) with individuals with early psychosis ($N = 29$). Post-test improvements in positive affect and cognitive performance were observed. Neither self-esteem nor self-efficacy improved. The technique appears feasible for use within early intervention services. Adverse consequences should be monitored and additional components considered to enhance benefits.

Keywords: psychosis; positive psychology; strengths; self-esteem; cognitive performance

Introduction
Negative self-constructs are targets in cognitive behavioural treatment (CBT) for psychosis, and identification of positive self-attributes enhances self-esteem (Hall & Tarrier, 2003). Negative self-biases, compounded by cognitive deficits, can hinder participants’ ability to identify and accept positive self-attributes (Hall & Tarrier, 2003). CBT for vocational rehabilitation may improve work outcomes while sustaining self-esteem (Lysaker, Bond, Davis, Bryson, & Bell, 2005) and positive affect potentially moderates effectiveness of Cognitive Remediation Training (Wykes & Spaulding, 2011).

The Values In Action Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004) has been used within an intervention package for individuals with psychosis (Meyer, Johnson, Parks, Ivanski, & Penn, 2012). The current study aimed to assess the acceptability and impact of completing the VIA-IS on individuals with psychosis. Hypotheses:

1. Identification of strengths via the VIA-IS would increase state self-esteem, self-efficacy and positive affect by directing attention towards positive self-attributes and elaborating “alternative” self-representations to compete for retrieval with negative self-constructs (Brewin, 2006).
2. Increased positive affect would lead to improved cognitive performance (Fredrickson, 2004).
Method
Twenty-nine participants were recruited from an Early Intervention for Psychosis Service (EIS; 48% male; mean age 25.3 years, SD 4.7; 75% ethnic minority; 48% F20, 52% F30 disorder; mean length of contact with EIS 14.9 months, SD = 13.4). Exclusion criteria: primary substance dependence, learning disability, inpatient.

Participants filled measures pre–post completing the VIA-IS online (http://www.authentichappiness.sas.upenn.edu/questionnaires.aspx) with a trainee psychologist (one session lasting approximately 45 min). The VIA-IS’s 240 items, rated on a 5-point Likert scale, measure 24 strengths (e.g. bravery). Top strengths were written by the researcher on a wallet-sized card for participants (Resnick & Rosenheck, 2006).

Outcome measures were: State Self-Esteem Scale (Heatherton & Polivy, 1991), General Self-Efficacy Questionnaire (Schwarzer & Jerusalem, 1995), Positive Affect subscale of the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) and the Trail Making Test, Parts A and B, Alternate Forms (Wagner, Helmreich, Dahmen, Lieb, & Tadic, 2011). A semi-structured feedback interview about the VIA-IS and adverse consequences was also completed.

Results
Findings showed medium effects post-intervention in enhancement of cognitive performance and positive affect (within participant pre–post tests: TMT Part A, \( t(28) = 3.41, p = 0.001, d = 0.46 \); TMT Part B, \( t(28) = 3.97, p < 0.0001, d = 0.47 \); Positive Affect, \( t(28) = -3.43, p = 0.001, d = -0.57 \) and no significant improvements in self-esteem (\( t(28) = -1.785, p = 0.0740 \) or self-efficacy (\( t(28) = -1.443, p = 0.149 \)). Reliable improvement was observed; 32% of participants in positive affect; 17% and 20% of participants in TMT, Parts A and B.

Changes in positive affect and cognitive performance (TMT) were not significantly correlated for Part A (\( r = -0.13, p = 0.09 \)) or Part B (\( r = 0.01, p = 0.99 \)). Only changes in Part A and B showed association (\( r = 0.417, p = 0.023 \)).

Thematic analyses (Braune & Clark, 2006) from interviews revealed four themes: Mood Enhancement (76% of participants), e.g. “I feel alive ... it has boosted my energy”; Lack of Confidence (34%), e.g. “strengths were difficult to believe”; Reflection and Awareness (45%), e.g. “I focused on values I hadn’t thought of before”; Subjectivity/Reliability (17%), e.g. “had it been closer to my episode, I’d answer differently”; Too lengthy (38%), e.g. “too long”.

Discussion
The VIA-IS improved positive affect, with reliable change in a substantial proportion of participants and positive qualitative feedback. Mechanisms underlying change may include directing attention towards memories associated with strengths and imagining of future positive experiences, which can improve mood and support development of alternative cognitive representations (Holmes & Mathews, 2010). Interpersonal contact during questionnaire completion may also have promoted feelings of safety and reduced perceptions of threat, improving affect (Gilbert, 1995).
No effect on self-esteem and self-efficacy were observed, although qualitative feedback suggested attention was directed to positive attributes/values. This may have triggered negative self-evaluation (i.e. “Lack of Confidence” theme), reflecting negative information-processing biases characteristic of low self-esteem (Fennell, 1997). A single session, involving little discussion of “strengths”, may be insufficient to counter such biases and elaborate “alternative” self-views (Brewin, 2006).

Enhanced cognitive performance was observed, with a substantial proportion reliably improved. Analysis did not suggest mediation of improvement by enhanced affect, self-esteem and self-efficacy. Changes may reflect practice effects and/or mechanisms not investigated (e.g. locus of control, sense of agency, mastery).

Further research should recruit a larger sample, collect follow-up data and use an active control to test efficacy. Diagnostic heterogeneity, gender balance and ethnic diversity suggests generalisation of results to EIS services. Results and interview feedback suggest the technique was acceptable for individuals with early psychosis. Longer interventions, including further elaboration of strengths to strengthen “alternative representations” in memory (Brewin, 2006), could enhance benefits.

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