MASTER THESIS

Title

Exploring the Relationship between Psychoticism, Negative Affect and Creativity

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List of Abbreviations

Abbreviation	Full Term
APA	American Psychological Association
AUT	Alternative Uses Task
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
NA	Negative Affect
PA	Positive Affect
PID-5	Personality Inventory for DSM-5
RAT	Remote Associates Test
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences
SSCS	Short Scale of Creative Self

Abstract

This study examined the association between psychoticism and creativity, as well as whether experiences of negative emotions (Negative Affect; NA) moderate this link. Creativity was assessed with the Alternative Uses Task (AUT), the Remote Associates Test (RAT), Forward Flow and the Short Scale of Creative Self (SSCS). Psychoticism was expected to show positive associations with creativity, particularly in divergent thinking tasks. The results showed that psychoticism was positively associated with the SSCS and with Forward Flow. No consistent associations were found in divergent or convergent thinking tasks. Experiences of negative emotions did not predict creativity but strengthened the association between psychoticism and self-perceived creativity when in moderate and especially in high levels. The findings suggest that psychoticism relates more strongly to self-perceptions of creativity than to measurable creative performance and that this link is amplified under conditions of distress or negative affect. In other words, individuals high in psychoticism who also experience high levels of negative emotions are likely to view themselves as creative even if it is not reflected in their task-based performance.

Keywords: psychoticism, creativity, negative affect, divergent thinking, self-perceived creativity

Introduction

The association between creativity and psychopathology has been a subject of interest since antiquity, with its origins traceable to Aristotle's assertion that "no great genius has ever been without some madness", linking creativity to melancholia (Aristotle, 350 BCE/2001). This idea has persisted through time, fueled by the recurring presence of "mad geniuses" throughout history, which has prompted extensive research into the potential connection between artistic and intellectual brilliance as well as psychopathological traits (Kyaga, 2015; Simonton, 2014).

Historical figures such as the famous painter of the 19th century, Vincent van Gogh, who is widely believed to have shown symptoms consistent with bipolar disorder (Dietrich, 2014), along with Issaac Newton, Wolfgang Amadeus Mozart and Franz Kafka, all of whom exhibited signs of psychopathology, are frequently cited as evidence of this supposed association. Rather than treating this linkage as a mere curiosity, contemporary theorists have attempted to interrogate its structure. A central question is whether traits that increase vulnerability to psychopathology, such as disinhibition, novelty-seeking, or sensitivity to internal stimuli, might also provide a cognitive advantage in supportive or structured settings. In these conditions, such traits may promote creativity, encourage flexible thinking and novel idea generation (Simonton, 2014; Dietrich, 2014). Historical accounts (Simon, 1978) and psychoanalytic theories (Freud, 1908/1959; Kris, 1952) further support this view, proposing that psychological states such as heightened emotion or inner conflict can facilitate creative expression. Consequently, the "mad genius" theory continues to resonate as a widely accepted belief among the public (Kaufman, Bromley, & Cole, 2006).

The question, therefore, is not whether madness causes genius, or whether psychopathology causes creativity, but rather how certain traits that increase vulnerability to

psychopathology may also foster creativity under specific conditions. Framed this way, the "mad genius" question shifts from being a metaphor to an empirical question within dimensional personality models, which view traits as varying in degree rather than as discrete categories.

In recent decades, efforts to clarify the psychological foundations of creativity have converged around two major theories: dispositional theories, which examine personality traits (Acar & Runco, 2012) and cognitive-affective models, which focus on temporary mental states and self-regulatory mechanisms (De Dreu, Baas, & Nijstad, 2008). Within dispositional theories, one trait that has received particular attention is psychoticism. This personality trait was originally conceptualized by Eysenck and Eysenck (1976) to capture traits such as cognitive looseness, impulsivity, and non-conformity. Although initially proposed as the third dimension of the PEN model alongside neuroticism and extraversion, psychoticism attracted interest as a potential correlate of creativity due to its association with overinclusive thinking and reduced latent inhibition, both of which will be addressed in more detail later in this introduction (Eysenck, 1993; Stavridou & Furnham, 1996).

Because the term psychoticism can easily be confused with related terms, it is important to distinguish it from psychosis and psychopathology. Psychosis refers to a clinical state used to describe symptoms like hallucinations or delusions (American Psychiatric Association, 2013), whereas psychopathology is a broader term encompassing all forms of mental disorders (Berrios, 1996). In Eysenck's model, psychoticism refers to a personality dimension (Eysenck & Eysenck, 1976) not to psychosis itself. The term was chosen because they proposed that high scorers were more likely to develop psychotic disorders and psychopathic tendencies.

From a dimensional perspective, psychoticism reflects traits such as unusual thinking and heightened perceptual sensitivity, which may be expressed in both adaptive and maladaptive

ways (DeYoung, Grazioplene, & Peterson, 2012; Fink et al., 2014). Although high levels of psychoticism may share certain features with psychosis, such as unconventional associations, they do not indicate the presence of a clinical disorder and can even be linked to adaptive outcomes such as originality and problem-solving (Eysenck, 1993; Runco & Acar, 2012).

This duality positions psychoticism as a particularly intriguing trait for creativity research. The present study examines not only the direct relationship between psychoticism and creativity but also the possibility that this link is shaped by emotional tendencies. While previous research has reported associations between psychoticism and creativity, the findings are mixed and the mechanisms underlying this relationship remain unclear (Acar, Chen, & Cayirdag, 2018; Fink et al., 2013; Kline & Cooper, 1986; Muhammad, Nadeem, & Nadeem, 2021; Stavridou & Furnham, 1996).

One possibility is to consider the role of affective states, as emotions can influence cognitive style and creative performance. Among these, Negative Affect (NA) emerges as a relevant factor. NA refers to the experience of unpleasant emotions and has been linked to both cognitive disruption and creative enhancement. On the one hand, it has been shown to narrow attention and disrupt flexible thought (Baumann & Kuhl, 2002; Bledow, Rosing, & Frese, 2013). On the other hand, it may stimulate deeper processing and support originality (Forgas, 2013; George & Zhou, 2002). Therefore, this study further examines whether NA moderates the psychoticism-creativity relationship.

1.1. Psychoticism and Creativity

Exploring the relationship between psychoticism and creativity challenges the categorical distinction between “healthy” and “pathological” minds, supporting a dimensional view in which

traits traditionally considered maladaptive may also be linked to adaptive outcomes such as creative thinking (Stavridou & Furnham, 1996). By recognizing psychoticism as a dimensional non-clinical personality trait, researchers can explore its role in areas of psychological interest including innovation, problem-solving and creativity.

The idea that psychoticism may be linked to creative potential was first proposed by Eysenck (1993), who argued that individuals high in psychoticism exhibit overinclusive thinking, a cognitive style characterized by an unusually broad conception of relevance. As a result, individuals with this trait are more likely to generate a wider range of innovative ideas during problem-solving. According to Eysenck, this quality can also be assessed through unusual responses to word association tasks and may underlie a cognitive advantage in producing novel ideas.

Eysenck (1993) drew an important distinction between two forms of creativity: one as a personality trait characterized by originality and the other as a demonstrable achievement, viewed in artistic or scientific accomplishments. He argued that creativity is not caused by psychosis but that some psychoticism traits may contribute to creative potential. At the same time, he emphasized that high creative achievement requires both cognitive ability and a supportive environment. From this perspective, Eysenck (1993) concluded that moderate levels of psychoticism can be adaptive and enhance creative potential without going to extremes. Dudek (1993) expanded on Eysenck's perspective by proposing that psychoticism reflects a predisposition toward overinclusive thinking. This potential can only be realized when overinclusive thinking is balanced by sufficient intelligence and cognitive control. Without this balance, the same associative tendencies may lead to chaotic thoughts, like those observed in clinical psychosis.

Similarly, DeYoung, Grazioplene, and Peterson (2012) argue that creativity can be enhanced when disinhibition, a reduced filtering of thoughts and perceptions, operates within a stable cognitive framework but risks devolving into incoherence when regulatory resources are insufficient. In this view, traits associated with psychoticism may promote originality by making it easier to connect unrelated ideas, yet they require sufficient cognitive control to prevent associations from becoming disorganized.

Building on this evidence, contemporary perspectives focus on cognitive processes as the key to understanding the link between psychoticism and creativity (Carson, 2011). Psychoticism here, is viewed as a broad trait domain that includes eccentricity, unusual beliefs, perceptual dysregulation and helps explain how certain cognitive and perceptual tendencies relate to creative thinking (Krueger, 2012).

The importance of regulatory control is also evident in studies on latent inhibition (LI), a phenomenon in which stimuli that were previously experienced as irrelevant are less likely to develop new associations than novel stimuli (Lubow, 2005). Reduced LI has been linked to increased creative potential but only when individuals also possess the cognitive resources to manage the increased flow of information (Carson, Peterson, & Higgins, 2003; Carson, 2011).

Despite all these theoretical advances, empirical evidence remains inconsistent. Meta-analyses suggest that certain facets of psychoticism and related traits, such as positive schizotypy show small associations with creativity, whereas negative schizotypy, including anhedonia and flat affect, shows no such link (Acar, Chen, & Cayirdag, 2018). Neurobiological studies further support the role of positive schizotypy, which refers to non-clinical traits such as unusual thinking and perceptual experiences, by showing increased activity in brain regions involved in associative processing and idea generation (Fink et al., 2013). This indicates that creativity is not

broadly linked to all psychotic-like traits but specifically to those aspects (e.g. positive schizotypy) that support associative flexibility and the generation of novel ideas.

Some studies have also reported negative associations or have shown no clear effects between psychoticism and creativity. For instance, a recent study by Muhammad, Nadeem, and Nadeem (2021) investigated this association in a sample of 200 university students using psychometric scales. The results revealed a non-significant negative correlation between psychoticism and creativity, highlighting the complexity surrounding this relationship. Earlier work by Kline and Cooper (1986) also raised the issue of whether the association between psychoticism and creativity could be generalized. Using a wider range of creativity measures from the Comprehensive Ability Battery (CAB), their study confirmed only weak links between Eysenck's Psychoticism scale and creative ability. These findings suggest that the choice of measurement tools can strongly influence whether such relation is detected, since different instruments capture different facets of creative expression.

From this perspective, the mixed empirical findings may be attributed to the heterogeneity of creativity measures. Creativity is a multidimensional construct that encompasses both divergent thinking and convergent thinking. Divergent thinking refers to the ability to generate multiple, original solutions to open-ended problems that are not obviously related, while convergent thinking involves narrowing down to a single correct solution through structured cognitive pathways, relying on logic and not ideation expansion (Guilford, 1967).

Evidence indicates that traits related to psychoticism and schizotypy are more strongly linked to divergent thinking tasks than to convergent thinking (Abu-Akel et al., 2020; Jones et al., 2011) and empirical work shows that the strength of the psychoticism and creativity association depends on how creativity is measured (Puryear, Kettler, & Rinn, 2017). The current

research contributes to this line of work by examining psychoticism in relation to multiple measures of creativity, including both self-report and performance-based tasks. By doing so, it aims to clarify the association between psychoticism and creativity and to capture how this link varies across different forms of creative performance. Therefore, the present study proposes the following hypothesis:

H1: Psychoticism is positively associated with creative performance, particularly in tasks measuring divergent thinking compared to convergent thinking tasks.

1.2. The Moderating Role of Negative Affect in the Psychoticism-Creativity Relationship

Although the impact of major dimensions of personality on creativity has been documented, the affective background within which they function is less well understood. In particular, the combination of psychoticism and Negative Affect remains a potentially fruitful but under investigated avenue. Most research has focused on the main effects, overlooking the role of emotions (Feist, 1998; Acar & Runco, 2012). That is why the present research addresses this significant gap and aims to clarify the affective conditions under which psychoticism predicts creative potential.

Not all individuals high in psychoticism exhibit creative advantages, raising the question of which contextual or emotional factors may amplify or inhibit this link. Affective states are one such factor. Because emotions can influence cognitive processes and in turn, aspects of creativity, it is important to examine not only the direct effects of personality traits such as psychoticism but also the potential moderating role of affective states.

Research in affective psychology has long recognized the dual influence of mood on creativity, with positive affect generally facilitating idea fluency, and negative affect exerting

more complex, task-dependent effects. Positive Affect (PA), which includes feelings such as enthusiasm, joy and interest has been linked to enhanced creativity. It has been shown to broaden attentional scope and promote cognitive flexibility, both of which are crucial for divergent thinking and originality (De Dreu, Baas, & Nijstad, 2008).

In contrast, the role of Negative Affect (NA) is less straightforward. NA refers to the tendency to experience negative emotional states such as anger, fear, guilt (Watson, Clark & Tellegen, 1988) and has been closely linked to psychological vulnerability and emotional instability (Clark & Watson, 1991). In the context of creativity, the role of NA appears complex. Some studies have found that NA undermines creative performance (Conner & Silvia, 2015; Conner, DeYoung, & Silvia, 2018) while others have reported non-significant associations between NA and creativity (Karwowski et al., 2017, Study 1; Silvia et al., 2014).

The existing literature reflects this complexity. For instance, Yoon (2024) found that the effect of NA on creativity was both negative and positive, depending on whether it triggers impression management or problem reframing. This model supports the idea that NA does not inherently diminish creativity. Instead, its effect is mediated by psychological mechanisms that can either be deleterious or beneficial for creativity.

Despite these findings, most studies report either a negative or no relation between NA and creativity (De Dreu, Baas, & Nijstad, 2008). Its influence appears conditional, varying with arousal levels, motivational orientation, individual regulation and contextual demands. Thus, this hypothesis follows:

H2: Negative Affect will be negatively associated with creativity.

At the same time, this variability in research suggests that it may be more accurate to consider NA as a moderator that shapes the expression of other traits such as psychoticism in relation to creativity rather than as a direct predictor. The present study aims to explore the relationship between psychoticism, negative affect, and creativity by examining both the direct and moderating effects. Rather than assuming linear causality or intrinsic benefit, the focus lies on delineating whether psychoticism-related traits may enhance or impair creative performance, and how affective states may modulate this relationship.

Psychoticism, the central variable in this study, is associated with unusual thinking, associative fluency and the generation of original responses in divergent thinking tasks. While these characteristics can enhance creativity, they also carry the risk of producing impractical or incoherent ideas. The influence of NA may help explain this. At mild levels NA has been linked to fostering creativity (George & Zhou, 2002) as well as to more focused processing (Forgas, 2013), which could help individuals with psychotic traits to structure and refine their ideas. In contrast, higher levels of NA narrow attention and consume cognitive resources (Bledow, Rosing & Frese, 2013). As NA intensifies, it could overwhelm individuals and amplify disorganization. More recent work emphasizes that creativity is fostered when negative mood declines and self-motivation is high (Bledow, Kühnel, & Kuhl, 2024). These outcomes depend on both the level of arousal and the individual's capacity to regulate it, suggesting that the intensity of NA may determine whether psychoticism results in creative output or unproductive ideation.

Additional evidence comes from Ivcevic and Brackett (2015) who demonstrated that openness to experience predicts creativity when accompanied by emotion regulation ability. Their results suggest that affective experiences can contribute to the development of traits that underlie creative potential. This effect was pronounced in individuals high in openness to

experience, a trait characterized by imagination and receptivity to novel ideas. While openness and psychoticism are distinct traits, both are linked to cognitive exploration and contribute to creativity through similar pathways. In this sense, just as openness benefits from emotional regulation, psychoticism may also lead to creative advantages when accompanied by NA that is regulated in ways that promote focus and engagement.

The plausibility of such moderation is supported indirectly by related research. For example, Wang et al. (2024) demonstrated that trait-level approach motivation, as measured by the Behavioral Activation System (BAS), moderated the relationship between schizotypy and creativity, highlighting that the impact of personality traits on creativity can depend on motivational dispositions. Elements of psychoticism, such as impulsivity and novelty seeking have been linked to heightened BAS sensitivity. Higher BAS sensitivity encourages exploratory behavior, which may aid divergent thinking but can also increase disorganization. As NA is known to influence motivational systems, it may play a comparable moderating role.

The *Dual pathway to Creativity* model (De Dreu, Baas, & Nijstad, 2008) provides a useful perspective by specifying the cognitive dynamics through which affective states shape creative processing. The model introduces two routes to creative output: cognitive flexibility and cognitive persistence. Positive affect may loosen attentional filters, promoting associative flexibility, while certain forms of negative affect may foster creativity through increased focus, persistence or task engagement. Against this backdrop, psychoticism's contribution to creativity may lie in its capacity to promote flexibility and loosened associations that encourage generating novel ideas, while moderate levels of negative affect may provide the structure needed for those associations to lead to productive outcomes. Rather than functioning in isolation, the interplay

between psychoticism and affective states may create optimal conditions for creativity. Thus, the following hypothesis is proposed:

H3: The relationship between psychoticism and creativity will be stronger at moderate levels of negative affect.

2. Method

2.1. Participants

This study used a cross-sectional design. A total of 150 participants were recruited to complete a survey administered via Qualtrics. All participants were required to be at least 18 years old and to have a good knowledge of English, in order to understand the survey content. Participation was voluntary and informed consent was obtained before the survey. The survey duration was, on average, twenty minutes. To ensure data quality, participants completed the survey in a semi-controlled setting, either in person or via a scheduled video call with the researcher. Participants received standardized instructions and information prior to initiation. The survey was completed in a distraction-free environment and participants were monitored throughout to ensure proper survey completion.

The data were cleaned prior to analysis, resulting in a final sample of $N = 145$ participants. One participant was excluded for being underage (i.e., 16 years), while the remaining exclusions were based on insufficient survey progress. The mean age of the final sample was 29.50 years (SD = 11.20, range = 18-63), with a median age of 25, indicating a slight positive skew in age distribution. Of the total sample, 67 participants (46.2%) identified as male and 78 (53.8%) as female. The majority held a university-level academic degree, with 36.6% having obtained a master's degree or higher and 31.0% holding a bachelor's degree. Additional

demographic variables, such as ethnicity or health-related behaviors were not collected as they were not central to the research questions. All participants were assigned to the same conditions and received the same set of questionnaires and tasks in the same order.

2.2. Materials and Procedure

The collected data and measures described below were extracted from a larger survey designed to assess creativity, cognitive functioning and personality traits. All questionnaires and tasks were administered via Qualtrics in a fixed order. Instructions were provided before each section to explain the task requirements, outlining the procedure.

2.2.1. PID-5: Psychoticism

The key variable in this study -psychoticism- was measured using the Psychoticism scale from the Personality Inventory for DSM-5 (PID-5; Krueger et al. 2013). This self-report instrument evaluates five personality trait domains including negative affect, detachment, antagonism, disinhibition and psychoticism with each trait domain consisting of five items. In this study the focus was placed on the psychoticism domain. Participants responded to items using a 4-point Likert scale ranging from “Very false or often false” to “Very true or often true”. Example items include “My thoughts often do not make sense to others” and “Things around me often feel unreal, or more real than usual”. A composite score was calculated by averaging the five items, with higher scores indicating higher levels of psychoticism. The PID-5 provided a dimensional assessment of psychoticism. The internal consistency of the Psychoticism scale was evaluated using Cronbach’s alpha and had an acceptable consistency, $\alpha = .73$ (5 items).

2.2.2. PID-5: Negative Affect

Negative Affect (NA) was measured using the Personality Inventory for DSM-5 (PID-5; Krueger et al. 2013). Like the psychoticism scale, the NA domain included five items, each rated on the same 4-point Likert scale. Example items include “I get emotional easily, often for very little reason” and “I get irritated easily by all sorts of things”. Scores were averaged to create a composite NA score, with higher scores indicating higher levels of negative affect. The internal consistency of the Negative Affect scale was evaluated using Cronbach’s alpha and had lower consistency, $\alpha = .59$ (5 items). After removing item 15, the reliability of Negative Affect improved, but only slightly, $\alpha = .62$ (4 items), therefore the item was retained due to its theoretical relevance.

2.2.3. Creativity Tasks

To assess creativity, several tasks and self-report measures were utilized.

i. Forward Flow Task

The Forward Flow Task required participants to generate ten words starting from a seed word (e.g., “Tree”), with each word intended to follow from the previous one. This task captured the degree of semantic distance between ideas, reflecting associative thinking and has been shown to predict divergent thinking (Gray et al., 2019). Scoring was based on the overall semantic distance across the words generated.

Semantic distances were calculated using the University of Colorado’s BERT-based semantic similarity tool, available online at http://wordvec.colorado.edu/matrix_comparison.html (University of Colorado, n.d.). BERT (Bidirectional Encoder Representations from Transformers) is a large language model developed by Google that captures word meaning in context through bidirectional encoding (Devlin et al., 2019). Cosine similarity scores were

computed for each consecutive word pair in a participant's sequence and converted to distance scores using the formula (1 – cosine similarity). These distances were then averaged to produce a forward flow score for each participant.

ii. *Alternative Uses Task (AUT)*

The Alternative Uses Task (AUT; Guilford, J. P., 1967) was also administered to evaluate divergent thinking. In this task, participants were asked to come up with as many alternative uses as possible for a common object, in this case a brick, within 1.5 minutes. The responses were typed into a text field and only valid responses were retained for scoring.

Each participant's response set was evaluated across four creativity dimensions: i) fluency, which referred to the number of valid uses generated by the participants, ii) flexibility which reflected the number of different conceptual categories the uses fell into, indicating the ability to think across different domains, iii) elaboration, which assessed the level of detail in each response and lastly, iv) originality, which captured how unique each response is, determined by its relative frequency compared to all other responses in the sample.

Elaboration was scored on an ordinal 0-2 scale based on the amount of detail provided: a score of 0 indicated no explanation (e.g., "paperweight"), 1 indicated some elaboration (e.g. "a paperweight to hold down papers"), and 2 reflected a full explanation with added context (e.g. " a paperweight to hold down important documents from flying off a desk during a strong wind"). The elaboration score for each participant represented the overall level of detail across all valid responses.

Originality was assessed using the Open Creativity Scoring with Artificial Intelligence (OCSAI) tool, (Organisciak et al., 2023), developed by the University of Denver. This tool was

utilized to assign an originality score ranging from 1 (very common) to 5 (highly original). For example, a response such as “building a wall” would receive a low originality score due to its frequency across participants, while a more novel idea like “using a brick as an instrument in a street performance” would be rated as more original.

iii. Remote Associates Test (RAT)

The Remote Associates Test (RAT; Mednick, S.A. 1962) was included to assess convergent thinking which captures the ability to identify a single solution that links unrelated ideas. Participants were presented with 15 triads of words (e.g. Cottage, Swiss, Cake) and were asked to generate a fourth word that could be paired with each of the triad words mentioned (e.g., Cheese).

Responses were entered in an open-text format and minor spelling errors that did not alter the meaning of response were accepted. One point was awarded for each correct answer and the total score (range: 0-15) reflected the participant’s convergent thinking ability. The number of correctly solved triads was summed to produce a single score for each participant. The RAT triads were drawn from previously validated sources and were presented in a fixed order.

iv. Short Scale of Creative Self (SSCS)

In addition to the above tasks, the Short Scale of Creative Self (SSCS; Karwowski, 2011) was incorporated to capture how participants assessed their own sense of creativity. This scale captured the two dimensions of the creative self: Creative Self-Efficacy and Creative Personal Identity. Participants responded to 11 statements using a 5-point Likert scale ranging from “Definitely not” to “Definitely yes”. This self-report questionnaire provided insight into how individuals perceived their own creative potential and how important creativity was to their sense

of self. The scale was computed by averaging all 11 items, resulting in an overall score reflecting participants' creative self-perception. The SSCS scale demonstrated good internal consistency, $\alpha = .90$ (11 items).

Finally, a self-reported diagnostic question was included to determine whether participants had received a formal diagnosis, enabling control for any formally diagnosed neurodevelopmental conditions. This item was part of the broader study but not analyzed in the present research.

2.3. Data Analysis

All data were analyzed using IBM SPSS Statistics. Means, standard deviations and frequency distributions were calculated, and the normality of the distributions was checked.

2.3.1 Correlational Analyses

Pearson correlation coefficients were computed to examine bivariate relationships between the PID-5 items related to psychoticism, negative affect (PID-5; Krueger et al., 2013) and each of the creativity measures: the Short Scale of Creative Self (SSCS; Karwowski et al., 2013), Remote Associates Test (RAT; Mednick, 1962), Alternative Uses Task (AUT; Guilford, 1967) and Forward Flow (Gray et al., 2019).

2.3.2 Moderation Analyses

To examine whether negative affect moderated the relationship between psychoticism and creativity, moderation analyses were conducted using Hayes' PROCESS macro for SPSS (Version 4.2; Hayes, 2022). Four separate models were tested, in which psychoticism was

entered as the independent variable (X), negative affect as the moderator (W) and each creativity measure (SSCS, RAT, Forward flow and AUT) as the outcome variable (Y).

In the fifth model, a composite score for creativity was used as the outcome variable (Y). This composite score was derived through a principal component analysis (PCA) with varimax rotation, based on the four creativity indicators mentioned above. A single component solution was extracted and used as the outcome variable (Y) for the final analysis, with psychoticism as the independent variable (X) and negative affect as the moderator (W).

3. Results

3.1. Descriptive Statistics

Table 1 includes the summary statistics for all Creativity measures, Psychoticism and Negative Affect. The four components of the Alternative Uses Task (AUT) – fluency, flexibility, elaboration and originality were afterwards standardized and averaged to form the composite AUT total score. Additionally, a composite creativity score was computed using Principal Component Analysis (PCA) based on SSCS, RAT, AUT total, and Forward Flow scores. The analysis yielded one component (eigenvalue > 1) that explained 38.93% of the variance, which was used as the total creativity measure in subsequent analyses.

Table 1

Descriptive Statistics for Creativity Measures, Psychoticism, and Negative Affect

Creativity measures	N	Mean (SD)	Median (Q1–Q3)
SSCS	145	3.63 (0.75)	3.64 (3.14–4.18)
RAT	145	3.61 (2.98)	3.00 (1.00–5.00)
AUT Fluency	145	4.27 (3.20)	4.00 (1.00–6.00)
AUT Flexibility	145	2.88 (2.11)	3.00 (1.00–5.00)
AUT Elaboration (avg.)	145	0.06 (0.17)	0.00 (0.00–0.10)
AUT Originality	145	0.84 (0.65)	1.00 (0.00–1.00)
Forward Flow	144	2.00 (0.05)	0.20 (0.17–0.23)
Psychoticism	145	1.95 (0.65)	2.00 (1.40–2.40)
Negative Affect	145	2.25 (0.57)	2.40 (1.80–2.60)

Note. Sample size (N), means with standard deviations (SD), and medians with interquartile ranges (Q1–Q3) are reported. *Forward Flow* was based on 144 participants due to one missing response.

3.2. Correlations

i. General Correlations

A merged correlation table including all study variables is presented in Table 2. Above the diagonal, Spearman's ρ coefficients are reported. SSCS was significantly positively correlated with AUT total scores, $\rho(145) = .29$, $p < .001$, indicating that individuals who perceived themselves as more creative tended to perform better on divergent thinking tasks. RAT scores were also positively correlated with AUT total scores, $\rho(145) = .30$, $p < .001$, suggesting that better performance on the convergent thinking task was associated with higher divergent thinking scores. However, SSCS was not significantly associated with RAT scores, $\rho(145) = .06$, $p = .48$ and Forward Flow did not show significant associations with SSCS, AUT or RAT scores. Psychoticism showed a positive correlation with SSCS, $\rho(145) = .16$, $p = .05$. Negative Affect was strongly positively correlated with Psychoticism, $\rho(145) = .37$, $p < .001$, indicating that individuals with higher levels of Psychoticism also tended to report greater Negative Affect.

ii. Partial Correlations

Partial correlations were computed to examine the associations between Creativity measures and Psychoticism and Negative Affect and are reported below the diagonal in Table 2, while controlling for the age, gender and education level. Participants with post-master's education were grouped with those holding a master's degree due to the low frequency of the former.

SSCS remained significantly positively correlated with AUT total score, $r(139) = .25$, $p = .003$. RAT scores were also significantly positively correlated with the AUT total score, $r(139) = .33$, $p < .001$, showing that better performance on the convergent thinking task was associated with higher divergent thinking scores. Psychoticism was positively associated with SSCS, $r(139) = .23$, $p = .005$ and with the Forward Flow, $r(139) = 0.19$, $p = .027$. Negative Affect was strongly positively correlated with Psychoticism, $r(139) = .42$, $p < .001$, suggesting that individuals with higher Psychoticism scores tended to report higher levels of Negative Affect.

Table 2

Merged Correlation Table Between Creativity measures, Psychoticism, Negative Affect and Demographic Variables.

Variable	1	2	3	4	5	6	7	8	9
1. SSCS	-	.059	.292**	-.143	.163	.100	.024	-.073	.128
2. RAT	.149	-	.296**	-.143	-.029	-.061	-.055	-.177*	.067
3. AUT total	.251**	.327**	-	-.023	-.141	-.040	.040	-.021	.279**
4. Forward flow	-.109	-.090	.026	-	.153	.169*	-.026	.135	.006
5.Psychoticism	.233**	.032	-.119	.186*	-	-.370**	-.222**	-.196*	-.222**
6. Negative Affect	.077	.017	-.084	.123	.419**	-	-.130	.222**	.070
7. Age	-	-	-	-	-	-	-	.067	.046
8. Gender	-	-	-	-	-	-	-	-	.081
9. Education	-	-	-	-	-	-	-	-	-

Note. Above the diagonal are the general Spearman's ρ correlations. Below the diagonal are the partial correlations (controlling for age, gender and education). $p<.05$(*), $p<.01$(**).

3.3. Moderation Analyses

Moderation analyses were conducted using PROCESS (Model 1) to investigate whether Negative Affect moderated the relationship between Psychoticism and Creativity measures, while also controlling for age, gender, and educational level. Prior to analysis, all variables involved in Psychoticism x Negative Affect were mean-centered. The normality of the moderator was assessed using skewness and kurtosis values, stem-and-leaf plots, and Q–Q plots, to ensure that the use of ±1 SD from the mean as conditional values in the moderation analysis was appropriate, and the results showed that the assumption of normality was sufficiently met.

3.3.1. SSCS

The overall model was significant, F (6, 138) = 3.39, p = .004 and accounted for 12.9% of the variance in SSCS. Psychoticism was a significant positive predictor, b = 0.28, SE = 0.11, p = .011, indicating that higher psychoticism scores were associated with higher self-assessed creativity. However, Negative Affect was not a significant predictor, b = -0.03, SE = 0.12, p = .819. There was a significant interaction between Psychoticism and Negative Affect, b = 0.46, SE = 0.16, t = 2.93, p = .004 (Table 3). Follow-up analyses revealed that the association between Psychoticism and SSCS was non-significant at low levels of Negative Affect (–1 SD) but became significant at average levels of Negative Affect and strongest at high levels of Negative Affect (+1 SD) (Table 4, Figure 1). Thus, the positive association between Psychoticism and SSCS became stronger as Negative Affect increased.

Table 3

Moderation Analysis Predicting Self-Assessed Creativity from Psychoticism, Negative Affect, and their Interaction (PROCESS Model 1).

Predictor	***b***	***SE***	***t***	***p***	**95% CI**
Constant	3.11	0.33	9.38	< .001	[2.45, 3.76]
Psychoticism	0.28	0.11	2.58	.011*	[0.07, 0.50]
Negative Affect	-0.03	0.12	-0.23	.819	[-0.27, 0.21]
Psychoticism × NA	0.46	0.16	2.94	.004*	[0.15, 0.77]
Age (covariate)	0.01	0.01	1.31	.194	[0.00, 0.02]
Gender (covariate)	-0.08	0.13	-0.60	.546	[-0.33, 0.18]
Education (covariate)	0.12	0.06	2.00	.047*	[0.00, 0.25]

Note. $p<.05$(*), $p<.01$(**); *b* = unstandardized regression coefficient; *SE* = standard error; *p* = p-value; CI = confidence interval.

Table 4

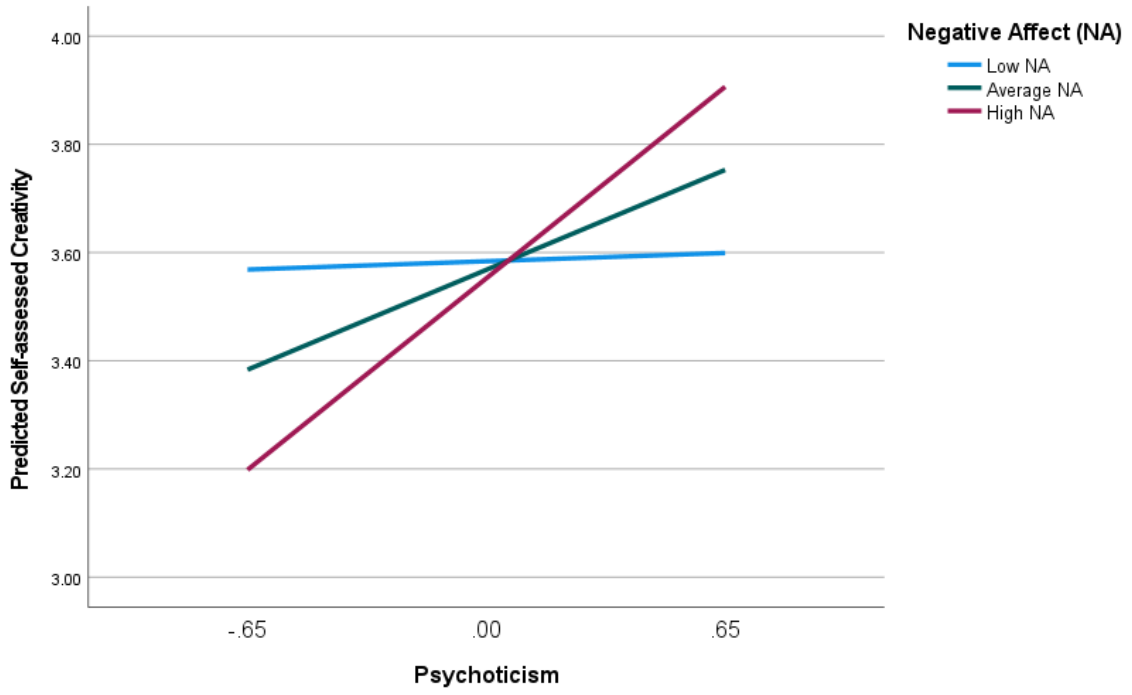
Conditional Effects of Psychoticism on Self-Assessed Creativity at Values of Negative Affect.

NA (centered) level	**B**	**SE**	***t***	***p***	**95% CI**
–1 SD	0.02	0.14	0.16	.870	[-0.26, 0.31]
Mean	0.28	0.11	2.58	.011*	[0.07, 0.50]
+1 SD	0.54	0.14	3.91	<.001**	[0.27, 0.82]

Note. $p<.05$(*), $p<.01$(**).

Figure 1

Interaction between Psychoticism and Negative Affect predicting SSCS (self-assessed creativity).



Note. Predicted values are plotted at low (–1 SD), average (mean), and high (+1 SD) levels of Negative Affect.

3.3.2. RAT

The overall model was not statistically significant, $F(6, 138) = 2.\ 10$, $p = .057$, explaining 8.4% of the variance in RAT. Psychoticism was not a significant predictor, $b = 0.24$, $SE = 0.45$, $p = .585$. Negative Affect was also non-significant, $b = -0.02$, $SE = 0.49$, $p = .971$. The interaction between Psychoticism and Negative Affect was non-significant, $b = -0.47$, $p = .456$, suggesting that Negative Affect did not moderate the relationship between Psychoticism and RAT (Table 5).

Table 5

Moderation Analysis Predicting RAT from Psychoticism, Negative Affect, and their Interaction (PROCESS Model 1)

Predictor	***b***	***SE***	***t***	***p***	**95% CI**
Constant	4.68	1.35	3.48	.001**	[2.02, 7.34]
Psychoticism	0.24	0.45	0.55	.585	[–0.64, 1.12]
Negative Affect (NA)	–0.02	0.49	–0.04	.971	[–0.99, 0.95]
Psychoticism × NA (interaction)	–0.47	0.63	–0.75	.456	[–1.73, 0.78]
Age (covariate)	–0.02	0.02	–0.72	.470	[–0.06, 0.03]
Gender (covariate)	–1.27	0.52	–2.43	.016*	[–2.30, –0.24]
Education (covariate)	0.49	0.25	1.96	.052	[0.00, 0.99]

Note. $p<.05$(*), $p<.01$(**); *b* = unstandardized regression coefficient; *SE* = standard error; *p* = p-value; CI = confidence interval.

3.3.3. Forward Flow

The overall model was not statistically significant, F (6, 137) = 1.52, p = .175, explaining 6.3% of the variance in Forward Flow. Psychoticism was not a significant predictor, $b = 0.01$, $SE = 0.01$, $p = .074$, though the effect was in the positive direction. Negative Affect was also non-significant, $b = 0.00$, $SE = 0.01$, $p = .549$. The interaction between Psychoticism and Negative Affect was also non-significant, $b = -0.01$, $p = .355$, suggesting that Negative Affect did not moderate the relationship between Psychoticism and Forward Flow (Table 6).

Table 6

Moderation Analysis Predicting Forward Flow from Psychoticism, Negative Affect, and their Interaction (PROCESS Model 1).

Predictor	*b*	*SE*	*t*	*p*	95% CI
Constant	0.17	0.02	7.99	<.001	[0.13, 0.21]
Psychoticism	0.01	0.01	1.80	.074	[0.00, 0.03]
Negative Affect (NA)	0.00	0.01	0.60	.549	[–0.01, 0.02]
Psychoticism × NA (Interaction)	–0.01	0.01	–0.93	.355	[–0.03, 0.01]
Age (covariate)	0.00	0.00	0.88	.382	[0.00, 0.00]
Gender (covariate)	0.01	0.01	1.69	.094	[0.00, 0.03]
Education (covariate)	0.00	0.00	0.28	.783	[–0.01, 0.01]

Note. b = unstandardized regression coefficient; *SE* = standard error; p = p-value; CI = confidence interval.

3.3.4. AUT total

The overall model was marginally statistically significant, F (6, 138) = 2.16, p = .050, explaining 8.6% of the variance in AUT total. Psychoticism was not a significant predictor, b = -0.12, *SE* = 0.11, p = .304. Negative Affect was also non-significant, b = -0.06, *SE* = 0.13, p = .637. The interaction between Psychoticism and Negative Affect was not significant, b = 0.13, *SE* = 0.16, p = .421, suggesting that Negative Affect did not moderate the relationship between Psychoticism and AUT total (Table 7). However, Education emerged as a significant predictor, b = 0.17, p = .011, indicating that individuals with higher education levels score higher in divergent thinking tasks.

Table 7

Moderation Analysis Predicting AUT total from Psychoticism, Negative Affect, and their Interaction (PROCESS Model 1).

Predictor	*b*	*SE*	*t*	*p*	95% CI
Constant	-0.30	0.34	-0.87	.386	[-0.98, 0.38]
Psychoticism	-0.12	0.11	-1.03	.304	[-0.34, 0.11]
Negative Affect (NA)	-0.06	0.13	-0.47	.637	[-0.31, 0.19]
Psychoticism × NA (Interaction)	0.13	0.16	0.81	.421	[-0.19, 0.45]
Age (covariate)	0.00	0.01	-0.83	.410	[-0.02, 0.01]
Gender (covariate)	-0.04	0.13	-0.28	.778	[-0.30, 0.23]
Education (covariate)	0.17	0.06	2.57	.011*	[0.04, 0.29]

Note. p<.05(*), p<.01(**); b = unstandardized regression coefficient; *SE* = standard error; *p* = p-value; CI = confidence interval.

3.3.5 Composite Creativity

The overall model was statistically significant, $F(6, 137) = 2.57$, $p = .022$, explaining 10.1% of the variance in Composite Creativity. However, neither Psychoticism $b = 0.06$, $p = .709$, nor Negative Affect $b = -0.07$, $p = .677$, significantly predicted composite creativity as main effects, indicating that neither trait alone was meaningfully associated with creative performance in this sample. The interaction between Psychoticism and Negative Affect was also not significant, $b = 0.30$, $p = .159$, suggesting that Negative Affect did not moderate the relationship between Psychoticism and Composite Creativity (Table 8). Among the covariates, education was a significant predictor, $b = 0.24$, $p = .005$.

Table 8

Moderation Analysis Predicting Composite Creativity from Psychoticism, Negative Affect, and their Interaction (PROCESS Model 1).

Predictor	***b***	***SE***	***t***	***p***	**95% CI**
Constant	-0.18	0.45	-0.41	.684	[-1.07, 0.70]
Psychoticism	0.06	0.15	0.37	.709	[-0.24, 0.35]
Negative Affect (NA)	-0.07	0.16	-0.42	.677	[-0.39, 0.26]
Psychoticism × NA (Interaction)	0.30	0.21	1.42	.159	[-0.12, 0.72]
Age (covariate)	0.00	0.01	-0.37	.711	[-0.02, 0.01]
Gender (covariate)	-0.31	0.17	-1.78	.077	[-0.65, 0.03]
Education (covariate)	0.24	0.08	2.87	.005**	[0.08, 0.41]

Note. p<.05(*), p<.01(**); *b* = unstandardized regression coefficient; *SE* = standard error; *p* = p-value; CI = confidence interval.

4. Discussion

The present study examined the relationship between psychoticism and creativity, as well as the potential influence of negative affect (NA). In summary, the findings provided partial support for the previous hypotheses. Psychoticism showed a positive association with self-perceived creativity, as measured by the Short Scale of Creative Self (SSCS) and was also positively correlated with performance on the Forward Flow task when demographic factors were considered.

However, psychoticism did not show consistent associations with the other creativity measures (e.g. Alternative Uses Task; AUT, Remote Associates Test; RAT). NA did not predict creativity, nor did it alter the link between psychoticism and creativity. Instead, the only effect observed was an interaction between SSCS and NA, particularly at high levels of NA. Finally, it

is noteworthy that among the control variables, education level emerged as a significant predictor on the divergent thinking task (AUT).

4.1. Hypotheses and Findings

Hypothesis 1. It was hypothesized that psychoticism would be positively related to creativity, particularly in tasks measuring divergent thinking compared to convergent thinking. This hypothesis was only partly confirmed. Psychoticism showed a positive association with the Forward Flow when demographic factors were controlled, but not with the AUT or RAT. This means that people with relatively high psychoticism levels tended to score higher on the Forward Flow task, a measure capturing the semantic distance and progression of an unconstrained thought that has also been shown to predict divergent thinking performance as well as creativity (Gray et al., 2019).

Although psychoticism did not demonstrate the expected advantage for divergent over convergent thinking, its association with the Forward Flow task provides limited support for earlier suggestions that psychoticism may foster creativity through reduced latent inhibition, by allowing a broader range of associations, which has also been linked to creative achievement (Eysenck, 1993; Stavridou & Furnham, 1996; Carson, Peterson, & Higgins, 2003; Carson, 2011). In addition, the associative and less constrained nature of Forward Flow appears to align with the cognitive mechanisms linked to psychoticism, as it captures a form of continuity by emphasizing the natural progression and semantic distance between ideas. As a result, both constructs may benefit from reduced latent inhibition without imposing evaluative or goal-directed restrictions. In contrast, the Alternative Uses Task (AUT) and the Remotes Associates Test (RAT) combine both associative and executive demands, such as goal maintenance, response selection and

controlled retrieval of associations. These additional control processes are likely to reduce any potential of an overinclusive associative style among individuals higher in psychoticism.

Furthermore, psychoticism displayed a positive association with SSCS. This suggests that people higher in psychoticism may be more likely to regard themselves as creative, although this self-assessment was not mirrored in several performance-based tasks (e.g. RAT, AUT). From the perspective of creative self-beliefs, the pattern found at an individual level is not unexpected. Prior research shows that self-beliefs about creativity can be organized into categories such as creative confidence (self-efficacy and self-concept), creative self-awareness (metacognition and mindset) and creative self-image (identity related valuations of creativity; Karwowski, Lebuda, & Beghetto, 2019). In this context, the SSCS was developed to measure trait-like creative self-efficacy and creative personal identity both of which capture broad appraisals of creativity and participation in a variety of contexts (Karwoski, Lebuda, & Wiśniewska, 2018; see also Karwowski, 2011).

In terms of the validity of self-perceptions of creativity as a measure of creative performance, the evidence is less encouraging and caution is advised. Reiter-Palmon, Robinson-Morral, Kaufman, & Santo (2012) found that self-perceptions of creativity did not correlate with performance-based measures of creative problem solving and were only weakly related to objective indicators of creative accomplishment. At the same time, research indicates that that self-report creativity scales can perform well psychometrically in low-stakes research settings, though they remain susceptible to socially desirable responding such as the “Faking good” effect, particularly when individuals wish to appear more creative than they are (Silvia et al., 2012).

While the SSCS retains validity in predicting creative behavior, its association with psychoticism may have a different psychological basis. Specifically, the elevated creative self-

beliefs among individuals high in psychoticism may primarily reflect an intensified self-perception of the creative ability and identity involvement, rather than higher creative performance. This interpretation aligns with findings that self-perceptions of creativity are strongly related to creative self-efficacy, yet only weakly associated with objective indicators of creative performance.

Hypothesis 2. The second hypothesis that negative affect would be negatively associated with creativity, was not supported. NA did not show direct links with SSCS or with performance-based creativity measures. This finding aligns with prior work reporting inconsistent or null relationships between NA and creativity (Karwowski et al. 2017, Study 1; Silvia et al., 2014). One explanation, noted by Silvia et al. (2014) is that trait measures may be too broad to capture the momentary emotional states that matter for creativity. Karwowski et al. (2017, Study 1) also observed that because creativity is multidimensional, NA might influence only specific aspects of it, which can result in inconsistent findings. Creativity often unfolds dynamically and is influenced by momentary affective states that can fluctuate across tasks. The present study measured NA from the PID-5 (PID-5; Krueger et al. 2013), which reflects a relatively stable personality tendency rather than short-term mood variation. The absence of a direct relationship may reflect a temporal-level mismatch between the measurement of affect as trait and the expression of creativity as a momentary performance.

The present findings extend previous work by demonstrating a null overall main effect of NA on creativity measures. Meta-analytic evidence has indicated that affect's impact on creativity depends on factors such as motivational activation and regulatory focus (Baas et al., 2008). Thus, trait NA may not generate sufficient motivational activation in neutral testing contexts to meaningfully impact creative performance. In contrast to experimental findings

where negative mood sometimes facilitates creativity under conditions of evaluative pressure or high structure (George & Zhou, 2002; Forgas, 2013), the present study found no evidence that either NA suppresses or enhances creativity performance. In that sense, individuals who experience higher levels of negative affect do not view themselves as less creative, nor do they perform worse on creative tasks. Instead, the effects of negative affect on creativity may emerge momentarily and depend on how individuals channel their emotions during creative engagement.

Hypothesis 3. The hypothesis that NA would moderate the relationship between psychoticism and creativity, received limited support. In particular, the prediction was that the interaction would be strongest at moderate levels of NA, based on the assumption that mild NA can promote persistence and structure, whereas high NA would constrain cognitive resources and impair creativity (Baas et al., 2008; Forgas, 2013; Bledow, Rosing, & Frese, 2013). The results partly supported this idea. No moderation effects were observed for performance-based measures, but an interaction was found for self-perceived creativity (SSCS).

Specifically, individuals higher in psychoticism reported greater self-perceived creativity when NA levels were also high. This finding extends the results of Hypothesis 1, suggesting that psychoticism is positively related to creativity self-perceptions and that NA influences how individuals high in psychoticism evaluate their own creativity rather than their actual creative performance. At low levels of NA there was no interaction observed but it became significant at average levels and was strongest at high levels. The moderation was therefore partially consistent with expectations and did not extend to measures such as the AUT, RAT or Forward Flow.

From a research perspective, these findings highlight the importance of distinguishing between subjective and objective facets of creativity. NA could possibly amplify self-perceived creativity among individuals higher in psychoticism, possibly due to increased emotional

intensity, self-focus or motivational drive. In high-psychoticism individuals who are more prone to bizarre associative content, this accelerated appraisal may act as a self-signaling process that amplifies creative self-beliefs while leaving task output itself unchanged. Future studies should therefore investigate whether this pattern reflects affective biases or genuine increases in creative engagement.

4.2. Strengths and Limitations

The present study used multiple creativity measures. By including self-report (e.g. SSCS) and performance-based tasks (e.g. AUT, RAT, Forward Flow) it was possible to capture different facets of creativity within a single design. This multidimensional approach provides a more comprehensive assessment than studies relying only on a single measure. At the same time this approach introduces complexity: the indicators did not overlap fully as seen on the lack of consistent associations across measures.

A positive aspect is also the fact that there was a relatively balanced gender distribution (46% male, 54% female), which reduces the likelihood of gender-related bias. The sample also included participants with a range of educational backgrounds, nearly one third holding a bachelor's degree and more than one third a master's or higher, supporting variability in academic attainment. These characteristics support variability in academic attainment, although the age distribution was skewed toward younger adults. Participants ranged from 18 to 63 years, with a median age of 29.5 years, making the sample primarily representative of younger adults, which limits generalizability to older adults.

Despite these advantages, several limitations should be noted. First, both psychoticism and NA were measured with the brief version of the PID-5, consisting of only five items each

(PID-5; Krueger et al., 2013). While this format reduces participant burden and makes it feasible to include multiple creativity measures, it also restricts content coverage and lowers reliability. Psychoticism showed acceptable internal consistency, but NA was less reliable. This choice was made partly because the study formed part of a larger survey. Given that the full procedure took on average twenty minutes to complete, the brief scales were necessary to prevent fatigue and disengagement. Second, creativity was assessed with a shortened version of the RAT, consisting of 15 items. Although, it was practical for time management, the limited number of items lowered the test's sensitivity compared to studies that used standardized versions of the RAT.

In addition, previous research has suggested that self-report measures of creativity often capture a general positive valuation of creativity rather than actual creative ability (Karwowski, 2011). In the present study this distinction is relevant as participants did not do well on performance-based creativity measures, yet psychoticism was positively associated with SSCS. This indicates that individuals high in psychoticism may be more inclined to view themselves as creative even if it is not reflected in their actual performance.

As a result, the order of measurement appearance may have influenced responses. The SSCS was administered at the end of the procedure, after participants had competed the performance tasks. This order could have shaped self-perceptions of creativity based on immediate task experience and performance evaluations. For example, individuals who perceived their answers as original or thought that they did well on the tasks, may have rated themselves more favorably. As a result, SSCS may represent situational judgements rather than stable self-concepts. This complicates the interpretation of the psychoticism and SSCS link as the association may have been influenced by impressions formed during the tasks.

4.3. Theoretical and practical implications

Despite these limitations, the present findings make several contributions. The discrepancy between self-perceived and task-based creativity underscores the importance of differentiating creative identity and creative performance in research. The positive association between psychoticism and Forward Flow also supports the idea that unusual associative processes may be a cognitive characteristic of psychoticism.

From a clinical perspective, the findings contribute to a dimensional understanding of psychoticism while clarifying its parallels with clinical phenomena. They suggest that nonpatient individuals high in psychoticism may hold creative self-beliefs even in the absence of corresponding gains in creative performance. This discrepancy may reflect cognitive or emotional mechanisms with limited self-monitoring or insight. Clinically this is relevant because it mirrors patterns in individuals at the subclinical levels of psychosis who may display heightened creativity in their tendency to find hidden meaning in everyday events and a strong inclination to form unusual associations. While such associative richness can fuel imaginative thinking, it may also blur the boundaries between internal experience and external reality. Individuals with elevated psychoticism may therefore rely heavily on their own interpretations, showing limited openness to external feedback.

From a therapeutic standpoint, recognizing these tendencies highlights the importance of psychoeducation and metacognitive interventions. Helping clients understand how their thought patterns influence both their creativity and their perception of reality can foster self-awareness and emotional regulation. Clinicians can guide individuals to appreciate their adaptive aspects of their creativity while also developing strategies to evaluate their ideas and interpretations. This can be helpful to therapeutic contexts where creativity can be addressed as a part of self-esteem

and provide clinicians with opportunities to strengthen their clients' sense of identity. Structured interventions might even use creative outlets to channel unusual associative tendencies into adaptive outcomes.

4.4. Conclusion

This study provides modest support for a link between psychoticism and creativity. Psychoticism is associated with increased self-perceived creativity and with Forward Flow, but not with divergent or convergent performance. Negative affect did not predict creativity directly and only moderated self-perceptions of creativity at moderate to high levels. These results suggest that psychoticism role in creativity may lie more in how people perceive their creative potential and that these self-perceptions are shaped by affective dispositions. Experiences of tension, sadness and irritability did not predict creativity directly but strengthened the association between psychoticism and self-perceived creativity, even though this was not reflected in their individuals' performance.

References

Abu-Akel, A., Webb, M. E., de Montpellier, E., Von Bentivegni, S., Luechinger, L., Ishii, A., & Mohr, C. (2020). Autistic and positive schizotypal traits respectively predict better convergent and divergent thinking performance. *Thinking Skills and Creativity*, *36*, 100656. https://doi.org/10.1016/j.tsc.2020.100656

Acar, S. & Runco, M. A. (2012). Psychoticism and Creativity. *Psychology of Aesthetics, Creativity, and the Arts, 6* (4), 341-350. https://doi.org/10.1037/a0027497

Acar, S., Chen, X., & Cayirdag, N. (2018). Schizophrenia and creativity: A meta-analytic review. *Schizophrenia Research, 195,* 23-31. https://doi.org/10.1016/j.schres.2017.08.036

American Psychiatric Association, DSM-5 Task Force. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5™* (5th ed.). American Psychiatric Publishing, Inc. https://doi.org/10.1176/appi.books.9780890425596

Aristotle. (2001). In J. Barnes (Ed.), *The Complete Works of Aristotle: The Revised Oxford Translation*. Princeton University Press.

Baas, M., De Dreu, C. K. W., & Nijstad, B. A. (2008). A meta-analysis of 25 years of mood creativity research: Hedonic tone, activation, or regulatory focus? *Psychological Bulletin, 134*(6), 779-806. https://doi.org/10.1037/a0012815

Baumann, N., & Kuhl, J. (2002). Intuition, affect, and personality: Unconscious coherence judgments and self-regulation of negative affect. *Journal of Personality and Social Psychology*, *83*(5), 1213-1223. https://doi.org/10.1037/0022-3514.83.5.1213

Berrios, G. E. (1996). *The history of mental symptoms: Descriptive psychopathology since the nineteenth century.* Cambridge University Press.

Bledow, R., Rosing, K., & Frese, M. (2013). A Dynamic Perspective on Affect and Creativity. *Academy of Management Journal*, *56*(2), 432-450. https://doi.org/10.5465/amj.2010.0894

Bledow, R., Kühnel, J., & Kuhl, J. (2024). Personality dynamics turn positive and negative mood into creativity. Journal of Personality. https://doi.org/10.1111/jopy.12913

Carson, S. H., Peterson, J. B., & Higgins, D. M. (2003). Decreased Latent Inhibition Is Associated With Increased Creative Achievement in High-Functioning Individuals. Journal of Personality and Social Psychology, 85(3), 499–506. https://doi.org/10.1037/0022-3514.85.3.499

Carson S. H. (2011). Creativity and psychopathology: a shared vulnerability model. Canadian journal of psychiatry. Revue canadienne de psychiatrie, 56(3), 144–153. https://doi.org/10.1177/070674371105600304

Clark, L.A., & Watson, D. (1991). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology, 100*(3), 316-336. https://doi.org/10.1037/0021-843X.100.3.316

Conner, T. S., & Silvia, P. J. (2015). Creative days: A daily diary study of emotion, personality, and everyday creativity. *Psychology of Aesthetics, Creativity, and the Arts, 9*(4), 463–470. https://doi.org/10.1037/aca0000022

Conner, T. S., DeYoung, C. G., & Silvia, P. J. (2018). Everyday creative activity as a path to flourishing. *The Journal of Positive Psychology, 13*(2), 181–189. https://doi.org/10.1080/17439760.2016.1257049

Devlin, J., Chang, M. W., Lee, K., & Toutanova, K. (2019). BERT: Pre-training of deep bidirectional transformers for language understanding. *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies,* 4171-4186. https://doi.org/10.48550/arXiv.1810.04805

DeYoung, C. G., Grazioplene, R. G., & Peterson, J. B. (2012). *From madness to genius:* The Openness/Intellect trait domain as a paradoxical simplex. *Journal of Research in Personality, 46*(1), 63-78.https://doi.org/10.1016/j.jrp.2011.12.003

Dietrich, A. (2014). *The mythconception of the mad genius.* Frontiers in Psychology, 5, 79. https://doi.org/10.3389/fpsyg.2014.00079

Dudek, S. Z. (1993). Creativity and Psychoticism: An Overinclusive Model. *Psychological Inquiry*, *4*(3), 190-192. https://doi.org/10.1207/s15327965pli0403_6

Eysenck, H.J. (1993). Creativity and personality: Suggestions for a theory. *Psychological Inquiry, 4,* 147-178. https://doi.org/10.1207/s15327965pli0403_1

Eysenck, H.J., & Eysenck, S. B. G. (1976). *Psychoticism as a dimension of personality.* London: Hodder and Stoughton.

Feist, G. J. (1998). A Meta-Analysis of Personality in Scientific and Artistic Creativity. *Personality and Social Psychology Review*, *2*(4), 290-309. https://doi.org/10.1207/s15327957pspr0204_5

Fink, A., Benedek, M., Unterrainer, H.-F., Papousek, I., & Weiss, E. M. (2014). Creativity and psychopathology: are there similar mental processes involved in creativity and in psychosis-proneness? *Frontiers in Psychology*, *5*. https://doi.org/10.3389/fpsyg.2014.01211

Fink, A., Weber, B., Koschutnig, K., Benedek, M., Reishofer, G., Ebner, F., Papousek, I., & Weiss, E. M. (2013). Creativity and schizotypy from the neuroscience perspective. *Cognitive, Affective, &Amp; Behavioral Neuroscience*, *14*(1), 378-387. https://doi.org/10.3758/s13415-013-0210-6

Forgas, J. P. (2013). Don't Worry, Be Sad! On the Cognitive, Motivational, and Interpersonal Benefits of Negative Mood. *Current Directions in Psychological Science*, *22*(3), 225-232. https://doi.org/10.1177/0963721412474458 (Original work published 2013)

Freud, S. (1959). *Creative Writers and Day-Dreaming.* In J. Strachey (Ed. & Trans.), The standard edition of the complete psychological works of Sigmund Freud (Vol. 9, pp. 141-153). Hogarth Press. (Original work published 1908).

George, J. M., Jing Zhou, & Zhou, J. (2002). Understanding when bad moods foster creativity and good ones don't: the role of context and clarity of feelings. *The Journal of Applied Psychology*, *87*(4), 687–697. https://doi.org/10.1037/0021-9010.87.4.687

Gray, K., Anderson, S., Chen, E., Kelly, J.M., Christian, M., Patrick, J., Huang, L., Lewis, K. (2019). "Forward flow": A new measure to quantify free thought and predict creativity. *American Psychologist, 74*(5), 539-554. https://doi.org/10.1037/amp0000391

Guilford, J. P. (1967). *The nature of human intelligence.* McGraw-Hill.

Hayes, A. F. (2022). PROCESS macro for SPSS and SAS (Version 4.2) [Computer software]. https://www.processmacro.org/index.html

Ivcevic, Z., & Brackett, M. A. (2015). Predicting creativity: Interactive effects of openness to experience and emotion regulation ability. *Psychology of Aesthetics, Creativity, and the Arts*, *9*(4), 480-487. https://doi.org/10.1037/a0039826

Jones, T., Caulfield, L., Wilkinson, D., & Weller, L. (2011). The Relationship Between Nonclinical Schizotypy and Handedness on Divergent and Convergent Creative Problem-Solving Tasks. *Creativity Research Journal*, *23*(3), 222–228. https://doi-org.eur.idm.oclc.org/10.1080/10400419.2011.595964

Kaufman, J. C., Bromley, M. L., & Cole, J. C. (2006). Insane, Poetic, Lovable: Creativity and Endorsement of the "Mad Genius" Stereotype. *Imagination, Cognition and Personality, 26*(1), 149-161. https://doi.org/10.2190/J207-3U30-R401-446J (Original work published 2006).

Karwowski, M. (2011). Short Scale of Creative Self: Creative Self-Efficacy and Creative Personal Identity. University of Wroclaw.

Karwowski, M., Lebuda, I., Szumski, G., & Firkowska-Mankiewicz, A. (2017). From moment-to-moment to day-to-day: Experience sampling and diary investigations in adults'

everyday creativity. *Psychology of Aesthetics, Creativity, and the Arts, 11*(3), 309–324. https://doi.org/10.1037/aca0000127

Karwowski, M., Lebuda, I., & Wiśniewska, E. (2018). *Measuring Creative Self-efficacy and Creative Personal Identity*. *The International Journal of Creativity & Problem Solving*, 28(1), 45-57.

Karwowski, M., Lebuda, I., & Beghetto, R. A. (2019). Creative self-beliefs. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (2nd ed., pp. 396–417). Cambridge University Press. https://doi.org/10.1017/9781316979839.021

Kline, P., & Cooper, C. (1986). Psychoticism and Creativity. *The Journal of Genetic Psychology*, *147*(2), 183–188. https://doi.org/10.1080/00221325.1986.9914492

Kris, E. (1952). *Psychoanalytic explorations in art.* International Universities Press.

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2012). Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychological Medicine*, *42*(9), 1879–1890. https://doi.org/10.1017/S0033291711002674

Krueger, R.F., Derringer, J., Markon, K. E., Watson D., & Skodol, A. E. (2013). *The Personality Inventory for DSM-5 Brief Form (PID-5-BF).*

Kyaga, S. (2015). *Creativity and mental illness: The mad genius in question.* Palgrave Macmillan/Springer Nature. https://doi.org/10.1057/9781137345813

Lubow R. E. (2005). Construct validity of the animal latent inhibition model of selective attention deficits in schizophrenia. *Schizophrenia bulletin*, *31*(1), 139–153. https://doi.org/10.1093/schbul/sbi005

Mednick, S. A. (1962). The associative basis of the creative process. *Psychological Review,* 69(3), 220-232. https://doi.org/10.1037/h0048850

Muhammad, K., Nadeem, D. M., & Nadeem, A. (2021). Relationship between Psychoticism and Creativity. *Journal of Professional &Amp; Applied Psychology*, *2*(2), 199-205. https://doi.org/10.52053/jpap.v2i2.37

Organisciak, P., Acar, S., Dumas, D., & Berthiaume, K. (2023). *Beyond semantic distance: Automated scoring of divergent thinking greatly improves with large language models. Thinking Skills and Creativity, 49,* 101356. https://doi.org/10.1016/j.tsc.2023.101356

Puryear, J. S., Kettler, T., & Rinn, A. N. (2017). Relationships of personality to differential conceptions of creativity: A systematic review. *Psychology of Aesthetics, Creativity, and the Arts, 11*(1), 59–68. https://doi.org/10.1037/aca0000079

Runco, M. A., & Acar, S. (2012). Divergent Thinking as an Indicator of Creative Potential. *Creativity Research Journal*, *24*(1), 66–75. https://doi.org/10.1080/10400419.2012.652929

Simon, B. (1978). *Mind and madness in ancient Greece: The classical roots of modern psychiatry*. Cornell University Press.

Silvia, P. J., Wigert, B., Reiter-Palmon, R., & Kaufman, J. C. (2012). Assessing creativity with self-report scales: A review and empirical evaluation. *Psychology of Aesthetics, Creativity, and the Arts*, *6*(1), 19-34. https://doi.org/10.1037/a0024071

Silvia, P. J., Beaty, R. E., Nusbaum, E. C., Eddington, K. M., Levin-Aspenson, H., & Kwapil, T. R. (2014). Everyday creativity in daily life: An experience-sampling study of "little c" creativity. *Psychology of Aesthetics, Creativity, and the Arts, 8*(2), 183–188. https://doi.org/10.1037/a0035722

Simonton, D.K. (2014). *The Mad-Genius Paradox: Can Creative People Be More Mentally Healthy But Highly Creative People More Mentally Ill?* Perspectives on Psychological Science, 9(5), 470–480. https://doi.org/10.1177/1745691614543973

Stavridou, A., & Furnham, A. (1996). The relationship between psychoticism, trait-creativity and the attentional mechanism of cognitive inhibition. Personality and Individual Differences, 21, 143-153. https://doi.org/10.1016/0191-8869(96)00030-X

Reiter-Palmon, R., Robinson-Morral, E. J., Kaufman, J. C., & Santo, J. B. (2012). Evaluation of Self-Perceptions of Creativity: Is It a Useful Criterion? *Creativity Research Journal*, *24*(2-3), 107-114. https://doi.org/10.1080/10400419.2012.676980

University of Colorado. *Matrix comparison tool.* http://wordvec.colorado.edu/matrix_comparison.html

Wang, L., Pei, Y., Zhu, Y., Long, H., & Pang, W. (2024). The Moderation Effect of Approach Motivation Between Schizotypy and Creative Ideational Behavior. *Psychology Research and Behavior Management*, 1947-1960. https://doi.org/10.2147/prbm.s441013

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Yoon, H. J. (2024). Dual Pathways Linking Trait Negative Affect to Employee Creativity. *Journal of Ecohumanism, 3*(8), 9421–. https://doi.org/10.62754/joe.v3i8.5560