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Letter to the Editor

Additional data on whether vividness of visual mental imagery is linked to schizotypal traits in a non-clinical population

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Vividness
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Schizotypy
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Dear Editor,

Our research group was interested to read the study by Oertel et al. (2009) which found a greater vividness of visual mental imagery in patients with schizophrenia, first-degree relatives, and high-schizotypy controls when compared to low-schizotypy controls, indicating that vivid mental imagery may be an independent symptom and trait marker for the psychosis continuum.

However, we note that the comparison between high and low schizotypy controls relied on a relatively small sample size ($N = 24$ in each). We have recently completed a comparable study comparing two such groups using a larger sample size, a more in-depth psychometric assessment of schizotypy and a specific measure that evaluated the vividness of visual mental imagery. We compared a group of non-clinical high and low schizotypy participants on the measure of mental imagery vividness, as well as a larger group of high and low delusional ideation participants on the same measure. The relationship between mental imagery and delusional ideation is of particular interest in the light of Currie's hypothesis that delusions result from imaginings being misidentified as beliefs (Currie and Jureidini, 2001) and prior studies that found high levels of vividness-based memory monitoring errors in people diagnosed with schizophrenia (e.g. Brebion et al., 1997).

Table 1
Comparison of high and low schizotypy (OLIFE) and delusional ideation (PDI) scorers on vividness of visual mental imagery score (VVIQ).

	VVIQ total score						
	Low OLIFE/PDI scorers		High OLIFE/PDI scorers				
	N	Mean (S.D.)	*N*	Mean (S.D.)	*P*	*d*	95% CI
OLIFE Total	46	97.3 (26.7)	43	97.9 (25.8)	0.91	0.02	−11.7–10.42
UE	56	99.9 (21.0)	36	105.9 (26.3)	0.23	0.25	−15.9–3.8
CD	50	98.6 (24.3)	38	97.1 (26.3)	0.79	0.06	−9.3–12.2
IA	49	103.6 (22.7)	43	99.9 (21.7)	0.43	0.17	−5.5–12.9
IN	50	98.2 (23.3)	42	99.5 (21.9)	0.78	0.06	−10.8–8.1
PDI-21	58	102.3 (22.8)	55	103.0 (28.5)	0.90	0.03	−10.2–9.0

VVIQ = Marks' Vividness of Visual Imagery Questionnaire; PDI = Peters et al Delusions Inventory; OLIFE = Oxford and Liverpool Inventory of Feelings and Experiences; UE = OLIFE Unusual Experiences subscale; CD = OLIFE Cognitive Disorganisation subscale; IA = OLIFE Introvertive Anhedonia subscale; IN = OLIFE Impulsive Non-comformity subscale.

The schizotypy comparison group comprised 174 undergraduate students (149 women, 33 men, 3 not disclosed; mean age = 19.4, S.D. = 2.2, range 18–33) in an ethically approved study, all of whom completed the Oxford and Liverpool Inventory of Feelings and Experiences (OLIFE) schizotypy scale (Mason et al., 1995) and the Marks' Vividness of Visual Imagery Questionnaire (VVIQ; Marks, 1973). The delusional ideation comparison group involved a wider sample and involved all participants previously described, plus an additional 50 from the same population, making for a total sample size of 224 (188 women, 34 men, four not disclosed; mean age = 19.4, S.D. = 2.2, range 18–33) all of whom completed the 21-item Peters et al. Delusions Inventory (PDI-21; Peters et al., 2004) and VVIQ.

Using the methodology of Oertel et al. (2009), high and low scorers were selected from the top and bottom quartile of the scale scores. Groups were compared using independent samples two-tailed *t*-tests and, as can be seen from Table 1, no significant differences were found between the high and low schizotypy groups or the high and low delusional ideation groups on the vividness of their visual mental imagery scores. The low effect sizes (calculated as Cohen's "*d*") and the fact that the 95% confidence intervals are relatively close to the zero, indicate that the null hypothesis can be accepted with a high degree of confidence. Additionally, a Pearson correlation reported no significant relationship between vividness of mental imagery and any of the scale or subscale scores on the schizotypy and delusional ideation measures (smallest $P = 0.242$).

In contrast to the study of Oertel et al. (2009), our measure of mental imagery specifically targeted visual mental imagery, whereas the Betts' Questionnaire of Mental Imagery (Sheehan, 1967) consists of imagery taken from seven different sensory modalities (visual, auditory, olfactory, cutaneous, kinaesthetic, gustatory, and organic). Although our sample was somewhat younger, the results suggest that vividness of visual mental imagery might not be a trait marker for the psychosis continuum in itself, at least within non-clinical participants. In the absence of a replication of the Oertel et al. (2009) findings, it is possible that the effect is only apparent when imagery involving several modalities is measured. This may suggest that vividness *per se* is not modality specific, in keeping with modality-independent salience dysregulation theories of psychosis and the psychosis continuum (Murray et al., 2008).

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