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Low inhibitory control mediates the negative relationship between hypomania and creativity in divergent thinking

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ABSTRACT

Hypomanic traits are often assumed to enhance creative thinking, but empirical evidence is mixed. The present study assessed creativity in divergent thinking across a broad range of hypomanic traits. Participants (n = 468, including both healthy adults and individuals with bipolar disorder) completed Alternate Uses Tasks (AUT) in which they generated novel uses for common objects. Independent raters scored each response for creative quality, considering both originality and usefulness, yielding two metrics per participant: mean creativity (average idea quality) and maximum creativity (average of the most creative ideas). Inhibitory control was measured using a Stroop color-word task. Regression analyses showed that higher hypomanic traits predicted greater fluency (i.e., more uses generated) but lower creative quality in AUT (both lower mean creativity and lower maximum creativity). No evidence for a curvilinear (inverted-U) relationship was found. Moreover, higher hypomanic scores were associated with more interference errors in Stroop performance, and greater Stroop interference correlated with lower creativity. Mediation analysis indicated that Stroop interference partially accounted for the negative hypomania–creativity link. These findings suggest that individuals high in hypomanic traits tend to produce many ideas, but those ideas are, on average, less creative—partly due to diminished inhibitory control. The results underscore the importance of measuring creative quality, not only fluency or originality, and considering executive functions when studying creative thinking in bipolar-spectrum populations.

1. Introduction

Since ancient times, mood disorders have been associated with creativity, as reflected in the “mad genius” stereotype (Forthmann et al., 2023; Kyaga, 2015). Biographical accounts and epidemiological studies suggest that creative professionals (e.g., artists and writers) exhibit more bipolar-spectrum symptoms than the general population (Kyaga et al., 2011, 2013). Self-report surveys often find a link between self-perceived creativity and bipolar or hypomanic traits (Furnham et al., 2008; Greenwood et al., 2022; Johnson et al., 2025; Ruiter and Johnson, 2015). However, *objective* tests of creative thinking have yielded mixed results. Recent reviews note no clear consensus that bipolar disorder (BD) confers a substantial creative advantage (Cruz et al., 2022; Forthmann et al., 2023), and if any advantage exists, it appears modest. This study examines divergent thinking (DT) performance across a broad sample, including both non-clinical individuals and those reporting a BD diagnosis.

DT is measured with open-ended tasks that require generating ideas without a single correct answer (Guilford, 1967). A common example is the Alternate Uses Task (AUT), where participants list novel uses for familiar objects. Responses are often scored by fluency (number of ideas), originality (statistical rarity), flexibility (variety of categories), and elaboration (details). However, creativity is commonly defined as ideas that are both novel and useful (Runco and Jaeger, 2012), so the mere number of ideas, statistical rarity of ideas, number of categories, or detailedness (or their sum) do not guarantee creative quality. Accordingly, we evaluate participants’ responses using creativity quality ratings (Koivisto and Toivanen, 2024) that combine originality and usefulness.

Studies examining DT in bipolar disorder have revealed inconsistent results. For instance, Cruz et al. (2022) reported that comparisons of BD patients with healthy controls on creative tasks were heterogeneous, failing to confirm that BD enhances creativity. Similarly, a recent meta-analysis (Forthmann et al., 2023) found only a very small average advantage for BD on DT, if any. In short, BD patients – especially during full manic episodes – generally do not outperform controls on idea-generation tasks, and any creativity benefit seems marginal and state-dependent.

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A related question is whether subclinical hypomanic traits in the general population are related to creativity. Hypomania is a risk factor for BD, and it refers to elevated or irritable mood and increased activity or energy, which are not as severe as in mania (American Psychiatric Association, 2013). One hypothesis is an inverted-U pattern: mild hypomanic traits might boost creativity, whereas more severe symptoms could impair it. Studies using hypomanic personality scales have shown mixed results. Some large surveys find no correlation between hypomanic traits and divergent-thinking performance (Siegel and Bugg, 2016; Von Stumm et al., 2011). Others report only modest associations: higher HPS scores (Hypomanic Personality Scale, Eckblad and Chapman, 1986) sometimes predict slightly greater idea fluency or higher creativity ratings (LeBoutillier et al., 2016; Zabelina et al., 2014). Conversely, some studies suggest stronger hypomanic symptoms are linked to poorer idea originality (Carter et al., 2019). Overall, no clear consensus has emerged as to how hypomanic traits relate to creative performance.

Part of the discrepancy across studies may stem from how creativity is operationalized. Many investigations emphasize idea quantity (fluency) or originality (Carter et al., 2019; Von Stumm et al., 2011), or they assess separately the components of creativity (e,g., fluency, originality, flexibility, etc.) or their composite (Baas et al., 2020; Siegel and Bugg, 2016) rather than judging the actual creative quality of the responses. Creative ideas should be both original and useful (Runco and Jaeger, 2012). Merely generating more ideas elevates the chance of finding an unusual one (Plucker et al., 2011), so individuals with very high fluency – possibly those with hypomanic traits – might appear creative if only their single best idea is considered. However, if creativity is assessed by the average quality of all responses, a prolific thinker who produces mostly commonplace ideas may score poorly despite a few standout ideas. These differences in scoring methods can substantially influence conclusions about hypomania and creativity.

Another relevant factor is cognitive control. Bipolar and hypomanic individuals often exhibit deficits in executive function, particularly in inhibitory control (Murphy et al., 1999; Traykova et al., 2025). In theory, reduced inhibition could have two opposing effects: it might free thought and encourage unusual associations (Carson et al., 2003; Radel et al., 2015), but it could also allow routine or irrelevant ideas to intrude on the mind, lowering overall idea quality. Indeed, stronger DT has been linked to better inhibitory control, assessed by a Stroop color-word task (Edl et al., 2014), suggesting, in line with the controlled-attention theory of creativity (Beaty et al., 2014), that inhibition actually can aid creative search. Thus, weaker inhibition in hypomania might lead to many low-quality ideas and reduce overall creativity. To our knowledge, no prior study has directly tested whether inhibitory control mediates the relationship between hypomanic traits and creative idea generation.

The present study addresses these gaps by examining divergent-thinking quality and inhibitory control together. Participants performed the AUT with instructions emphasizing creative quality (i.e., originality and usefulness) rather than quantity of ideas. We used two measures of creative quality: the average creativity of all ideas and the maximum creativity (the highest-rated idea/probe). We assessed inhibitory control via a Stroop task where participants responded to congruent and incongruent color-words. This design allows for testing whether Stroop interference mediates any association between hypomanic traits and creative performance. For example, if higher hypomanic scores predict poorer inhibition, this could explain why such individuals might produce more low-quality ideas (lower mean creativity) even if they occasionally generate an exceptionally creative idea (higher maximum creativity). In sum, by using creative quality ratings along with an inhibitory control measure, we aim to clarify how hypomanic tendencies are related to creative idea generation beyond mere idea count or rarity.

2. Method

2.1. Participants

A total of 475 participants were recruited from Prolific (prolific.com), of whom 400 were from the general population, and 75 had self-reported a BD diagnosis. This allowed a large range of hypomanic traits to be examined as a continuum.

The inclusion criteria were age 18–65, English as a native language in countries where English is the dominant language, and the ability to complete the study with either a desktop or laptop computer. Dyslexia was an exclusion criterion because the DT task required writing. Gender distribution was balanced using Prolific's quota sampling method. Participants were paid £4 for about 30 min participation.

Of the participants, 54 voluntarily withdrew from the study, 1 was dropped due to a failed instruction check, and 3 were inactive after exceeding the time limit of 87 min determined by Prolific. Prolific automatically replaced those with new participants. None failed more than one of the three attention check statements embedded in the self-rating scales. Data from 7 participants (5 from the general subsample, 2 from the bipolar subsample) were removed due to incomplete data in the outcome variables, indicating inactivity.

The final sample consisted of 468 participants (226 women, 336 men, and 6 with missing gender information). The mean age of the participants was 39.5 years (SD = 12.3). The recruitment groups did not differ in age, $t(466) = 0.91$, $p = .364$. The highest level of education, or the closest education level corresponding to the provided alternatives, was reported according to eight alternatives: No formal education ($n = 1$), Elementary school ($n = 2$), High school diploma or equivalent ($n = 107$), Vocational/Trade school (n = 44), Associate's degree ($n = 25$), Bachelor's degree ($n = 108$), Master's degree ($n = 85$), Doctorate or PhD (n = 18). A Mann-Whitney U test did not detect a statistically significant difference between the recruitment groups in education, $U = 13{,}116$, $p = .201$. Two hundred thirty-two participants resided in the United States, 198 in the United Kingdom, 28 in Canada, 3 in Australia, and the information was lacking for 7 participants.

All subjects gave their informed consent to participate in the study. The study was conducted in accordance with the Declaration of Helsinki, and accepted by the Ethics Committee for Human Sciences at the University of Turku, Finland (20.05.2025, approval no. TY/866/2025).

2.2. General procedure

The study was part of a larger project preregistered at OSF. io: https://osf.io/7pe4d/overview?view_only=e177a9e56a3143ab94ac10e23c49ac97 The project examines whether (hypo)mania is associated with creative divergent thinking and real-life creative achievements, and whether the possible associations are moderated or mediated by cognitive and/or affective factors—specifically, inhibitory control, the spontaneous flow of thought, mood state, the experience of flow, and novelty seeking.

The study was conducted online using PsyToolkit (Stoet, 2010, 2017). The present data were gathered in the same session with other scales not relevant to the present study. Before the study began, participants had to prove they were human by solving a CAPTCHA. The scales and tasks were administered in a fixed sequence, with the hypomania scale always completed first, the Internal State Scale (ISS) mood assessment third, the AUT fourth, and the Stroop task sixth.

2.3. Scales

Hypomania was measured using the Hypomanic Personality Scale (HPS) (Eckblad and Chapman, 1986). HPS contains 48 statements, and the participants judge whether they agree (“yes”) or disagree (“no”) with them. HPS assesses manic and hypomanic features with statements that can be divided into three subscales: social vitality, mood volatility, and excitement. Each response indicating hypomania is given a value of 1. Thus, the hypomania score can range from 0 to 48. The internal consistency of the HPS in this study was good (α = .93).

The mood during the test session was assessed with the Internal State Scale (ISS) (Bauer, 1991). It consists of 15 statements measuring 4 subscales: Activity (5 items), Well-being (3 items), Conflict (5 items), and Depression (2 items). The participants indicated using a slider how well each statement described their feelings over the past 24 h (0 = not at all, 100 = very much). Depression was operationalized as a categorical variable (yes/no) based on the algorithm of Bauer et al. (2000), such that a depressive state was present if the activity score was below 155 and the well-being score was below 125.

2.4. Alternate Uses Task (AUT)

The probe objects were *brush, hammer, mirror, umbrella, barrel, basket, football, and pants*, divided into two sets of 4 probes.[1] Each participant performed one of the probe sets (4 probes in randomized order). They were given 90 s to respond to each probe, after which the probe changed automatically. The instructions were modified from those of Beaty and Johnson (2021) and identical to those in Koivisto and Toivanen (2024), stressing creative quality. The instruction was to "*come up with original and creative uses for an object. The goal is to come up with creative ideas, which are ideas that strike people as clever, unusual, interesting, uncommon, humorous, innovative, or different. You can type in as many ideas as you can, but creative quality is more important than quantity. It's better to have a few really good ideas than a lot of uncreative ones*".

Creativity of each response was judged by three blinded raters (the author and two briefly trained students) on the scale from 1 to 5 (1 = *uncreative or usual response, or nonsense response without any appropriateness*; 5 = *highly creative response*, i.e., original and appropriate), taking into account the standard definition according to which creativity refers to ideas that are both original and appropriate in a specific context (Runco and Jaeger, 2012). The scores of the three raters were averaged for every response. Then, two individual creativity scores were calculated. *Creativity Mean* was calculated by averaging all the scores of the participant's responses to the four probes. *Creativity Max* was calculated by selecting each participant's maximum score for each probe and then averaging these scores. The interrater reliability (ICC, model = "twoway", type = "consistency", unit = "average") was 0.81, indicating good reliability. *Fluency* was the average number of responses per item.

2.5. Stroop

The Stroop task began with a fixation point in the center of the screen, followed by the color word after 300 ms. The color words (green, yellow, red, blue) were written either with a congruent color (e.g., word "green" in green font) or an incongruent color (e.g., word "yellow" in green font). The participants were asked to respond to the font color as quickly and accurately as possible by pressing the computer key g, y, r, or b. There were 24 congruent and 24 incongruent trials, presented in random order. A practice block of 8 trials preceded the actual trials. Errors to incongruent trials served as the measure of disinhibition. The error rate in incongruent conditions is often a better measure than the reaction time effect, because errors directly reflect a severe failure of executive control (Lansbergen et al., 2007), whereas reaction time variability is confounded by the general motor and cognitive slowing typical of clinical patients.

[1] Two of the probes in each set were semantically rich (having many close semantic associates), and two were semantically sparse (having fewer semantic associates) (Beaty et al., 2023). Because preliminary analyses did not detect any interesting interactions between HPS and semantic richness, we dropped the richness variable. Therefore, the preregistered linear mixed-effect models were replaced with simpler regression analyses.

2.6. Statistical analyses

The mean and maximum creativity outcomes were analyzed with linear and polynomial regression analyses in R (R Core Team, 2021). HPS was the predictor, and Age, Education, Fluency, and Depression state served as covariates. The analyses on Fluency and Stroop errors as outcome variables had the same predictors and covariates, except Fluency. The mediation analyses were performed with the mediation package in R (Tingley et al., 2014). All outcome measures were standardized ($M = 0$, $SD = 1$) and normalized with rank-based Blom's procedure with the rcompanion package (Mangiafico, 2023); HPS and Age scores were standardized before entering them into the models. Education was originally an ordered 8-level factor, but in the regression analyses, it was treated as a continuous variable because the number of levels was sufficient to approximate continuity, simplifying analysis and interpretation.

3. Results

The data and analysis scripts are available at OSF.io: https://osf.io/s6mqw/overview.

3.1. Descriptive statistics and correlations

The mean HPS score was 16.1 ($SD = 10.1$, *95% CI* [15.2 – 17.0], min = 0, max = 42). Fig. 1 shows the distribution of the scores in the recruitment groups. Despite the high degree of overlap in the distribution of hypomanic traits between the recruitment groups, the HPS score was significantly higher in the bipolar recruitment group ($M = 22.4$, $SD = 9.9$, *95% CI* [20.1, 24.7]) than in the general recruitment group ($M = 14.9$, $SD = 9.8$, *95% CI* [14.0, 15.9]), $t(466) = 5.96$, $p < .001$, showing that our recruitment process was successful: we received participants with large variation in hypomanic traits. The presence of a depressive state (computed with ISS algorithm, Bauer et al., 2000) did not differ between the general (9%, n = 37) and bipolar (16%, n = 12) recruitment samples, $\chi^2 = 2.58$, $p = .109$.

Table 1 presents the descriptive statistics and Spearman's correlations. HPS correlated positively with education, fluency, and errors in incongruent Stroop trials, and negatively with age and both measures of creativity.

3.2. Hypomania as a predictor of divergent thinking

First, the association of HPS with Creativity Mean, Creativity Max, and Fluency was tested with separate linear regression models. Age,

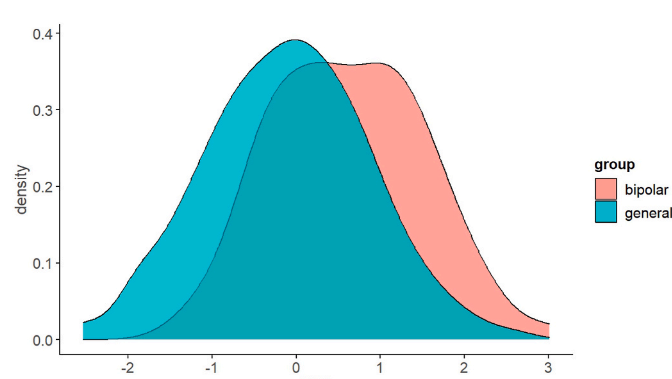

Fig. 1. Density plot of standardized HPS points in the general and bipolar recruitment groups.

Table 1
Descriptive statistics and Spearman's correlations.

	Age	Education	HPS	Fluency	Creativity Mean	Creativity Max	Stroop % errors
Education	−0.034	—					
HPS	−0.276***	0.180***	—				
Fluency	0.052	0.077	0.096*	—			
Creativity Mean	0.120**	−0.060	−0.196***	−0.125**	—		
Creativity Max	0.140**	−0.043	−0.157***	0.164***	0.910***	—	
Stroop % errors	−0.032	0.076	0.169***	−0.035	−0.141**	−0.132**	—
Mean	39.51	5.30	16.10	4.26	1.92	2.39	6.06
SD	12.28	1.57	10.14	1.90	0.42	0.51	13.25

Note. *p < .05, **p < .01, ***p < .001. Stroop = percent errors in incongruent color-word trials. Education level was measured as an ordered 8-point variable (median = 6; see section 2.1).

Education, Fluency, and Depression were covariates, except Fluency in the fluency model (Table 2).

HPS was negatively associated with the mean creativity (Fig. 2A) and maximum creativity (Fig. 2B). However, high HPS was positively associated with increased Fluency (Fig. 2C). Fluency had opposing effects on mean and maximum creativity. The more participants produced responses, the lower the mean creativity of their responses and the higher the maximum creativity.

In addition, possible non-linear relationships between HPS and the three AUT outcomes were tested by adding cubic terms, and then quadratic terms to the models reported above. No evidence for non-linear relationships was detected in comparisons of the model fits with R's anova function. The *p*-values for all the comparisons of quadratic and cubic models to the linear model or to each other were nonsignificant ($p > .05$).

3.3. Inhibitory control as a mediator

Next, it was tested whether hypomania explains inhibitory control, operationalized as the number of errors in incongruent word-color trials in the Stroop task. Age, Education, and Depression served as covariates. HPS predicted errors in incongruent trials, $B = 0.13$, $SE = 0.04$, *95% CI* [0.05, 0.21], $t(462) = 3.30$, $p = .001$. None of the covariates had a statistically significant effect (*p*-values >0.11).

To test whether inhibitory control (errors in incongruent trials) could be a mediator between HPS and AUT outcomes, three linear regressions were run, one on each outcome. The number of errors in incongruent trials was the predictor, while Age, Education, Depression, and Fluency (except Fluency in the models on Fluency) were the covariates. Errors in incongruent trials predicted Creativity Mean, $B = -0.16$, SE = 0.05, *95% CI* [−0.27, −0.06], $t(461) = -3.00$, $p = .0028$, and Creativity Max, $B = -0.15$, $SE = 0.05$, *95% CI* [−0.26, −0.05], $t(462) = -2.81$, $p = .005$, but not Fluency, $B = -0.06$, $SE = 0.05526$, *95% CI* [−0.17, 0.05], $t(462) = -1.13$, $p = .261$. Thus, weak inhibitory control was associated with decreased creativity, but not with decreased fluency. Full models can be found in Supplementary Materials (Table S1). It was next tested whether inhibitory control mediates the negative relationship between hypomania and creativity.

Two models were entered into each mediation analysis using 2000 simulations: the total model and the mediator model. In the total model, either Creativity Mean or Creativity Max was the dependent variable, and HPS and errors in incongruent Stroop trials were predictors, with Age, Education, Fluency, and Depression as covariates. In the mediator model, the errors in incongruent Stroop trials were predicted by HPS, with Age, Education, and Depression as covariates. For Creativity Mean (Fig. 3), the indirect effect (i.e., mediation) was statistically significant, $B = -0.02$, *95% CI* [−0.04, −0.004], $p = .003$. After accounting for the mediation, the direct negative effect of HPS remained statistically significant, $B = -0.15$, *95% CI* [−0.25, −0.06], $p = .002$. Ten percent of the association between HPS and Creativity Mean was mediated.

Similarly, for Creativity Max, the mediation was statistically significant, $B = -0.02$, *95% CI* [−0.04, −0.002], $p = .017$. Twelve percent of the association was mediated. The direct effect remained statistically significant, $B = -0.13$, 95% CI [−0.22, −0.04], $p = .006$. Thus, for both scoring methods, the mediation was only partial. The mediation effects were also replicated by using the response time (RT) Stroop effect (RT incongruent – RT congruent) as the mediator (Supplementary Materials, Table S2–S5).

4. Discussion

Our results clarify how hypomanic traits relate to creative idea generation in DT. Participants with higher hypomanic tendencies generated many ideas (high fluency) but scored lower on creative quality. This negative link held regardless of whether creativity was operationalized by the average quality of all responses or by each person's peak creativity. In other words, people high in hypomanic traits were very productive in generating uses in AUT, but their ideas were, on average, less original and useful, suggesting a quantity-over-quality trade-off.

Generating more ideas increases the chance of finding a highly creative use. As we observed, fluency correlated positively with the maximum creativity score, but we also found that higher fluency was associated with *lower* mean creativity, even though it raised the maximum creativity. This fits what is called a “serial order” or sampling effect (Hass and Beaty, 2018). Producing many responses boosts the odds that at least one idea will be good, but most ideas remain common. Despite this, the maximum creativity of highly hypomanic persons

Table 2
Linear regression models on Creativity Mean (average scoring), Creativity Max (maximum scoring), and Fluency (number of responses).

	Creativity Mean			Creativity Max			Fluency		
	B	*95% CI*	*p*	*B*	*95% CI*	*p*	*B*	*95% CI*	*p*
(Intercept)	0.13	−0.20–0.45	0.443	0.13	−0.19–0.46	0.419	−0.15	−0.48–0.18	0.376
HPS	−0.17	−0.27 to −0.08	**<0.001**	−0.15	−0.24 to −0.06	**0.002**	0.13	0.04–0.23	**0.006**
Fluency	−0.10	−0.19 to −0.01	**0.032**	0.20	0.11–0.29	**<0.001**			
Age	0.06	−0.03–0.15	0.222	0.07	−0.02–0.16	0.154	0.10	0.01–0.19	**0.037**
Education	−0.00	−0.06–0.06	0.952	−0.01	−0.06–0.05	0.840	0.02	−0.04–0.08	0.535
Depression	−0.15	−0.29 to −0.00	**0.044**	−0.13	−0.27–0.01	0.078	0.07	−0.08–0.21	0.370

Note. Creativity Mean, Creativity Max, and Fluency were standardized scores.

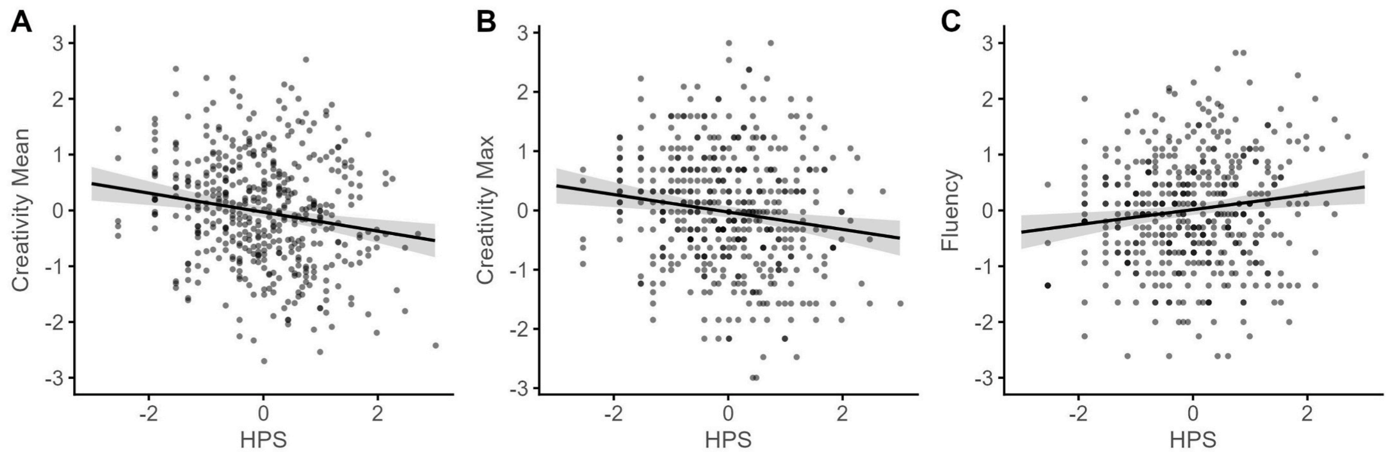

Fig. 2. Hypomania's (HPS) relationship to A) mean creativity, b) maximum creativity, and fluency. X- and y-axes represent standardized scores.

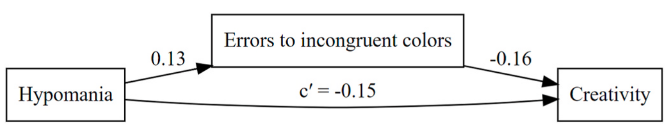

Fig. 3. The mediation paths for the relationship between hypomania (HPS) and the mean Creativity of the AUT responses. *Note.* For maximum Creativity as the outcome, the estimate of the direct effect was −0.13 and the estimate of the mediator–creativity link was −0.15.

remained low. Crucially, we found no evidence of an inverted-U relationship between hypomania and creativity—creative quality declined steadily as hypomanic traits increased. Even among participants with very high hypomania scores (including some with bipolar diagnoses), there was a linear drop in idea quality. This runs counter to suggestions that moderate hypomania might enhance creativity (Cruz et al., 2022; Fink et al., 2014) and suggests that even subclinical mania-like traits tend to harm idea quality.

Our findings align with recent reviews showing that creative advantage in bipolar-spectrum conditions is at best very small (Cruz et al., 2022; Forthmann et al., 2023) or absent (Johnson et al., 2015; Santosa et al., 2007). Some studies even report slight deficits in originality (Alici et al., 2018). These mixed outcomes may be due partly to how creativity is measured. Many of the prior studies emphasize idea quantity, statistical rarity, or separate components of creativity, although creativity requires a combination of originality and usefulness (Runco and Jaeger, 2012). By having independent raters score each idea's creativity (considering originality and usefulness), we explicitly captured creative quality. Under these quality-based ratings, the negative hypomania–creativity link emerged clearly. Had we only reported fluency, hypomanic participants would have appeared more "creative" simply because they produced more ideas.

Another key finding involves cognitive control. As expected, higher hypomanic traits were accompanied by poorer inhibitory control: individuals higher in hypomania made more errors to incongruent color-word pairs in the Stroop task, consistent with known executive deficits in bipolar-spectrum conditions (Murphy et al., 1999; Traykova et al., 2025). Importantly, poorer Stroop performance was associated with lower creativity scores. This pattern fits controlled-attention theories of creativity (Beaty et al., 2014; Benedek et al., 2014) which propose that suppressing obvious or irrelevant responses helps in search for novel ideas. When inhibition is weak, many common or trivial ideas intrude, dragging down overall creativity. In line with this, our mediation analysis showed that Stroop performance *partially* mediated the hypomania–creativity relationship. Controlling for inhibitory control weakened (but did not eliminate) the negative association between hypomanic traits and creativity. This suggests that disinhibition contributes to the lower idea quality seen in high-hypomania individuals, although other factors—such as mood-related distractibility, arousal, or personality differences—may also play roles.

We acknowledge some limitations and strengths. A limitation of online studies is that the researcher has little control over the equipment used by participants. However, due to varying devices and viewing conditions, the generalizability of the results is greater than in controlled laboratory conditions. Second, participants' lack of motivation or attentiveness may be a serious problem in online studies. The present study used control procedures to eliminate the data of potentially inattentive or unengaged participants. The cross-sectional design precludes causal conclusions. We used only one divergent-thinking task (AUT) and one measure of inhibition (Stroop), so future work should replicate our results with diverse creativity tasks (for example, figural or domain-specific creativity tests) and additional executive measures. This study focused on Stroop errors in incongruent color-word trials, which were assumed to directly index a breakdown of inhibitory control, but the main results were also replicated with the response time cost for responding to incongruent versus congruent trials (Supplementary Materials). The large, heterogeneous sample—including many participants with high hypomania scores and some with self-reported clinical bipolar diagnoses—gave strong power to detect the modest effects. The wide range of hypomanic traits also allowed us to test for nonlinear relations effectively.

5. Conclusions and future directions

In summary, hypomanic traits appear to exert opposed influences on idea generation: they boost ideational fluency (the sheer quantity of ideas) but reduce the overall creative quality of those ideas. Poor inhibitory control intensifies the decline in quality, yet most of the increased output probably reflects heightened activation or motivational drive in hypomania, rather than differences in cognitive inhibition. In other words, highly hypomanic individuals may produce many responses due to an elevated energetic drive, but without strong top-down filtering of usual or inappropriate ideas. These results do not support the link between psychopathology and creativity (Kyaga et al., 2013; Post, 1994), at least in the context of hypomania and DT.

Future research should examine how this pattern of results generalizes to convergent thinking and real life. For example, hypomanic individuals might have higher creative achievements simply because they undertake more creative activities (quantity), for example, due to high approach motivation or novelty seeking (Baas et al., 2020), rather than because each idea or project is of higher quality. Gathering measures of the creative quality of the achievements could test this idea. Additionally, interventions aimed at bolstering cognitive control could be explored to test if they help high-hypomania individuals produce higher-quality ideas.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work the author used OpenAI's ChatGPT (based on the GPT-4 architecture) in order to proofread, edit, and draft the English text. After using this tool, the author reviewed and edited the content as needed and takes full responsibility for the content of the published article.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jpsychires.2026.07.017.

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