BODHI SPECTRUM
Global Journal of Multidisciplinary Research

The Psychology of Overthinking: Causes and Consequences in Everyday Life

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ABSTRACT

Overthinking conceptualized in psychological science as repetitive negative thinking encompassing both past-oriented depressive rumination and future-oriented anxious worry represents a pervasive cognitive process with profound implications for daily functioning, decision-making, interpersonal relationships, and psychophysiological health. Moving beyond colloquial characterizations of excessive contemplation, this article synthesizes foundational and contemporary empirical frameworks to examine the etiology, maintenance mechanisms, and everyday consequences of overthinking. Specifically, the paper explores cognitive and executive control deficits (such as impaired attentional disengagement and working memory updating failures), metacognitive beliefs, intolerance of uncertainty, and maximizing decision styles. It further analyzes the neurobiological correlates of repetitive thought highlighting hyperconnectivity between the Default Mode Network and the subgenual prefrontal cortex and traces how perseverative cognition translates transient psychological stressors into prolonged cardiovascular, endocrine, and behavioral dysregulation. Finally, the article evaluates evidence-based cognitive, metacognitive, and behavioral interventions designed to shift maladaptive abstract processing toward concrete, action-oriented problem solving.

Keywords: *Overthinking, Rumination, Worry, Anxiety, Stress, Decision-making.*

In everyday parlance, "overthinking" refers to the subjective experience of becoming trapped in prolonged, unproductive loops of analysis, second-guessing, and mental rehearsal. Within clinical and cognitive psychology, however, overthinking is not treated as a single unitary construct; rather, it is operationalized under the umbrella of repetitive negative thinking (RNT). [1]

1 Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. International Journal of Cognitive Therapy, 1(3), 192–205. https://doi.org/10.1521/ijct.2008.1.3.192

Ehring and Watkins (2008) define RNT by three core process characteristics: (a) it is repetitive and recyclic, (b) it is experienced as passive, intrusive, and difficult to control, and (c) it is focused predominantly on negative content.

Historically, psychological research investigated two primary manifestations of RNT along separate theoretical tracks: rumination and worry. Nolen-Hoeksema (1991), formulating the Response Styles Theory (RST), defined depressive rumination as behaviors and thoughts that passively and repetitively focus an individual's attention on their symptoms of distress, as well as the possible causes and consequences of those symptoms, without initiating active problem solving.[2] Subsequent psychometric refinements by Treynor et al. (2003) demonstrated that rumination comprises two distinct subcomponents: *reflective pondering* a purposeful, analytical turning inward aimed at cognitive problem solving and *brooding* a passive, moody comparison of one's current situation against unachieved standards, which carries the primary pathogenic load for emotional distress.[3]

Conversely, Borkovec and colleagues defined worry as a chain of negatively affect-laden, predominantly verbal thoughts and images aimed at mental problem solving on an issue whose outcome is uncertain yet contains the possibility of negative results.[4] While rumination is typically anchored in the past replaying perceived failures, losses, or social missteps and worry is oriented toward anticipated future threats, empirical factor analyses reveal that both processes load onto a shared transdiagnostic latent factor.[5] As Ehring et al. (2011) established in validating the Perseverative Thinking Questionnaire, the maladaptive power of overthinking lies less in the specific temporal content of the thoughts and more in the shared cognitive process: abstract, difficult-to-disengage, and capacity-consuming mental repetition.

Crucially, repetitive thought is not inherently pathological.[5] Watkins (2008) demonstrated that repetitive thought yields constructive or unconstructive outcomes depending on three moderating dimensions: the valence of thought content, the intrapersonal and situational context, and the level of construal (abstract versus concrete processing).[6] Abstract processing involves decontextualized, global evaluations focused on causes, meanings, and implications (e.g., *"Why did this happen to me?"* or *"What does this flaw say about my worth?"*). In contrast, concrete processing grounds attention in specific, contextual, and observable details regarding how an event unfolded and what actionable steps can be taken (e.g., *"What specific sequence of events led to this outcome, and what is the immediate next step?"*). Everyday overthinking becomes debilitating precisely when individuals become locked in an abstract, evaluative mode of processing that manufactures the illusion of analytical work while obstructing behavioral resolution.

Why do certain individuals effortlessly disengage from minor daily setbacks while others spiral into hours of mental replay? Psychological research identifies an interplay of executive functioning vulnerabilities, metacognitive beliefs, intolerance of uncertainty, and dispositional decision-making styles. From a cognitive science perspective, overthinking reflects a breakdown in cognitive control over the contents of working memory. Working memory is a limited-capacity system responsible for maintaining task-relevant information while inhibiting irrelevant distractions. Joormann and Gotlib (2008) demonstrated that individuals prone to depressive rumination exhibit a specific deficit in *updating* working memory specifically, an inability to expel no-longer- relevant negative material once it has entered conscious awareness.[7] Because negative representations linger in working memory, they continue to color subsequent appraisals and crowd out adaptive, goal-directed cognition.

Building upon these findings, Koster et al. (2011) proposed the Impaired Disengagement Hypothesis, arguing that prolonged rumination is driven by difficulty shifting attention away from self-referential negative information.

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2 Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. *International Journal of Cognitive Therapy, 1*(3), 192–205. https://doi.org/10.1521/ijct.2008.1.3.192

3 Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*(4), 569–582. https://doi.org/10.1037/0021-843x.100.4.569

4 Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3), 247–259

5 Borkovec, T. D., Ray, W. J., & Stöber, J. (1998). Worry: A cognitive phenomenon intimately linked to affective, physiological, and interpersonal behavioral processes. *Cognitive Therapy and Research, 22*(6), 561–576.

6 Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. *International Journal of Cognitive Therapy, 1*(3), 192–205. https://doi.org/10.1521/ijct.2008.1.3.192

7 Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*(4), 569–582. https://doi.org/10.1037/0021-843x.100.4.569

[8] When an everyday stressor triggers a discrepancy between an individual's current state and their personal goals, negative self-referential thoughts naturally arise. Healthy self-regulation relies on top-down attentional control to disengage from these thoughts once initial appraisal is complete. When top-down attentional control is weakened whether by acute stress, fatigue, or trait cognitive vulnerability attention remains tethered to the negative self-representation, initiating a self-reinforcing loop of rumination.[9]

Metacognitive Beliefs and the Cognitive Attentional Syndrome: Paradoxically, overthinkers frequently hold explicit or implicit beliefs that their repetitive thinking is beneficial. Within the Self-Regulatory Executive Function (S-REF) model, Wells (2009) and Papageorgiou and Wells (2001) identified two tiers of metacognitive beliefs (beliefs about one's own thinking) that initiate and sustain overthinking[10]

Intolerance of Uncertainty and Cognitive Avoidance

Overthinking also serves an emotional regulatory function specifically, the avoidance of uncertainty and abrupt emotional shifts. Dugas et al. (1998) identified Intolerance of Uncertainty (IU) a dispositional incapacity to endure the aversive response triggered by the perceived absence of salient, key, or sufficient information as a primary cognitive driver of chronic worry. [11] For individuals high in IU, ambiguity in everyday life (such as an unreturned text message or an ambiguous remark from a supervisor) is interpreted as inherently threatening. Overthinking becomes a compulsive attempt to mentally simulate every conceivable scenario in order to manufacture a subjective sense of certainty.

Furthermore, Borkovec (1994) demonstrated that verbal-linguistic worry dampens somatic and autonomic arousal associated with vivid, distressing mental imagery.[12] Expanding on this, Newman and Llera (2011) formulated the Contrast Avoidance Model, positing that chronic worriers use repetitive negative thought to maintain a steady, low-grade state of negative affect so that they are never caught off guard by a sudden, sharp spike in emotional distress (a negative emotional contrast).[13] Similarly, Nolen-Hoeksema et al. (2008) noted that depressive rumination functions as a form of behavioral avoidance: by compiling an exhaustive mental case that a situation is hopeless or beyond one's control, the individual justifies passive withdrawal and avoids the risk of taking real-world action.[14]

Perfectionism and Maximizing Decision Styles: In everyday consumer, academic, and career contexts, overthinking is closely linked to perfectionistic standards and maximizing tendencies. Building on Herbert Simon's distinction between optimizing and satisficing, Schwartz et al. (2002) demonstrated that *maximizers* individuals driven to make the absolute best possible choice rather than settling for a "good enough" option (*satisficers*) engage in exhaustive information search, prolonged deliberation, and intense post-decision counterfactual thinking. [15] When confronted with modern environments characterized by an abundance of options, maximizers experience heightened choice overload, upward social comparison, and post-decisional regret.

Neurobiological and Psychophysiological Mechanisms: Far from being a purely ethereal mental habit, overthinking leaves a distinct signature across central neural networks and peripheral autonomic and endocrine

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8 Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3), 247–259

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10 Ehring, T., Zetsche, U., Weidacker, K., Wahl, K., Schönfeld, S., & Ehlers, A. (2011). The Perseverative Thinking Questionnaire (PTQ): Validation of a content-independent measure of repetitive negative thinking. *Journal of Behavior Therapy and Experimental Psychiatry, 42*(2), 225–232. https://doi.org/10.1016/j.jbtep.2010.12.003

11 Joormann, J., & Gotlib, I. H. (2008). Updating the contents of working memory in depression: Interference from irrelevant negative material. *Journal of Abnormal Psychology, 117*(1), 182–192. https://doi.org/10.1037/0021-843x.117.1.182

12 Koster, E. H. W., De Lissnyder, E., Derakshan, N., & De Raedt, R. (2011). Understanding depressive rumination from a cognitive science perspective: The impaired disengagement hypothesis. *Clinical Psychology Review, 31*(1), 138–145. https://doi.org/10.1016/j.cpr.2010.08.005

13 Wells, A. (2009). *Metacognitive therapy for anxiety and depression*. Guilford Press.

14 Papageorgiou, C., & Wells, A. (2001). Metacognitive beliefs about rumination in recurrent major depression. *Cognitive and Behavioral Practice, 8*(2), 160–164. https://doi.org/10.1016/s1077-7229(01)80021-3

15. Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (1998). Generalized anxiety disorder: A preliminary test of a conceptual model. *Behaviour Research and Therapy, 36*(2), 215–226. https://doi.org/10.1016/s0005-7967(97)00070-3

systems. Neuroimaging investigations have localized the neural architecture of self-referential overthinking primarily within the brain's Default Mode Network a large-scale network anchored in the ventromedial prefrontal cortex, posterior cingulate cortex, and precuneus that activates during passive rest, autobiographical memory retrieval, and inward-directed thought. In a comprehensive meta-analysis, Hamilton et al. (2015) demonstrated that trait and state rumination are reliably associated with abnormally heightened functional connectivity between the DMN and the subgenual prefrontal cortex, a region implicated in sadness, behavioral withdrawal, and visceral emotional processing.[16]

When the DMN becomes hyper-coupled with the sgPFC while simultaneously exhibiting weakened top-down regulation from the dorsolateral prefrontal cortex and the central executive network-neutral self-reflection becomes fused with negative affective valence. Consequently, whenever the brain defaults to resting state between daily tasks, it automatically gravitates toward negatively tinged, self-referential loops.

The Perseverative Cognition Hypothesis and Somatic Wear

To explain how psychological stress translates into physical morbidity, Brosschot et al. (2006) proposed the **Perseverative Cognition Hypothesis**. Traditional stress models assumed that physiological arousal occurs primarily during direct exposure to an acute stressor. Brosschot et al. (2006) argued that the true pathogenic toxicity of stress lies in its duration: through worry (anticipatory stress) and rumination (retrospective stress), human beings maintain active cognitive representations of stressors long before they occur and long after they have ended. [17]

Because the autonomic nervous system and the hypothalamic-pituitary-adrenal axis respond to sustained mental representations of threat similarly to physical danger, overthinking prolongs physiological activation.[18] In a meta-analysis of 60 experimental and correlational studies, Ottaviani et al. (2016) confirmed that perseverative cognition is significantly associated with elevated systolic and diastolic blood pressure, increased heart rate, elevated salivary cortisol, and reduced heart rate variability. Reduced HRV a marker of diminished parasympathetic (vagal) tone reflects impaired autonomic flexibility and poor emotional regulation, creating a bidirectional feedback loop in which physiological rigidity further undermines cognitive inhibition. [19]

Consequences of Overthinking in Everyday Life

When repetitive negative thinking becomes a default cognitive habit, its downstream effects permeate virtually every domain of daily existence.

Everyday Domain	Primary Cognitive Mechanism	Observable Behavioral & Psychological Consequences
Decision-Making & Productivity	Maximizing, choice overload, and working memory depletion	Analysis paralysis, chronic procrastination, task switching errors, and post-decisional regret
Interpersonal Relationships	Rejection sensitivity, abstract self-focus, and co-rumination	Reassurance seeking, misinterpreting neutral social cues, social withdrawal, and relational fatigue
Sleep & Circadian Recovery	Pre-sleep cognitive arousal and sustained sympathetic activation	Prolonged sleep-onset latency, fragmented REM sleep, nocturnal awakenings, and daytime fatigue
Physical & Health Behaviors	Prolonged HPA-axis activation and depleted self-regulatory capacity	Elevated cortisol and blood pressure, emotional eating, poor dietary adherence, and physical inactivity
Emotional Well-Being	Brooding, impaired disengagement, and negative memory bias	Amplified dysphoria, heightened vulnerability to clinical anxiety and major depression, and burnout

16 Borkovec, T. D. (1994). The nature, functions, and origins of worry. In G. C. L. Davey & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment, and treatment* (pp. 5–33). John Wiley & Sons.

17 Hamilton, J. P., Farmer, M., Fogelman, P., & Gotlib, I. H. (2015). Depressive rumination, the default-mode network, and the dark matter of clinical neuroscience. *Biological Psychiatry, 78*(4), 224–230. https://doi.org/10.1016/j.biopsych.2015.02.020

18 Brosschot, J. F., Gerin, W., & Thayer, J. F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research, 60*(2), 113–124. https://doi.org/10.1016/j.jpsychores.2005.06.074

19 Zoccola, P. M., & Dickerson, S. S. (2012). Assessing the relationship between rumination and cortisol: A review. *Journal of Psychosomatic Research, 73*(1), 1–9.

Decision Paralysis and Impaired Problem Solving

A central irony of overthinking is that while individuals engage in it to solve problems, it systematically degrades problem-solving efficacy. In a series of experimental studies, Lyubomirsky and Nolen-Hoeksema (1995) demonstrated that inducing self-focused rumination in dysphoric individuals caused them to generate significantly less effective solutions to interpersonal and everyday dilemmas, appraise their problems as more severe and unsolvable, and express lower confidence in their ability to execute solutions.[20] Because abstract overthinking consumes finite working memory resources, little executive capacity remains for concrete planning, creative ideation, or decisive action, resulting in analysis paralysis.

Interpersonal Strain and Co-Rumination

Overthinking also shapes how individuals navigate social interactions. Individuals prone to rumination exhibit heightened recall of negative autobiographical memories and interpret ambiguous interpersonal cues through a pessimistic, self-blaming lens.

In close relationships, this frequently manifests as repetitive reassurance seeking or co-rumination excessively discussing and revisiting problems, speculating about negative outcomes, and dwelling on negative feelings with a partner or friend.[14] While co-rumination can temporarily foster a sense of emotional intimacy, longitudinal evidence indicates that it simultaneously exacerbates anxiety and depression while eroding social support as peers experience conversational exhaustion.

Sleep Disruption and Health Behavior Erosion: At night, the removal of external daytime distractions frequently triggers an acute surge in overthinking. Pre-sleep cognitive activity worrying about tomorrow's obligations or replaying today's regrets maintains elevated heart rate and suppresses parasympathetic recovery during sleep. Furthermore, in a systematic review and meta-analysis, Clancy et al. (2016) demonstrated that perseverative cognition is significantly associated with poorer health behaviors, including increased substance use, unhealthy dietary patterns, and reduced physical exercise, largely because chronic mental preoccupation depletes the self-regulatory energy required to maintain healthy daily routines. [21]

Discussion

The synthesis of cognitive, neurobiological, and behavioral evidence reveals that everyday overthinking is far more than a benign personality quirk or an excess of conscientiousness; rather, it operates as a transdiagnostic self-regulatory trap. While individuals initiate repetitive thought under the positive metacognitive assumption that sustained analysis will yield clarity, safety, or optimal choices, the shift into abstract, evaluative processing systematically undermines those very goals. Specifically, when impaired attentional disengagement locks negative self-referential representations inside working memory, cognitive bandwidth is depleted, converting routine daily decisions into sources of analysis paralysis and post-decisional regret.[22]

Furthermore, the clinical and everyday significance of overthinking lies in its capacity to bridge transient mental events with chronic somatic and interpersonal wear. By maintaining active cognitive representations of past social missteps or uncertain future threats, perseverative cognition prolongs autonomic and hypothalamic-pituitary-adrenal (HPA) axis activation long after external stressors have subsided.[23] Over time, this sustained physiological arousal erodes sleep architecture, impairs vagal flexibility, and diminishes the self-regulatory capacity needed for healthy daily routines, while simultaneously straining close relationships through reassurance seeking and co-rumination.

Consequently, effective remediation cannot rely on simplistic advice to "stop thinking" or suppress intrusive thoughts, as deliberate thought suppression reliably rebounds and reinforces negative metacognitive beliefs regarding

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20 Ottaviani, C., Thayer, J. F., Verkuil, B., Lonigro, A., Medea, B., Couyoumdjian, A., & Brosschot, J. F. (2016). Physiological concomitants of perseverative cognition: A systematic review and meta-analysis. *Psychological Bulletin*, 142(3), 231–259. https://doi.org/10.1037/bul0000036

21 Clancy, F., Prestwich, A., Caperon, L., & O'Connor, D. B. (2016). Perseverative cognition and health behaviors: A systematic review and meta-analysis. *Frontiers in Human Neuroscience,* 10, Article 534. https://doi.org/10.3389/fnhum.2016.00534

22 Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. *International Journal of Cognitive Therapy, 1*(3), 192–205. https://doi.org/10.1521/ijct.2008.1.3.192

23. Brosschot, J. F., Gerin, W., & Thayer, J. F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research, 60*(2), 113–124. https://doi.org/10.1016/j.jpsychores.2005.06.074

mental uncontrollability. Instead, breaking the cycle requires altering the *mode* of cognitive engagement—shifting from abstract, decontextualized rumination toward concrete, action-oriented problem solving, cultivating detached mindfulness toward passing thoughts, and adopting satisficing thresholds in daily decision-making.[24]

Conclusion

Overthinking represents a paradoxical breakdown in human self-regulation, wherein the very mental capacities evolved for foresight, reflection, and problem solving become hijacked by repetitive, unconstructive loops. Driven by executive disengagement deficits, intolerance of uncertainty, and maladaptive metacognitive beliefs, chronic rumination and worry infiltrate everyday life by paralyzing decision-making, disrupting restorative sleep, straining interpersonal bonds, and prolonging physiological stress responses. Recognizing overthinking as a modifiable cognitive habit rather than an inescapable trait or a productive analytical tool empowers individuals and clinicians to interrupt perseverative cycles through concrete behavioral action, metacognitive detachment, and structured decision frameworks.

Bibliography

Borkovec, T. D. (1994). The nature, functions, and origins of worry. In G. C. L. Davey & F. Tallis (Eds.), *Worrying: Perspectives on theory, assessment, and treatment*. John Wiley & Sons.

Borkovec, T. D., Ray, W. J., & Stöber, J. (1998). Worry: A cognitive phenomenon intimately linked to affective, physiological, and interpersonal behavioral processes. *Cognitive Therapy and Research, 22*(6). https://doi.org/10.1023/A:1018790003416

Brosschot, J. F., Gerin, W., & Thayer, J. F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research, 60*(2). https://doi.org/10.1016/j.jpsychores.2005.06.074

Clancy, F., Prestwich, A., Caperon, L., & O'Connor, D. B. (2016). Perseverative cognition and health behaviors: A systematic review and meta-analysis. *Frontiers in Human Neuroscience, 10*. https://doi.org/10.3389/fnhum.2016.00534

Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (1998). Generalized anxiety disorder: A preliminary test of a conceptual model. *Behaviour Research and Therapy, 36*(2). https://doi.org/10.1016/S0005-7967(97)00070-3

Ehring, T., & Watkins, E. R. (2008). Repetitive negative thinking as a transdiagnostic process. *International Journal of Cognitive Therapy, 1*(3). https://doi.org/10.1521/ijct.2008.1.3.192

Ehring, T., Zetsche, U., Weidacker, K., Wahl, K., Schönfeld, S., & Ehlers, A. (2011). The Perseverative Thinking Questionnaire (PTQ): Validation of a content-independent measure of repetitive negative thinking. *Journal of Behavior Therapy and Experimental Psychiatry, 42*(2). https://doi.org/10.1016/j.jbtep.2010.12.003

Hamilton, J. P., Farmer, M., Fogelman, P., & Gotlib, I. H. (2015). Depressive rumination, the default-mode network, and the dark matter of clinical neuroscience. *Biological Psychiatry, 78*(4). https://doi.org/10.1016/j.biopsych.2015.02.020

Joormann, J., & Gotlib, I. H. (2008). Updating the contents of working memory in depression: Interference from irrelevant negative material. *Journal of Abnormal Psychology, 117*(1). https://doi.org/10.1037/0021-843X.117.1.182

Koster, E. H. W., De Lissnyder, E., Derakshan, N., & De Raedt, R. (2011). Understanding depressive rumination from a cognitive science perspective: The impaired disengagement hypothesis. *Clinical Psychology Review, 31*(1). https://doi.org/10.1016/j.cpr.2010.08.005

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*(4). https://doi.org/10.1037/0021-843X.100.4.569

Ottaviani, C., Thayer, J. F., Verkuil, B., Lonigro, A., Medea, B., Couyoumdjian, A., & Brosschot, J. F. (2016). Physiological concomitants of perseverative cognition: A systematic review and meta-analysis. *Psychological Bulletin, 142*(3). https://doi.org/10.1037/bul0000036

Papageorgiou, C., & Wells, A. (2001). Metacognitive beliefs about rumination in recurrent major depression. *Cognitive and Behavioral Practice, 8*(2). https://doi.org/10.1016/S1077-7229(01)80021-3

Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3). https://doi.org/10.1023/A:1023910315561

Watkins, E. R. (2008). Constructive and unconstructive repetitive thought. *Psychological Bulletin, 134*(2). https://doi.org/10.1037/0033-2909.134.2.163

Wells, A. (2009). *Metacognitive therapy for anxiety and depression*. Guilford Press.

Zoccola, P. M., & Dickerson, S. S. (2012). Assessing the relationship between rumination and cortisol: A review. *Journal of Psychosomatic Research, 73*(1). https://doi.org/10.1016/j.jpsychores.2012.03.007

24. Watkins, E. R. (2008). Constructive and unconstructive repetitive thought. *Psychological Bulletin, 134*(2), 163–206. https://doi.org/10.1037/0033-2909.134.2.163