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Tired minds, tired ideas? Exploring insomnia and creativity

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ABSTRACT

Do tired minds have tired ideas? In two studies, we explored the role of insomnia and personality in divergent thinking, everyday creative behavior, and creative achievement. Using a well-validated measure of insomnia—the Bergen Insomnia Scale—the present work explored the differential effects of nighttime and daytime insomnia symptoms. Structural equation models found a moderate effect of a global insomnia factor on divergent thinking ($\beta = .19$). Further analysis showed time-of-day effects: nighttime sleep disturbances positively predicted divergent thinking more strongly ($\beta = .15$) than daytime disturbances ($\beta = .03$). A similar pattern emerged regarding everyday creative behavior: nighttime impairments showed a positive effect ($\beta = .15$) and daytime impairments showed a negative effect ($\beta = -.15$). Global insomnia and the time-of-day variables had small and negative effects on creative achievement. The present research highlights the importance of taking a nuanced approach to the study of insomnia and creativity.

1. Tired minds, tired ideas? Exploring insomnia and creativity

Folk theories of creativity often characterize the creative person as someone who struggles with an uncontrolled mind: the manic artist frantically working through the night is a common image (Weisberg, 2006). Yet empirical research on the association between sleep disturbances and creativity is limited and conflicting. The small literature focuses on divergent thinking—a measure of general creative ability—so it remains unclear how insomnia predicts real-world creative behaviors and achievements. In the present research, we sought to reconcile and extend the literature on insomnia and creativity using a well-validated measure of insomnia symptoms (Pallesen, Bjorvatn, Nordhus, Sivertsen, & Hjørnevik, 2008) and a well-rounded approach to the assessment of creativity.

2. Insomnia and divergent thinking

Despite mounting evidence of the harmful effects of insomnia in many domains of human performance, only a few studies have considered the role of insomnia in creativity. Chronic sleep disturbance impairs people's ability to control attention (Van Dongen, Maislin, Mullington, & Dinges, 2003), form new memories (Yoo, Hu, Gujar, Jolesz, & Walker, 2007), and make decisions (see Harrison & Horne, 2000, for a review). The handful of studies that have explored insomnia and divergent thinking provide different accounts (Horne, 1988; Healey & Runco, 2006).

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Much research suggests that sleep disturbance is harmful to creativity. Horne (1988) conducted a sleep-deprivation study with a sample of college students. Half of the sample remained awake for 32 h in a research lab; half was instructed to sleep at home. Participants completed several intelligence tests and the figural and verbal forms of the Torrance Test of Creative Thinking (TTCT; Torrance, 1962). The sleep-deprived sample performed substantially worse on the TTCT but not on the intelligence tasks. Follow-up studies have replicated these findings in similar sleep deprivation paradigms (Harrison & Horne, 1999). Research in problem solving corroborates the divergent thinking work by showing harmful effects of sleep loss and beneficial effects of sustained sleep (e.g., Cai, Mednick, Harrison, Kanady, & Mednick, 2009).

Only one study has proposed that creative thinking brings about insomnia (Healey & Runco, 2006). To assess creativity, the authors administered the figural TTCT and split the sample of school-aged children at the 90th percentile to form high and low-creative groups. To assess insomnia, they selected items related to sleep disturbance from child depression and anxiety scales. The more creative group of children had more incidences of sleep disturbances than the control group. The findings were interpreted as support for the contention that higher levels of divergent thinking cause higher levels of insomnia, although the design was cross-sectional and correlational.

3. The present research

In the present research, we conducted two studies to examine the role of insomnia in creativity. The small body of research on insomnia and creativity has produced two opposing perspectives: on the one hand, Healey and Runco (2006) reported a positive relationship between sleep disturbances and divergent thinking; on the other hand, Horne (1988) showed harmful effects of sleep deprivation on divergent thinking. One notable limitation of Healey and Runco (2006) was their use of an ad-hoc insomnia scale with unknown validity. Although the items of this scale were related to sleep disturbances, the original scales were designed to measure anxiety and depression. The present research thus sought to clarify and extend past work. In two studies, we assessed insomnia symptoms using an effective measure of insomnia with extensive validity evidence (Pallesen et al., 2008). Furthermore, the two studies captured several facets of creativity. Study 1 measured creative cognition using divergent thinking tasks; Study 2 measured people's creative behaviors, ranging from common "little c" creativity to significant "Big C" creative accomplishments (Kaufman, Plucker, & Baer, 2008). As a pair, the studies thus provide a well-rounded look at insomnia and creativity.

4. Study 1

Study 1 examined whether insomnia predicts creative cognition, assessed as divergent thinking. To assess insomnia, we used the Bergen Insomnia Scale (BIS), a scale that evaluates chronic sleep disturbances (Pallesen et al., 2008). To assess divergent thinking, we used the unusual uses task, a classic measure of domain-general creative cognition (Kaufman et al., 2008). Finally, we assessed personality using a brief Big Five scale (Gosling, Rentfrow, & Swann, 2003) to determine if insomnia predicts divergent thinking over and above normal personality.

5. Method

5.1. Participants

The data were collected as part of a larger project of individual differences in cognitive abilities (Silvia et al., under review). The sample comprised 131 people—110 women and 21 men—who were undergraduates enrolled in psychology courses at UNCG (mean age = 19.71, SD = 4.92). Students volunteered to participate and received credit toward a research option. Based on self-reported race and ethnicity, the sample was 70% European American, 23% African American, 6% Asian, and 5% Hispanic or Latino (people could indicate several options).

5.2. Procedure

Students participated in groups ranging from 1 to 8. Upon entering the lab, they completed consent forms, were briefed by an experimenter on the purpose of the study, and completed questionnaires and cognitive tasks.

5.2.1. Insomnia

We used the BIS to measure insomnia (Pallesen et al., 2008). This six-item scale was modeled on DSM-IV-TR criteria for clinical insomnia and has been validated against subjective reports and polysomnographic data (i.e., physiological measurements of respiration, limb movement, and sleep-stage progression during controlled laboratory sleep). Half of the items relate to nighttime disturbances (e.g., "During the past month, how many days a week have you been awake for more than 30 min between periods of sleep?") and half relate to daytime disturbances (e.g., "During the past month, how many days a week have you felt that you have not had enough rest after waking up?"). For each item, participants responded using an eight-point scale from 0 to 7, with each number representing the days per week that a specific symptom was experienced.

Table 1
Descriptive statistics: Study 1.

	M	SD	Min, max	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Box: Rater 1	1.92	.94	1, 5	1														
2. Box: Rater 2	2.04	.73	1, 5	.55	1													
3. Rope: Rater 1	1.74	.86	1, 5	.34	.32	1												
4. Rope: Rater 2	2.20	.74	1, 4	.36	.31	.39	1											
5. BIS 1	3.21	2.24	0, 7	−.01	.11	.08	.12	1										
6. BIS 2	2.74	2.73	0, 7	.05	.01	.07	.03	.26	1									
7. BIS 3	2.46	2.34	0, 7	.04	.02	−.06	.12	.31	.29	1								
8. BIS 4	4.59	2.17	0, 7	−.08	.03	.04	.11	.31	.27	.19	1							
9. BIS 5	2.92	2.31	0, 7	.09	.02	−.06	.07	.34	.24	.22	.57	1						
10. BIS 6	4.06	2.30	0, 7	.00	.15	.05	.16	.37	.29	.29	.59	.58	1					
11. Neuroticism	3.01	.97	1.00, 5.00	.02	.05	−.06	.08	.05	.07	.15	.11	.19	.23	1				
12. Extraversion	3.41	.88	1.00, 5.00	.17	.03	.05	.12	−.06	.03	.11	.15	.10	.04	−.12	1			
13. Openness to experience	3.57	.95	1.00, 5.00	.04	.25	.20	.04	.00	.05	−.04	.11	−.14	.11	−.01	.02	1		
14. Agreeableness	3.81	.80	1.00, 5.00	.00	−.02	−.03	.04	.07	−.02	.12	.11	.12	.11	−.18	.15	−.02	1	
15. Conscientiousness	3.73	.76	1.5, 5.00	.11	.22	.03	.07	−.03	−.04	.09	−.03	−.12	−.07	−.22	.18	.05	.24	1

Note: $n = 131$. Bergen Insomnia Scale (BIS) items are related to nighttime (BIS 1–BIS 3) and daytime sleep disturbances (BIS 4–BIS 6).

5.2.2. Creativity

Participants worked on two divergent thinking tasks: unusual uses for a box and a rope. They were encouraged to "be creative" and "to come up with something clever, humorous, original, compelling, or interesting." Students had 3 min to work on each prompt. Responses were scored independently by two trained raters using the snapshot scoring method. In this form of subjective scoring, each participant's set of responses receives a holistic score, using a 1 (*not at all creative*) to 5 (*very creative*) scale (Silvia, Martin, & Nusbaum, 2009; Silvia, Nusbaum, Berg, Martin, & O'Connor, 2009). Rooted in the consensual assessment technique (Amabile, 1982), subjective scoring has been widely used to assess a range of creative products, including divergent thinking responses (Nusbaum & Silvia, 2011; Silvia et al., 2008).

5.2.3. Questionnaires

Following the creativity tasks, participants completed a demographic questionnaire and a brief Big Five scale. The scale consists of ten items—two from each of the five factors—and has shown satisfactory convergence with the longer scales (Gosling et al., 2003).

6. Results and discussion

6.1. Model specification

The data were analyzed with Mplus 6.12, using maximum likelihood with robust standard errors. Table 1 displays correlations and descriptive statistics for all observed variables. Items from the BIS were centered at the sample's grand mean. We modeled insomnia as a higher-order latent variable, indicated by two lower-order variables—nighttime disturbances and daytime disturbances. For model identification, paths to these variables were constrained to be equal, and the variance of the higher-order variable was fixed to one. Divergent thinking was also modeled as a higher-order latent factor, indicated by two lower-order latent variables, which were in turn indicated by the two raters' scores from the box and rope tasks. Paths to the lower-order variables were constrained to be equal, and the variance of the higher-order factor was fixed to one. The reliability of the latent DT variable, estimated via maximal reliability (Drewes, 2000), was good ($H = .84$). Finally, we modeled the five factors from the brief Big Five as observed variables. All estimates are standardized. We report effect sizes in the text (Kline, 2004). Table 2 displays *p*-values and 95% confidence intervals around the standardized effects. Using the *r* metric, effect sizes of .10, .30, and .50 are considered small, medium, and large, respectively (Cohen, 1988).

6.2. Insomnia and divergent thinking

Did insomnia predict divergent thinking? We first specified a structural equation model with the higher-order insomnia variable predicting divergent thinking. This model showed good fit: χ^2 (34 *df*) = 38.19, $p = .284$; CFI = .985; SRMR = .046; RMSEA = .031 (90% CI: .000, .073). We found a small and positive effect of insomnia ($\beta = .19$): responses became more creative as insomnia increased.

But how might daytime and nighttime disturbances uniquely predict divergent thinking? We next specified a separate model predicting divergent thinking with the two lower-order insomnia factors: χ^2 (33 *df*) = 38.40, $p = .237$; CFI = .980; SRMR = .046; RMSEA = .035 (90% CI: .000, .076). Interestingly, nighttime disturbances had a larger effect on divergent thinking ($\beta = .15$) than daytime disturbances ($\beta = .03$). In sum, it appears that people who have sleep difficulties produce slightly better ideas, but the overall effect in our analysis was carried by nighttime disturbances.

Table 2
Effects of insomnia and personality on divergent thinking: Study 1.

	β	p	95% CI
1. Insomnia			
Global insomnia	.197	.164	−.080, .474
2. Day/nighttime disturbances			
Daytime	.039	.893	−.522, .599
Nighttime	.157	.582	−.401, .715
3. Insomnia and personality			
Global BIS	.180	.189	−.089, .450
Neuroticism	.087	.447	−.138, .383
Extraversion	.104	.371	−.125, .405
Openness to experience	.251	.010	.061, .501
Agreeableness	−.080	.517	−.320, .236
Conscientiousness	.239	.031	.021, .524
4. Day/nighttime disturbances and personality			
Daytime	.020	.937	−.328, .356
Nighttime	.159	.554	−.299, .549
Neuroticism	.089	.450	−.164, .368
Extraversion	.106	.366	−.159, .427
Openness to experience	.251	.010	.053, .534
Agreeableness	−.079	.513	−.425, .215
Conscientiousness	.237	.028	.017, .662

Note: $n = 131$.

6.3. Insomnia and personality

Did insomnia predict divergent thinking above the effects of personality? A third model examined the effects of both the higher-order insomnia variable and personality in divergent thinking. This model fit well: χ^2 (79 *df*) = 101.068, $p = .047$; CFI = .927; SRMR = .064; RMSEA = .046 (90% CI: .005, .071). The effect of insomnia on divergent thinking remained stable ($\beta = .18$) after controlling for personality. In addition, openness to experience ($\beta = .25$) and conscientiousness ($\beta = .23$) showed medium effects on divergent thinking (see Table 2).

A final model examined the effects of the lower order insomnia variables and personality on divergent thinking: χ^2 (78 *df*) = 101.127, $p = .040$; CFI = .924; SRMR = .064; RMSEA = .048 (90% CI: .011, .072). The effects of daytime ($\beta = .15$) and nighttime disturbances ($\beta = .02$) were similar in direction and magnitude as our prior model that excluded personality. Openness ($\beta = .25$) and conscientiousness ($\beta = .23$) showed stable effects. Personality and insomnia thus showed unique effects, and nighttime sleep disturbances predicted divergent thinking more strongly than daytime disturbances.

7. Study 2

The results from Study 1 suggest that insomnia's facets relate differently to creative cognition. But how does insomnia relate to other components of creativity? Creativity has many aspects, such as creative traits, beliefs, self-concepts, goals, thinking styles, and behaviors (Kaufman, 2009; Silvia & Kimbrel, 2010). In Study 2, we moved beyond creative cognition and examined creative behaviors. We examined behaviors that fall under "little c" creativity (common creative actions and hobbies that are typical of a creative lifestyle) and "Big C" creativity (uncommon and significant creative achievements; Kaufman, 2009). Using standard tools, we explored how everyday little-c creativity and Big-C creative achievements related to insomnia. One notable limitation of Study 1 was the use of a brief Big Five scale to measure personality, which might have underestimated the effects of personality. In Study 2, we thus administered the 60-item NEO FFI (Costa & McCrae, 1992) to obtain a more robust assessment of personality.

8. Method

8.1. Participants

Participants were UNCG undergraduate students (mean age = 19.64, SD = 2.16) who participated for credit toward a research option in a psychology course ($n = 196$; 60 men, 136 women). Based on self-reported race and ethnicity, the sample was 61% European American, 31% African American, 7% Asian, and 7% Hispanic or Latino (students could select more than one option).

8.2. Procedure

The study was conducted in groups of 1–8. Upon entering the lab, students completed consent forms, were briefed by an experimenter about the study, and completed several questionnaires and cognitive tasks. As in Study 1, we used the BIS (Pallesen et al., 2008) to assess chronic sleep disturbance.

Table 3
Descriptive statistics: Study 2.

	M	SD	Min, max	1	2	3	4	5	6	7	8	9	10	11	12	13
1. CAQ	2.01	1.22	−.69, 3.92	1												
2. BICB	.32	.16	0, .74	.47	1											
3. BIS 1	3.57	2.37	0, 7	−.09	.17	1										
4. BIS 2	2.87	2.63	0, 7	−.06	.08	.53	1									
5. BIS 3	2.56	2.40	0, 7	−.01	.02	.31	.33	1								
6. BIS 4	4.85	2.12	0, 7	−.11	.00	.33	.25	.20	1							
7. BIS 5	3.22	2.20	0, 7	.03	.01	.24	.15	.13	.59	1						
8. BIS 6	4.35	2.26	0, 7	−.05	.00	.34	.28	.12	.72	.58	1					
9. Neuroticism	3.02	.66	1.58, 4.92	−.07	.08	.20	.08	−.01	.17	.25	.23	1				
10. Extraversion	3.57	.56	2.08, 4.83	.27	.19	−.07	−.01	.02	−.03	−.05	−.15	−.27	1			
11. Openness to Experience	3.68	.53	2.42, 5.00	.31	.37	.17	.14	.03	.14	.10	.18	.04	.12	1		
12. Agreeableness	3.60	.48	2.25, 4.83	.04	−.05	−.13	−.20	.01	−.10	−.15	−.08	−.29	.13	.07	1	
13. Conscientiousness	3.51	.55	1.83, 5.00	.09	.05	−.08	−.13	.00	−.11	−.14	−.19	−.35	.18	−.06	.14	1

Note: $n = 196$. Bergen Insomnia Scale (BIS) items are related to nighttime (BIS 1–BIS 3) and daytime sleep disturbances (BIS 4–BIS 6).

Participants completed two well-validated measures of creative behavior (Silvia, Wigert, Reiter-Palmon, & Kaufman, 2012): the Creative Achievement Questionnaire (CAQ; Carson, Peterson, & Higgins, 2005) and the Biographical Inventory of Creative Behaviors (BICB; Batey, 2007). A measure of Big-C creativity, the CAQ measures creative productivity in 10 domains (e.g., visual arts, creative writing, and scientific discovery). Participants respond to a series of eight statements that increase in significance within each domain (e.g., music; "Recordings of my composition have been sold publicly"). High scores reflect significant accomplishment. The BICB, in contrast, is a measure of little-c everyday creative behavior (e.g., starting a club, designing a website, writing a poem, decorating a personal space creatively). Participants are asked if they have been involved in a series of 34 different activities, in the past 12 months, by responding *yes* or *no* to each activity. Participants also completed a demographic questionnaire and the NEO-FFI (60 items; Costa & McCrae, 1992).

9. Results and discussion

9.1. Model specification

The data were analyzed using Mplus 6.12. Table 3 displays correlations and descriptive statistics of the observed variables. As in Study 1, insomnia was modeled as a higher-order latent variable, indicated by two lower-order latent variables (nighttime disturbances and daytime disturbances). BICB items were averaged to form a composite (Batey, 2007). This composite represents a percentage of the 34 items endorsed (i.e., 0 or 1). CAQ items were summed and log-transformed to normalize the highly skewed distribution (Silvia et al., 2012). Personality and creative achievement were modeled as observed variables. All effects are standardized.

9.2. Insomnia and the CAQ

Our first analysis examined the contribution of insomnia to creative achievement. We thus specified a model predicting the log-transformed CAQ from the higher-order latent insomnia variable. This model showed good fit: χ^2 (13 *df*) = 13.164, $p = .435$; CFI = .999; SRMR = .036; RMSEA = .008 (90% CI: .000, .071). The latent insomnia variable had a small and negative effect ($\beta = -.09$). A separate model considered the unique effects of the lower-order insomnia variables: χ^2 (12 *df*) = 13.303, $p = .347$; CFI = .995; SRMR = .036; RMSEA = .024 (90% CI: .000, .079). There were small and negative effects of nighttime ($\beta = -.09$) and daytime disturbances ($\beta = -.02$).

9.3. Insomnia and the BICB

Our next model examined the role of insomnia in the BICB, a measure of everyday creative behavior. We specified a structural model predicting the composite BICB from the higher-order insomnia variable. This model fit well: χ^2 (13 *df*) = 10.745, $p = .632$; CFI = 1.00; SRMR = .032; RMSEA = .000 (90% CI: .000, .060). We found a small positive effect of insomnia on the BICB ($\beta = .11$). We then considered an alternate model, predicting the BICB with the lower-order insomnia variables (i.e., nighttime and daytime disturbances): χ^2 (12 *df*) = 7.179, $p = .845$; CFI = 1.00; SRMR = .021; RMSEA = .000 (90% CI: .000, .042). This model revealed a medium positive effect of nighttime disturbances ($\beta = .23$) and a small negative effect of daytime disturbances ($\beta = -.10$; see Table 4). Thus, unlike the CAQ, insomnia positively predicted the BICB, but this effect appeared to be driven by nighttime disturbances.

Table 4
Effects of insomnia and personality on creative achievement and everyday creativity: Study 2.

	CAQ			BICB		
	β	p	95% CI	β	p	95% CI
1. Insomnia						
Global insomnia	−.078	.543	−.330, .174	.112	.280	−.059, .316
2. Day/nighttime disturbances						
Daytime	−.093	.529	−.384, .289	−.109	.274	−.303, .086
Nighttime	.027	.865	−.236, .439	.231	.024	.031, .431
3. Insomnia and personality						
Global BIS	−.161	.191	−.403, .081	−.009	.927	−.201, .183
Neuroticism	.009	.918	−.164, .182	.134	.050	.000, .268
Extraversion	.217	.028	.024, .409	.171	.014	.035, .308
Openness to experience	.318	.000	.171, .465	.356	.000	.226, .485
Agreeableness	−.052	.531	−.216, .112	−.083	.268	−.229, .064
Conscientiousness	.038	.664	−.132, .207	.106	.147	−.038, .250
4. Day/nighttime disturbances and personality						
Daytime disturbances	−.110	.448	−.357, .158	−.150	.094	−.325, .026
Nighttime disturbances	−.048	.753	−.345, .249	.159	.096	−.028, .346
Neuroticism	.007	.940	−.166, .180	.142	.038	.008, .275
Extraversion	.216	.028	.023, .410	.169	.018	.029, .309
Openness to experience	.317	.000	.168, .466	.353	.000	.223, .483
Agreeableness	−.051	.538	−.214, .112	−.073	.331	−.219, .074
Conscientiousness	.037	.666	−.131, .205	.103	.162	−.042, .248

Note: $n = 196$.

9.4. Insomnia and personality

We then examined the contribution of personality and insomnia in creative achievement. The first model predicted the log-transformed CAQ with the insomnia and the NEO-FFI. This model fit well: χ^2 (43 *df*) = 63.595, $p = .022$; CFI = .942; SRMR = .081; RMSEA = .049 (90% CI: .019, .074). Insomnia again showed a small and negative effect on the CAQ ($\beta = -.16$). Regarding personality, openness to experience ($\beta = .31$) and extraversion ($\beta = .21$) had medium effects (see Table 4).

We then specified an alternate model predicting creative achievement with the lower-order insomnia variables and personality: χ^2 (42 *df*) = 64.233, $p = .015$; CFI = .937; SRMR = .081; RMSEA = .049 (90% CI: .019, .074). The effects of nighttime ($\beta = -.04$) and daytime disturbances ($\beta = -.10$) were small and negative. The effects of openness ($\beta = .31$) and extraversion ($\beta = .21$) were consistent with the previous analysis.

Our final model examined the role of insomnia and personality in the BICB. A structural model predicting the BICB average with the higher-order insomnia variable showed good fit: χ^2 (43 *df*) = 59.256, $p = .050$; CFI = .955; SRMR = .083; RMSEA = .044 (90% CI: .000, .069). The effect of insomnia decreased to zero ($\beta = -.01$), which suggests that insomnia had no effect on everyday creative behavior after controlling for the effects of personality. An additional model assessed the unique contributions of nighttime and daytime disturbances along with personality on the BICB: χ^2 (42 *df*) = 56.072, $p = .071$; CFI = .961; SRMR = .080; RMSEA = .041 (90% CI: .000, .068). An interesting pattern of effects emerged: nighttime ($\beta = .15$) and daytime ($\beta = -.15$) disturbances had effects equal in magnitude, but in opposing directions. Taken together, it appears that once personality is taken into account, nighttime sleep disruptions have a moderately positive effect on creative behavior, but daytime sleep disturbances are somewhat harmful.

10. Discussion

The present research assessed the contribution of insomnia to divergent thinking and creative achievement. In both studies, people who reported difficulty at night were slightly more creative on measures of divergent thinking (Study 1) and everyday creativity (Study 2); however, people with daytime impairments were slightly less creative. The effects of nighttime disturbances fit with recent research on sleep styles and creativity: "evening types"—people who typically stay up late and wake up late—performed modestly better on some measures of general creativity (Giampietro & Cavallera, 2006). And although we did not manipulate sleep deprivation, the effects of daytime disturbances in our study also fit with past research showing impaired divergent thinking performance resulting from sleep disruptions (Horne, 1988). Much of our recent work demonstrates the importance of controlled aspects of attention and cognition in creativity (e.g., Beaty & Silvia, 2012; Beaty & Silvia, 2013; Silvia & Beaty, 2012). Considered in the context of the growing literature on insomnia and cognition (e.g., Cai et al., 2009; Harrison & Horne, 2000; Van Dongen et al., 2003; Yoo et al., 2007), such cognitive control should be impaired in people who struggle with daytime fatigue.

Our analysis focused on effect sizes to assess the relative strength of association among variables. Due to the sample-dependent nature of significance tests, many researchers have advocated for interpreting effect sizes and their corresponding confidence intervals (Cohen, 1990; Kelley & Preacher, 2012; Kline, 2004). In our study, most of the effects were small or small-to-medium, according to the benchmarks defined by Cohen (1988). Many different factors contribute to creative cognition

and behavior, and the effect sizes reported in these studies suggest that insomnia plays a minor role in the grand scheme of creativity. Such findings are important, however, since they contribute to a more accurate depiction of the creative person and sharpen the field's understanding of what really matters in predicting creativity. They also help to demystify the creative process by clarifying misconceptions and providing a sober account of creativity as an ordinary experience (Weisberg, 2006). Perhaps the so-called manic artist sleeps like a baby after all.

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