Replication of the Associations of Positive, Negative, and Disorganized Schizotypy With Interview-Assessed Symptoms and Impairment: Convergence With Previous Studies

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Abstract:

Schizophrenia-spectrum psychopathology appears best understood as being expressed across a continuum of clinical and subclinical symptoms and impairment referred to as schizotypy. This brief report describes a comprehensive replication study examining the associations of positive, negative, and disorganized schizotypy with interview ratings of impairment, psychopathology, and personality pathology in a sample of 161 young adults. Consistent with past studies, positive, negative, and disorganized schizotypy had distinct and hypothesized associations with symptoms and impairment. Positive schizotypy was associated with prodromal symptoms and schizotypal, paranoid, and borderline personality traits. Negative schizotypy was associated with impaired functioning, negative symptoms, and schizoid, schizotypal, and paranoid traits, as well as any broad personality disorder diagnosis; it was also associated with never having dated. Disorganized schizotypy was associated with impaired functioning, disorganized schizotypic experiences, attentional deficits, and schizotypal, paranoid, borderline, and avoidant personality traits, as well as depression. Overall, we successfully replicated findings from five previous schizotypy interview studies, supporting the construct validity of the multidimensional model of schizotypy and the Multidimensional Schizotypy Scale.

Keywords: schizotypy | multidimensional | psychosis | schizophrenia-spectrum | interview | replication

Article:

Schizophrenia-spectrum disorders are best understood as the most extreme manifestations of a dynamic continuum of clinical symptoms and subclinical phenotypic experiences referred to as schizotypy. Rather than categorizing schizophrenia-spectrum psychopathology as an all-or-none phenomenon, schizotypy expands the boundaries to include psychotic disorders, Cluster A personality disorders, the psychosis prodrome, and subclinical experiences (Kwapil & Barrantes-Vidal, 2015; Lenzenweger, 2010). The schizotypy continuum is multidimensional, with positive, negative, and disorganized schizotypy as the three most commonly identified dimensions. Positive (psychotic-like) schizotypy involves unusual thought content (ranging from magical beliefs to full-blown delusions), odd perceptual experiences (ranging from momentary illusions to

hallucinations), and suspiciousness. Negative schizotypy involves deficits in experiences including blunted affect, anhedonia, social withdrawal, and lack of motivation and energy. Disorganized schizotypy involves disruptions in thought, speech, behavior, and emotion (ranging from mild difficulties to gross disorganization). The schizotypy dimensions are associated with distinct patterns of etiology and expression, and failure to consider the multidimensional structure of schizotypy (and by extension schizophrenia-spectrum conditions) results in a loss of conceptual precision and statistical power (e.g., Kemp et al., 2021).

Psychometric Assessment of Schizotypy

Psychometrically sound questionnaires provide a useful and relatively noninvasive method for assessing multidimensional schizotypy (see reviews by Chapman et al., 1995; Kwapil & Chun, 2015; Mason, 2015). Interview studies provide a powerful approach for examining the expression of positive, negative, and disorganized schizotypy. Five interview studies in the past 15 years examined the association of psychometrically assessed multidimensional schizotypy with psychopathology, personality pathology, and functioning in nonclinically ascertained young adults. Three studies (Barrantes-Vidal et al., 2013; Kwapil et al., 2008, 2013) used the Wisconsin Schizotypy Scales (e.g., Chapman et al., 1976, 1978) that assess positive and negative schizotypy, whereas two studies (Kemp et al., 2021; Kwapil et al., 2022) used the Multidimensional Schizotypy Scale (MSS; Kwapil, Gross, Silvia, et al., 2018), which assesses positive, negative, and disorganized schizotypy (note that other studies have assessed associations of schizotypy questionnaires with interview outcomes, but did not specifically examine the positive, negative, and disorganized schizotypy dimensions). All five studies found that each schizotypy dimension was associated with impaired functioning. Positive schizotypy was robustly associated with positive, prodromal, and psychotic-like experiences, as well as schizotypal and paranoid personality disorder traits. Negative schizotypy was associated with interview-assessed negative symptoms and with schizoid, schizotypal, and paranoid personality disorder traits. Disorganized schizotypy has been less widely studied than the other two schizotypy dimensions. Kemp et al. (2021) reported that, as hypothesized, disorganized schizotypy was associated with interview-assessed disorganized symptoms, as well as with depressive disorders. Kwapil et al. (2022) reported that disorganized schizotypy was associated with paranoid, borderline, and avoidant personality traits.

Although these studies all included nonclinically ascertained samples, negative schizotypy predicted schizophrenia-spectrum disorder diagnoses (including Cluster A personality disorder diagnoses) in three of the four cross-sectional studies (Barrantes-Vidal et al., 2013; Kemp et al., 2021; Kwapil et al., 2008, 2022) and positive schizotypy did so in one of the four studies (Barrantes-Vidal et al.). Both positive and negative schizotypy predicted the development of schizophrenia-spectrum disorders, whereas positive schizotypy predicted the development of psychotic disorders in the Chapmans' 10-year longitudinal sample (Kwapil et al., 2013).

Goals and Hypotheses of the Present Study

The aforementioned studies were the first to examine the association of multidimensional schizotypy with interview-assessed symptoms and impairment in nonclinically identified young adults. However, none of these studies provided a thorough replication as they each were limited in scope. For example, three of the five studies employed the Wisconsin Schizotypy Scales, which

do not assess disorganized schizotypy. Among the interviews, some studies failed to assess schizotypic symptoms and only one study included an interview assessment of disorganized symptoms. Furthermore, the studies differed regarding which personality disorders were assessed.

The goal of the present study is to examine the association of positive, negative, and disorganized schizotypy with interview assessments of schizotypic symptoms, schizophrenia-spectrum personality traits and disorders, and impairment in a nonclinically ascertained sample of young adults. In doing so, we hope to provide a comprehensive effort to replicate the previous findings. This is especially relevant in light of the widely documented replication crisis in psychology (e.g., Diener & Biswas-Diener, 2019). Furthermore, examining these associations is an essential step in the construct validation of the multidimensional model of schizotypy, as well as questionnaire measures of schizotypy.

All goals and hypotheses of the study were preregistered on Open Science Framework. Based on the multidimensional model of schizotypy (e.g., Kwapil & Barrantes-Vidal, 2015) and previous studies, we hypothesized that positive, negative, and disorganized schizotypy would have unique associations with interview measures of symptoms and impairment. We posited that all three schizotypy dimensions would be associated with impaired functioning. We predicted that positive schizotypy would be associated with positive schizotypic symptoms and schizotypal, paranoid, and borderline personality disorder traits. We predicted that negative schizotypy would be associated with interview-rated negative schizotypic symptoms, as well as schizoid, schizotypal, paranoid, and avoidant personality disorder traits. Moreover, we hypothesized that negative schizotypy would be associated with broad Cluster A personality disorder diagnoses, never dating, and having fewer than two close friends. Finally, we predicted that disorganized schizotypy would be associated with disorganized schizotypic symptoms, attentional deficits, and paranoid, avoidant, and borderline personality disorder traits. Previous studies indicated that disorganized schizotypy is strongly associated with depression and neuroticism (Hernández et al., 2022; Kemp et al., 2018), so we hypothesized that disorganized schizotypy would be associated with the history of mental health treatment and depressive disorders.

Method

Power Analysis

We reviewed effect sizes from similar cross-sectional interview studies, specifically Kemp et al. (2021) and Kwapil et al. (2022), to determine sample size. Effect sizes ranged from small ($f^2 = 0.08$) to large ($f^2 = 0.84$) magnitude for the hypothesized associations. Following Cohen (1992), a sample of 139 participants would ensure power of 0.80 for an effect size of $f^2 = 0.08$ for regression analyses with three predictors. Following Kemp et al. and Kwapil et al., we aimed to enroll approximately 150 participants.

Participants

A total of 162 participants enrolled in the study from an undergraduate subject pool. One participant was omitted from the analyses due to an elevated infrequency scale score following the study protocol. In order to obtain a wide range of scores for each schizotypy subscale, any eligible participant of at least 18 years of age was allowed to sign up for the study. Additionally, we oversampled participants who scored at least 1.5 SD above the mean on the Multidimensional

Schizotypy Scale-Brief (MSS-B; Gross et al., 2018) positive, negative, or disorganized schizotypy subscales taken during a departmental prescreening. Demographic characteristics of the sample were as follows: Mage= 19.2 years, SD = 1.4, range 18 to 26 years; 67% female. The study was approved by the UIUC IRB (Protocol #18143). Participants provided informed consent and received course credit.

Materials

Assessment of multidimensional schizotypy

Participants completed the 77-item MSS at the start of the study. This questionnaire comprises true–false items that assess positive, negative, and disorganized schizotypy. The subscales have good internal consistency (coefficient $\alpha \geq 0.87$) and test–retest reliability (intraclass $r \geq 0.84$) (Kemp et al., 2020). The MSS items were intermixed with the 13-item (Chapman and Chapman, 1983) infrequency scale.

Interview Assessments

The semistructured interview-assessed demographic information, psychosocial functioning, psychopathology, and personality pathology. Demographic information was obtained by using a modified version of the overview section of the Structured Clinical Interview for DSM-5 Disorders (SCID-5; First et al., 2015). The Global Assessment of Functioning Scale (GAF; American Psychiatric Association, 2000) was used to assess overall functioning. The SCID-5 mood disorder modules were administered to assess depressive and bipolar disorders.

The Structured Interview for Prodromal Symptoms (SIPS; McGlashan et al., 2001) was administered to assess lifetime positive and disorganized schizotypic experiences. The SIPS-positive schizotypy subsection inquires about unusual thought content/delusional ideas, suspiciousness/persecutory ideas, grandiose ideas, perceptual abnormalities/hallucinations, and bizarre thinking. The SIPS-disorganized schizotypy subsection inquires about disorganized communication, odd behavior/appearance, trouble with focus and attention, and impairment in personal hygiene. The Negative Symptom Manual (NSM; Kwapil & Dickerson, 2001) assesses five classes of negative schizotypic symptoms: anhedonia, social withdrawal, avolition/anergia, affective flattening, and alogia. An additional component assessing attentional deficits was administered, but not included in the computation of total negative symptoms.

Cluster A (schizotypal, schizoid, and paranoid), borderline, and avoidant personality disorder traits and diagnoses were assessed using the International Personality Disorder Examination (IPDE; World Health Organization, 1995). The IPDE produces dimensional severity scores and diagnoses.

Procedures

After providing consent, participants completed questionnaires (15 min) followed by the interview (1.5–2.5 hr). Interviews were administered by a trained assessor supervised by a licensed psychologist and were audio recorded. However, interrater reliability was not assessed given that the study only involved one interviewer/rater. Due to the COVID-19 pandemic, approximately 40% of the interviews were conducted virtually via Zoom. The interviewer was aware of

oversampling procedures, but did not know participants' MSS scores or which participants were oversampled.

Results

MSS Descriptive Statistics

Table S1 in the online supplemental materials presents descriptive statistics for the MSS subscales. Standardized scores for the MSS subscales were based on norms from 9,366 adults (Kemp et al., 2021). We recruited a sample that scored across the full range of the MSS subscales. However, the MSS negative schizotypy mean was lower with a smaller range compared to the other subscales. The internal consistency reliabilities of the subscales were consistent with previous studies and indicated good reliability. The correlations among the MSS subscales were as follows: positive and negative, r = .15, positive and disorganized, r = .41, and negative and disorganized, r = .28. MSS subscale scores were unassociated with age or sex.

Quantitative Interview Measures of Psychopathology and Functioning

Table S2 in the online supplemental materials presents descriptive statistics for the quantitative interview measures. Linear regression analyses assessed the associations of each of the MSS subscales with quantitative interview measures. In each regression analysis, scores on the three MSS schizotypy subscales were entered as simultaneous predictors. This method follows analytic procedures in recent interview (Kemp et al., 2021; Kwapil et al., 2022), questionnaire (Kwapil, Gross, Burgin, et al., 2018), and experience sampling methodology (Kwapil et al., 2020) studies, allowing us to examine the effect of each schizotypy subscale over and above the effect of the other subscales. For linear regressions, the standardized regression coefficient (β), change in R2 (unique variance accounted for by each predictor), and the effect size (f^2) were all computed for each schizotypy predictor in each regression. Additionally, the bivariate correlations were reported for each association for comparison purposes. Following Cohen (1992), f^2 values of 0.02 are considered small effects, 0.15 are considered medium effects, and 0.35 are considered large effect sizes. Likewise, bivariate correlation values of .10, .30, and .50 are denoted as small, medium, and large effect sizes, respectively. Note that change in R2 and f^2 were computed for each predictor by rerunning the analyses with the specific MSS predictor entered at the second step, over and above the other two MSS subscales.

Table 1 presents linear regression analyses. Each row indicates a separate regression analysis in which the three MSS subscales were entered simultaneously to examine each subscale's unique prediction of each of the quantitative interview measures. In line with our hypotheses, the positive, negative, and disorganized schizotypy subscales had differential patterns of associations with interview measures of symptoms and impairment. Negative and disorganized schizotypy uniquely predicted impaired functioning (small and medium effect sizes, respectively). Contrary to our hypotheses and previous findings, positive schizotypy was not associated with impaired global functioning in the regression analyses, although it had a significant bivariate association (medium effect). Positive

Table 1

Linear Regressions Examining Prediction by the Multidimensional Schizotopy Scale Subscales (n = 161)

Criteria	MSS-positive schizotypy				MSS-negative schizotypy				MSS-disorganized schizotypy				Total R^2
	r	β	ΔR^2	$f2$	r	β	ΔR^2	$f2$	r	β	ΔR^2	$f2$	
Global functioning	**-.34*****	-0.13	.015	0.02	*−.34****	−0.20**	.036	0.06	*−.54****	**−0.43*****	**.146**	**0.22**	*.35****
SIPS-positive symptoms	*.70****	*0.65****	*.352*	*0.70*	.15	0.02	.000	0.00	**.38*****	0.10	.008	0.02	*.50****
SIPS-disorganized symp.	.28***	0.06	.003	0.01	.13	−0.04	.001	0.00	**.56*****	**0.54*****	.227	**0.33**	*.31****
NSM-negative symp.	.16*	-0.04	.001	0.00	*.57****	*0.49****	*.222*	*0.37*	**.42*****	**0.30*****	.068	0.11	*.40****
NSM-attentional deficits	.18*	-0.02	.000	.000	.14	0.01	.000	0.00	**.46*****	**0.46*****	**.168**	**0.21**	*.21****
Schizotypal symptoms	*.65****	*0.54****	*.243*	*0.47*	.27***	0.12*	.014	0.03	**.47*****	0.21**	.035	0.07	*.48****
Schizoid symptoms	-.02	-0.07	.004	0.01	*.54****	*0.58****	*.305*	*0.44*	.04	−0.10	.007	0.01	*.31****
Paranoid symptoms	**.34*****	0.16*	.022	0.03	**.30*****	0.18*	.028	0.04	**.47*****	0.36***	.100	0.14	*.28****
Borderline symptoms	**.40*****	0.19**	.030	0.05	.17*	0.00	.000	0.00	**.58*****	**0.50*****	**.193**	**0.30**	*.36****
Avoidant symptoms	.11	-0.09	.006	0.01	.22**	0.11	.011	0.01	**.42*****	**0.43*****	**.143**	**0.18**	*.20****

Note. Medium effect sizes are in bold, and large effect sizes in bold and italics. Each row represents a separate regression analysis in which the three MSS subscales were entered simultaneously as predictors to examine their unique prediction of each of the interview measures. In addition, the bivariate correlation (r) is included. Note that ΔR^2 and f^2 were computed for each predictor by rerunning the analyses with the specific MSS predictor entered at the second step, over and above the other two MSS subscales.

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

schizotypy was robustly associated with SIPS-positive symptoms and schizotypal personality disorder traits (large effects). Moreover, positive schizotypy was associated with paranoid and borderline personality disorder traits (small effects). Negative schizotypy was associated with negative symptoms and schizoid symptoms (large effects). Negative schizotypy was also associated with schizotypal and paranoid personality disorder traits (small effects). Finally, disorganized schizotypy was associated with SIPS-disorganized symptoms, attentional deficits, and borderline and avoidant personality disorder traits (all medium effects). Disorganized schizotypy was also significantly associated with negative symptoms, as well as schizotypal and paranoid personality disorder traits (small effects).

Categorical Interview Measures of Psychopathology and Functioning

Table 2 presents the descriptive statistics for each of the categorical interview measures. Each measure was scored dichotomously and was reported as the percentage of individuals who endorsed that characteristic. For example, 33% of the sample indicated that they had never been in a serious or long-term dating relationship. For this study, we broadened the personality disorder diagnoses to include participants who met at least three of the schizoid, paranoid, or avoidant criteria or at least four of the schizotypal or borderline criteria. Three participants met the criteria for a broad schizophrenia-spectrum personality disorder diagnosis (one schizotypal, one schizoid and schizotypal, and one schizoid personality disorder). Nine participants met broad criteria for any of the five personality disorders assessed, including two with borderline and four with avoidant personality disorders.

Binary logistic regressions were computed to examine associations of the schizotypy subscales with categorical interview measures (Table 2). Consistent with Kemp et al. (2021) and Kwapil et al. (2022), negative schizotypy predicted having any broad personality disorder and never dating. Unlike past studies, however, negative schizotypy did not predict having fewer than two close friends. Contrary to recent studies, positive schizotypy significantly predicted history of mental health treatment and past depressive episodes. Positive schizotypy was also associated with past manic/ hypomanic episodes. As hypothesized, disorganized schizotypy significantly predicted past depressive episodes. Bivariate associations of the MSS subscales with categorical measures are presented in Table S3 in the online supplemental materials.

Ratings of 3 or higher on the SIPS indicate clinically significant attenuated psychotic symptoms. Following Cicero et al. (2014), we identified participants with any SIPS-positive symptom score of 3 or above, any SIPS-disorganized symptom of 3 or above, or any score of 3 or above on either SIPS symptom dimension. Tables S4 and S5 in the online supplemental materials present exploratory binary logistic regressions examining associations of the MSS schizotypy subscales with elevated SIPS scores. In the simultaneous regressions, MSS-positive schizotypy was associated with elevated SIPS-positive symptom ratings, MSS-disorganized schizotypy was associated with elevated SIPS-disorganized schizotypy symptoms, and both MSS positive and disorganized schizotypy were associated with having either elevated SIPS symptom ratings.

Table 2

Binary Logistic Regressions Examining Prediction by the Multidimensional Schizotypy Scale Subscales (n = 161)

Criteria	% Endorsed	MSS-positive schizotypy		MSS negative schizotypy		MSS-disorganized schizotypy	
		Odds ratio	95% CI	Odds ratio	95% CI	Odds ratio	95% CI
Any broad Cluster A PD	1.9%	1.94	[0.85, 4.45]	2.81	[0.95, 8.37]	0.95	[0.34, 2.65]
Any broad PD	5.6%	1.15	[0.62, 2.15]	2.18*	[1.10, 4.31]	1.83	[0.90, 3.73]
Never dated	32.9%	0.82	[0.58, 1.15]	1.65*	[1.07, 2.54]	1.42	[0.95, 2.12]
< 2 close friends	5.0%	0.57	[0.22, 1.48]	1.99	[0.98, 4.11]	1.29	[0.57, 2.94]
Mental health treatment	42.2%	1.40*	[1.02, 1.94]	1.36	[0.88, 2.10]	1.46	[0.99, 2.17]
Major depressive episode	42.9%	1.63*	[1.14, 2.33]	1.41	[0.88, 2.26]	2.31***	[1.47, 3.65]
Manic/hypomanic episode	13.0%	1.51*	[1.03, 2.22]	1.12	[0.64, 1.96]	1.02	[0.62, 1.69]

Note. Each row represents a separate regression analysis in which the three MSS subscales were entered simultaneously as predictors to examine their unique prediction of each of the interview measures.

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

Discussion

A growing body of research supports that schizophrenia-spectrum disorders exist along a dynamic, multidimensional continuum of clinical, as well as subclinical, impairment referred to as schizotypy. The present study attempted to replicate findings from five previous interview studies demonstrating that the positive, negative, and disorganized schizotypy dimensions are associated with differential patterns of impairment, psychopathology, and personality pathology. This replication process is essential in light of the ongoing replication crisis (Diener & Biswas-Diener, 2019). Overall, the present results were closely comparable to the five previous interview studies. Comparisons of associations and effect sizes across all six studies can be found in Table 3 (keep in mind these are the effect sizes for the partialed, not bivariate, associations).

Positive schizotypy involves odd beliefs, unusual perceptual experiences, and suspiciousness. Consistent with this formulation, positive schizotypy was robustly associated with positive/psychotic-like experiences and schizotypal traits (large effects) and paranoid personality disorder traits (small effects). These reflect core components of positive schizotypy that have been found consistently across previous interview studies. It is especially notable that questionnaire assessed positive schizotypy reliably predicts interview reports of positive/psychotic-like/prodromal experiences in nonclinically ascertained samples of ostensibly high-functioning young adults (students enrolled in a major university). Such associations may be even more pronounced in community-based samples. Furthermore, ample evidence suggests that positive/psychotic-like/prodromal experiences predict the development of schizophrenia-spectrum disorders (e.g., Cannon et al., 2008).

Contrary to the five previous studies, positive schizotypy was not associated with impaired global functioning over and above negative and disorganized schizotypy, although they were significantly associated at the bivariate level. Psychotic-like experiences can be distressing. However, it is important to keep in mind the severity of these experiences and the extent to which they interfere with schoolwork, social functioning, and overall well-being. In fact, certain odd beliefs, like deriving spiritual significance from identifying "angel numbers" or interpreting serendipitous coincidences as signs from the universe, may be experienced as benign or even comforting to some.

Negative schizotypy involves anhedonia, social withdrawal, alogia, and avolition/anergia. Consistent with this model and previous findings, negative schizotypy had unique associations (large effect sizes) with interview-rated negative symptoms and schizoid personality traits. The evidence across the six studies strongly indicates that questionnaire measures of negative schizotypy (especially the MSS negative schizotypy subscale) identify young adults with prominent levels of negative schizotypy psychopathology, including Cluster A personality disorders. We replicated these previous findings despite the fact that our oversampling procedures failed to recruit high scorers on the MSS negative schizotypy scale at the same level as the positive and disorganized subscales. This underrepresentation of high negative schizotypy scorers may be attributable to the nature of the study, which involved a lengthy and potentially arduous interview. Moreover, due to the COVID-19 pandemic, the institution offered options to participate in other high credit studies remotely. We also found significant associations of negative schizotypy with schizotypal and paranoid personality disorder traits (small effects), and a history of never having dated.

Table 3

Effect Sizes for Associations of Multidimensional Schizotypy With Interview-Assessed Symptoms and Functioning Across Six Studies

	Positive schizotypy						Negative schizotypy						Disorganized schizotypy					
	Study #						Study #						Study #					
Criteria	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Global Functioning	*(M)*	*(S)*	*(S)*	*(S)*	*(S)*	(S)	*(S)*	*(S)*	*(S)*	*(L)*	*(M)*	*(S)*				*(M)*	*(S)*	*(M)*
Positive/psychotic-like experiences	*L*	*S*	M	*L*		*L*	VS	*S*	*VS*	*S*		VS				VS		S
Negative schizotypic experiences	VS	S*		*(S)*		VS	*L*	*L*		*L*		*L*				*S*		*S*
Disorganized schizotypic experiences				*S*		VS				*S*		VS				*L*		*M*
Schizotypal traits	*M*	*S*	*S*	*M*	*M*	*L*	*S*	*S*	*S*	*M*	*M*	*S*				VS	S	*S*
Schizoid traits	VS	S	VS	*(S)*	S	VS	*M*	*M*	*M*	*L*	*L*	*L*				VS	VS	VS
Paranoid traits	*S*	*M*	*S*	*S*	VS	*S*	*S*	S	*S*	*S*	*S*	*S*				VS	*S*	*S*
Borderline traits		*S*			*S*	*S*		VS			VS	VS					*M*	*M*
Avoidant traits		*S*			VS	VS		*S*			*S*	VS					*S*	*M*

Note. Analyses are based on regression analyses in which schizotypy dimensions were entered as simultaneous predictors. Letters indicate effect sizes based on f^2 (following Cohen, 1992). L = large (≥ 0.35), M = medium (0.15 to 0.34), S = small (0.02 to 0.14), VS = very small (<0.02). Values in parentheses indicate inverse associations. Missing values indicate measure not administered. Bold/italic letters indicate reported statistical significance. Wisconsin Schizotypy Scales with positive and negative schizotypy factors administered in Studies 1 (Kwapil et al., 2008), 2 (Barrantes-Vidal et al., 2013; Racioppi et al., 2018), and 3 (Kwapil et al., 2013). Multidimensional Schizotypy Scale with positive, negative, and disorganized schizotypy factors administered in Studies 4 (Kemp et al., 2021), 5 (Kwapil et al., 2022), and 6 (the present study).

Disorganized schizotypy involves disruptions in thought, speech, emotions, and behaviors. As hypothesized, it was associated with interview measures of disorganized schizotypic experiences and attentional deficits. The limited previous studies have indicated associations of disorganized schizotypy with neuroticism, negative affect, depression, and history of mental health treatment, suggesting that emotional dysregulation is a key component of this dimension (Cicero & Kerns, 2010; Hernández et al., 2022; Kemp et al., 2018; Kwapil, Gross, Burgin, et al., 2018). These studies informed our hypotheses and were replicated in our current findings; disorganized schizotypy was significantly associated with depression, as well as paranoid, borderline, and avoidant personality traits (small to medium effects). The association of disorganized schizotypy with avoidant personality traits appears consistent with reported moderate-to-large associations of disorganized schizotypy with neuroticism (Kwapil, Gross, Silvia, et al., 2018) and social anxiety (Kemp et al., 2018).

Overall, the present study successfully replicated results from five prominent interview studies assessing the expression of multidimensional schizotypy in ostensibly high-functioning student samples. The multidimensional schizotypy model provides a useful framework for studying the development, expression, and heterogeneity of schizophrenia-spectrum psychopathology. Multiple studies and methods have demonstrated that positive, negative, and disorganized schizotypy are associated with unique patterns of symptoms and impairment. Furthermore, treating schizotypy as a homogenous construct clearly loses conceptual and empirical power and precision. The inclusion of other dimensions or facets may enhance this model, but thus far no other dimensions seem to provide the explanatory power offered by positive, negative, and disorganized schizotypy. Note that most current developmental psychopathology models of schizophrenia and spectrum disorders implicitly or explicitly recognize the presence of subclinical or prodromal expressions. Schizotypy provides a useful model for capturing both clinical and subclinical expressions. The present results provide further construct validation for the multidimensional model of schizotypy and the MSS as a measure of multidimensional schizotypy.

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