# The Relationship Between Schizotypy and Well-being: The Mediating Role of Psychological Flexibility

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# Disclosures

E. Tuckey:

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# The psychosis continuum

Psychotic-like experiences, such as delusional ideation and isolated hallucinations, occur across the general population

30-40% of college students reported an experience of hearing voices (Barrett & Etheridge, 1992)

5-8% prevalence rate of subclinical psychotic experiences in the general adult population (van Os et al., 2009; Linscott & van Os, 2013)

17% prevalence rate in a childhood sample (9-12 years)

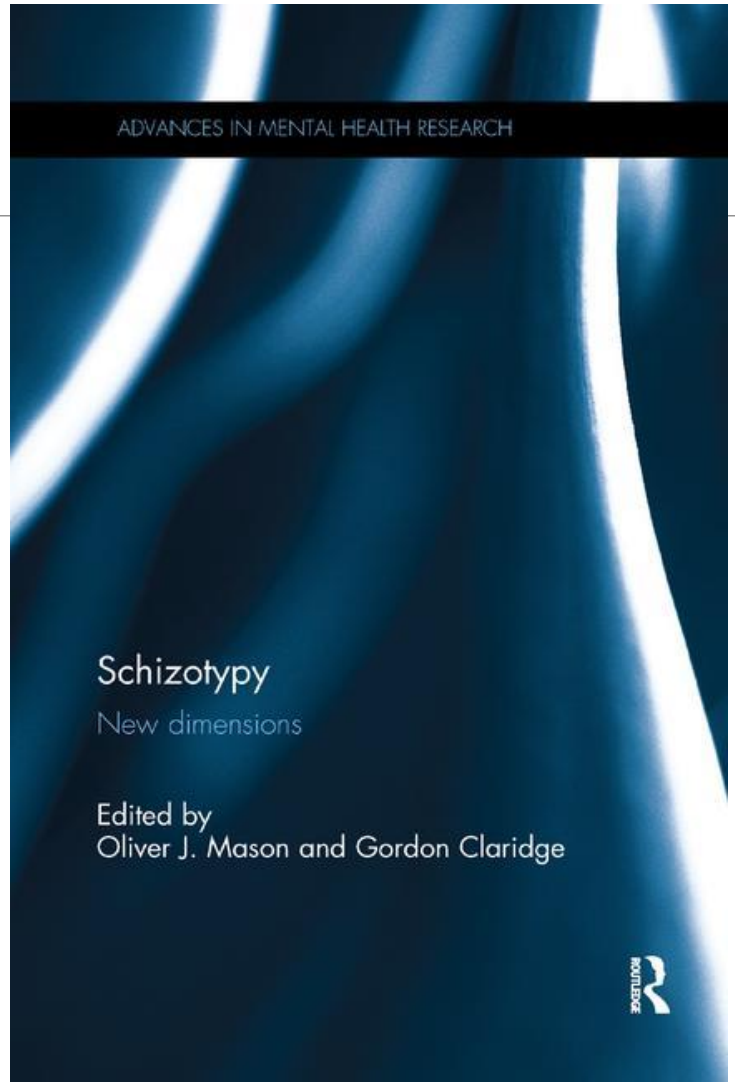
7.5% in an adolescent sample (13-18 years) (Kelleher et al., 2012)

80% report that experiences were transient (Linscott & van Os, 2013)

# Schizotypy

"…schizotypy is a multidimensional construct that represents the underlying vulnerability to schizophrenia-spectrum psychopathology this is expressed across a broad range of personality, subclinical, and clinical phenomenology."

Kwapil and Chun
in Mason and Claridge (2015), Pg. 8



# Schizotypy

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**Models of Schizotypy: The Importance of Conceptual Clarity**

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**The observation of psychosis-like traits that resemble symptoms of schizophrenia and bipolar disorder, both among healthy relatives of psychotic patients and among the general population, can be traced to the early 20th century.[1,2]**

remains a lack of consensus on its core dimensions and the relative import of each. For example, the consequences for schizophrenia liability of presenting with high values in one but not another schizotypal facet, or

"…schizotypy denotes a range of enduring personality traits, reflected in cognitive style and perceptual experiences, arising from a combination of polygenetic and environmental determinants, which are normally distributed within the general population."

Grant, Green and Mason (2018)

# Schizotypy

Considered as more stable schizophrenia-like personality traits, including odd behaviour and speech, magical thinking, unusual perceptual experiences and social anhedonia (Nelson et al., 2013)

Claridge's model of schizotypy as fully dimensional with adaptive manifestations

Schizotypy linked to daily life psychotic-like experiences, paranoia, cognitive difficulties, anxiety, depression, low self-esteem, and poor functioning (Kwapil et al., 2012; Barrantes-Vidal, Chun, et al., 2013; Barrantes-Vidal, Gross, et al., 2013)

'Healthy' adaptive expressions include creativity (Holt, 2015)

# Psychosis and psychological flexibility

**Experiential avoidance (EA)** predicts:

- Auditory hallucinations (Varese et al., 2011)
- Hallucination distress (Varese et al., 2016)
- Frequency of Delusions
- Delusional distress (Goldstone et al., 2011)
- Paranoid ideation (Udachina et al., 2009)
- Social anhedonia (Vilardaga et al., 2012)

**Defusion** is associated with:

- Reduced rehospitalisation rates
- Reduced distress (Gaudiano & Herbert, 2006)

Research linking **meaning** to recovery in psychosis (Leamy et al., 2011)

**Non-judgemental acceptance** linked to:

- Delusional ideation
- Delusional ideation distress (Oliver et al., 2012)
- Emotional wellbeing (Morris et al., 2014)

**Mindfulness-based interventions** linked to improved outcomes for psychosis:

- Reduction in negative and affective symptoms, comorbid anxiety and depression (White et al., 2011, 2013)
- Reduction in distress (Chadwick et al., 2009, 2016)

Mindfulness practitioners lower in schizotypal traits (Antonova et al., 2016)

Could psychological flexibility play a role in the outcomes of schizotypy?

Could psychological flexibility mediate the relationship between schizotypy and wellbeing?

Which psychological flexibility processes might be the best predictors of wellbeing?

# Our study

Online study with a nonclinical Australian sample (aged 18 and over with English fluency)

Recruitment via the School of Psychology and Public Health Participant Registry, poster advertisements across the university campus, and online advertising on social media

Participants (N = 143)

- 23 male, 118 female, 2 other
- Mean age = 26.19 years
- Majority were university students (76.2%)
- Majority engaged in some form of employment (55.3%)

Cross-sectional, mediation design

# Measures

**Schizotypy:**

**The Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE)** Short Scales (Mason et al., 2005)

- Unusual experiences, e.g., *"When in the dark do you often see shapes and forms even though there is nothing there?"*
- Cognitive disorganization, e.g., *"Are you easily confused if too much happens at the same time?"*
- Introvertive anhedonia, e.g., *"Are there very few things that you have ever enjoyed doing?"*
- Impulsive nonconformity, e.g., *"Would you like other people to be afraid of you"*

**Outcome:**

**The Warwick-Edinburgh Mental Well-being Scale (WEMWBS)** (Tennant et al., 2007)

- Positive features of mental health, e.g., *"I've been feeling good about myself"*

# Measures

**Mediators:**

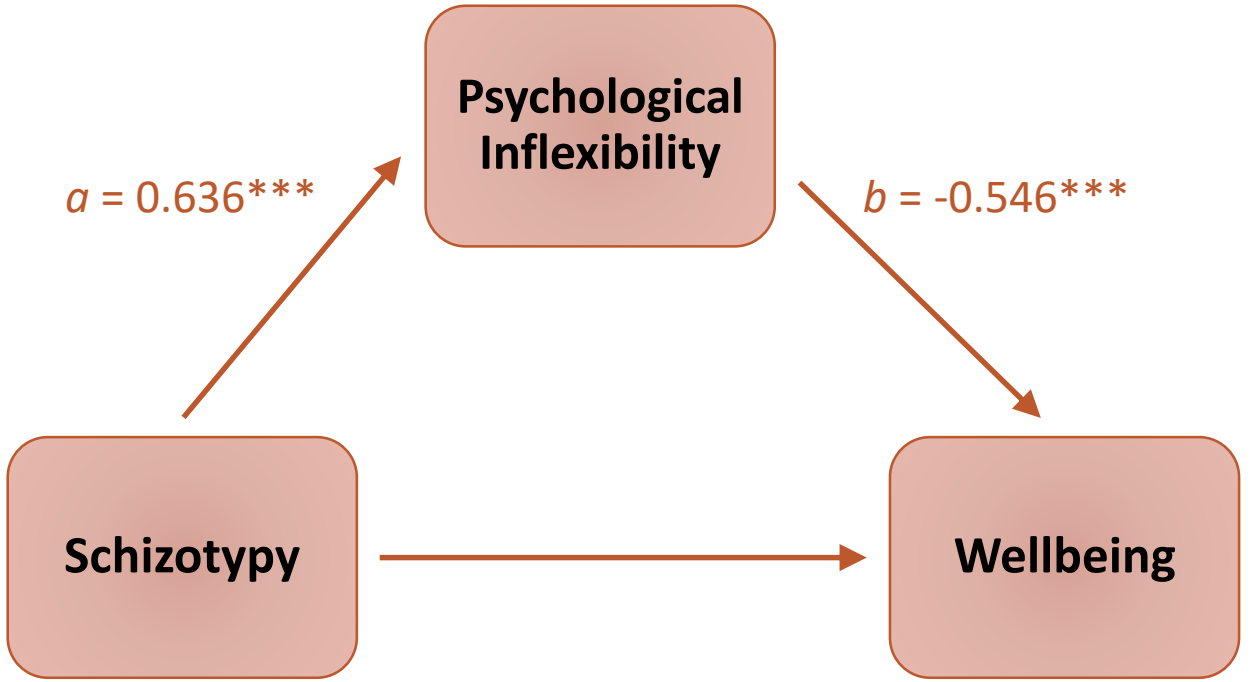
**Psychological Flexibility**

- The Acceptance and Action Questionnaire-II (AAQ-II) (Bond et al., 2011)
- The Cognitive Fusion Questionnaire (CFQ) (Gillanders et al., 2014)
- The Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003)
- The Multidimensional Experiential Avoidance Questionnaire (MEAQ) (Sahdra et al., 2016)
- The Valuing Questionnaire (VQ) Progress Scale (Davies et al., 2011)

# Mediation A

**Direct Effect**

*c'* = -0.319***




**Indirect effect**
(bootstrapping)

**AAQ-II = -0.347**
95% BC CI [-0.486, -0.233]

*$p$ < .05; **$p$ < .01; ***$p$ < .001

# Mediation B

**Direct Effect**

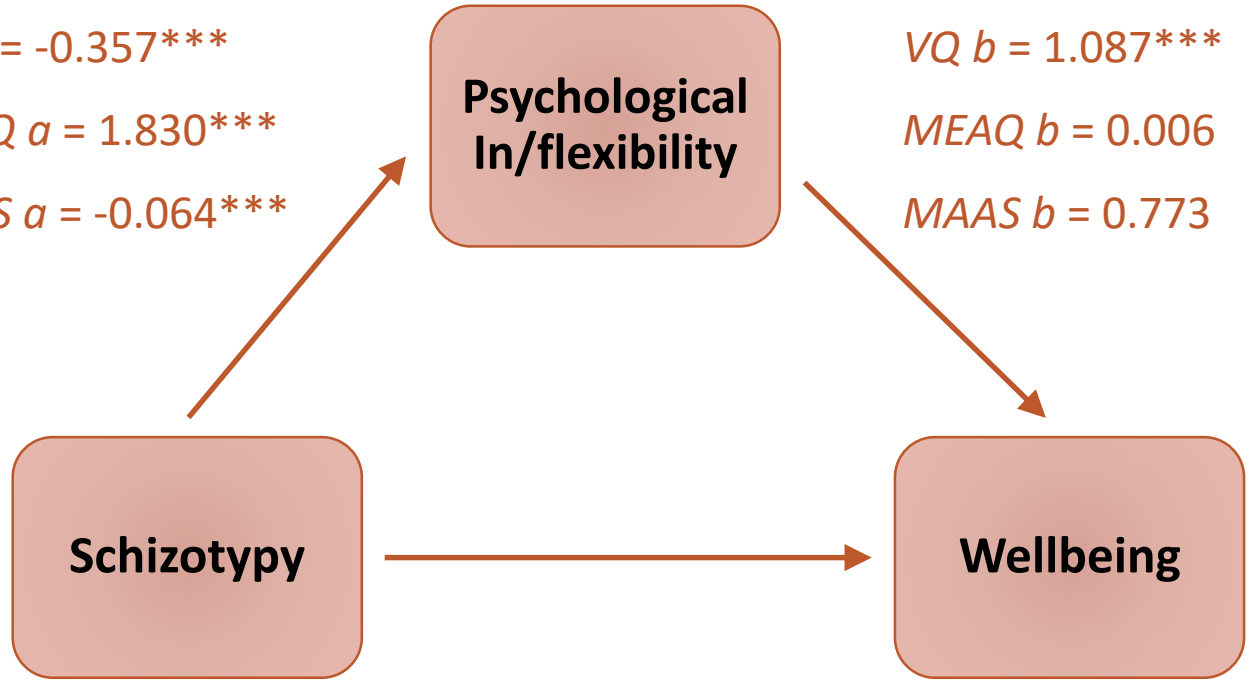
*c'* = -0.086

*CFQ a* = 0.706***

*VQ a* = -0.357***

*MEAQ a* = 1.830***

*MAAS a* = -0.064***




*CFQ b* = -0.219**

*VQ b* = 1.087***

*MEAQ b* = 0.006

*MAAS b* = 0.773

**Indirect effect** (bootstrapping)

**Total = -0.580**
95% BC CI [-0.769, -0.412]

**CFQ = -0.155**
95% BC CI [-0.275, -0.042]

**VQ = -0.388**
95% BC CI [-0.528, -0.268]

**MEAQ = 0.011**
95% BC CI [-0.077, 0.110]

**MAAS = -0.049**
95% BC CI [-0.141, 0.038]

*$p < .05$; **$p < .01$; ***$p < .001$

# Our findings

Mediation through psychological flexibility

- May suggest that the **relationship** to schizotypal experiences, not just the presence of traits alone, **impacts wellbeing**

Cognitive fusion and values were significant mediators

- Being entangled in experiences or taking experiences literally linked to poorer outcomes
- Valued actions linked to greater wellbeing – healthy schizotypy?

Experiential avoidance and mindfulness were not significant mediators

- But could these processes impact progress towards values?

**Limitations of the study:** participants mostly female and university students, cross-sectional design and nonclinical study

**Future directions:** path analysis or serial mediators (could EA and mindfulness influence values progress?), more representative sample, longitudinal study and clinical intervention

# What this could mean for clinical practice?

Many people with subclinical psychotic symptoms present to clinical services with distress (van Os et al., 2009)

Emerging support for ACT as an effective intervention for psychosis (Wakefield et al., 2018)

ACT linked to reduced rehospitalisation rates (Bach & Hayes, 2002; Gaudiano & Herbert, 2006), increased psychological flexibility, and improvements in functioning and mood (Johns et al., 2016)

Could ACT be beneficial for schizotypal traits?