

## Perceived Control and Mindfulness: Implications for Clinical Practice

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A broad range of studies conducted over the past 50 years suggest that perceived control is an important construct to physical health and psychological well-being. When people feel that they can exert control, they demonstrate better immune responses, cardiovascular functioning, physical strength, increased longevity, increased life satisfaction, and decreased anxiety and depressive symptoms. The authors discuss how perceived control can be understood through lens of mindfulness without meditation. In this framework, *mindfulness* is defined as the act of noticing new things, a process that promotes flexible responding to the demands of the environment. It is the opposite of mindlessness, which describes the overreliance on previously learned categories. Both lack of perceived control and mindlessness are rooted in rigidity and a view of the world as unchangeable. The authors present insights into how clinicians can use Langerian mindfulness to improve the perception of control, and therefore well-being, in their clients.

*Keywords:* perceived control, mindfulness, mindlessness, well-being, health

*Perceived control* refers to an individual's belief about his or her own capability of exerting influence on internal states and behaviors, as well as one's external environment (Langer, 1977; Lefcourt, 1966; Pearlin & Schooler, 1978; Wallston, Wallston, Smith, & Dobbins, 1987). The sense of control that one can exert over life events is one of psychology's most explored constructs. Starting in the 1960s, it became clear that the effects of aversive events and distress could be mitigated by the perception of being in control (Glass, Siger, & Friedman, 1969; Langer & Saegert, 1977; Pervin, 1963). Following these original studies, researchers discovered that increasing perceived control in a more general sense facilitated well-being (Langer, 1977; Langer, 1983; Langer, Ja-

nis, & Wolfer, 1975). For example, nursing home residents having control over the scheduling of their daily activities not only improved their health but also their longevity (Langer & Rodin, 1976; Rodin & Langer, 1977). Over the past five decades, researchers from many fields, including social, clinical, and health psychology, have investigated the varied implications of perceived control.

Early investigations considered globalized perceived control (Haidt & Rodin, 1999; Rotter, 1966), whereas recent contributions have stressed the integrative nature of the construct to specify the complexities that arise from different aspects of control (Gallagher, Bentley, & Barlow, 2014; Weems & Silverman, 2006). The multifaceted nature of the construct has produced many nuanced definitions (Burger, 1989; Langer, 1975; Rodin, 1990; Skinner, 1996); moreover, there are similar constructs under the larger umbrella of "control." Despite their varied emphases and specifics, self-efficacy, mastery, attributional style, and locus of control have all often been used interchangeably with the notion of perceived control (Keeton, Perry-Jenkins, & Sayer, 2008; Ledrich & Gana, 2013).

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This article was published Online First March 31, 2016.  
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The concept of perceived control, in itself, is not monolithic. Rothbaum and colleagues (1982) outlined a useful distinction between primary and secondary perceived control. *Primary perceived control* describes the attempt to modify the environment to align with one's wishes (e.g., knowing that it is possible to reschedule an appointment). *Secondary perceived control* refers to using mental strategies to change one's wishes so that they reflect the environment (e.g., deciding that an unreachable outcome is not that desirable, after all). According to this theory, when an individual cannot exert direct influence over the environment (i.e., primary control is not possible) one can use secondary control. The product of successful secondary control is considered to be a state of acceptance (Morling & Evered, 2006), as is the case of one diagnosed with an untreatable disease (Thompson, Nanni, & Levine, 1994).

The need for control is so important for people that sometimes they experience an "illusion of control," which was originally defined as "an expectancy of a personal success probability inappropriately higher than the objective probability would warrant" (Langer, 1975, p. 313; Langer & Roth, 1975). The phenomenon was observed in a series of experiments in which people were more likely to attribute personal success to skill rather than luck. For example, participants in a lottery were more likely to believe they would win if they were free to choose their own lottery numbers than if their numbers were randomly assigned (Langer, 1975).

In what follows, we will review the scientific literature about perceived control and how it relates to psychological and physical health. We will also explore the concept through the lens of Langerian mindfulness theory. Finally, we will describe some implications that we believe will be helpful to clinicians.

### Perceived Control and Physical Health and Psychological Well-being

*Perceived control* has been associated with psychological and physical health in a large body of research (Glass et al., 1969; Langer et al., 1975; Langer & Rodin, 1976; Rodin & Langer, 1977). It is represented as a key protective factor for well-being, with individuals having higher levels of global perceived control

reporting more control over their health (Infurna & Gerstorf, 2013). As a result, these individuals may be more likely to adopt and maintain healthy behaviors, such as exercising, following a healthy diet, and adhering to the advice of medical professionals (Bandura, 2004; White, Wójcicki, & McAuley, 2012).

A person's greater perception of control results in a decreased risk of physical decline and cardiovascular disease (Infurna & Gerstorf, 2014; Lachman & Agrigoroaei, 2010), as well as better neuroendocrine functioning and immunocompetence (Agrigoroaei et al., 2013; Bolini, Walker, Hamann, & Kestler, 2004; Wiedenfeld et al., 1990) and grip strength (Infurna & Gerstorf, 2014). Researchers have also linked higher levels of perceived control with better cognitive functioning, including memory, executive functioning, and processing speed (Caplan & Schooler, 2003; Lachman & Agrigoroaei, 2012; Langer, Rodin, Beck, Weinman, & Spitzer, 1979).

Perceived control has been established as a key component to health throughout the life span (Heckhausen & Schulz, 1995) and is particularly emphasized in the literature for older adults. The first investigations in this domain began in the 1970s and have continued to influence the field. These first studies dramatically demonstrated the robust health benefits to restoring personal control to elderly nursing home residents by providing them with more responsibilities and choices (Langer & Rodin, 1976). Specifically, those in the experimental group were invited to take personal responsibility for their living arrangements, including placement of the furniture, choosing the timing of a movie showing, and how they wanted to spend their time. Finally, they were given the responsibility for caring for a plant. The control group was told to take advantage of the amenities of the institution, specifying that it was the staff's responsibility to create the best environment possible, including caring for the plants for them. The primary difference between the two groups was the different degree of perceived control over the environment. In addition to better health, activity patterns, mood, and sociability, older adults who were encouraged to take more personal control over their environment were more likely to be alive over the 18-month follow-up than those who did not have control over their environment (Rodin & Langer, 1977). In

line with those results, Kaplan and Camacho (1983) found that perceived health predicted mortality even more strongly than actual health. Regardless of their actual health status, older adults who perceived their health to be poor were six times more likely to die than those who perceived themselves to be in excellent health (Idler & Kasl, 1991).

Perceived control is one of the key factors that influence the experience of acute and chronic pain (Gatchel, Peng, Peters, Fuchs, & Turk, 2007; Williams, Golding, Phillips, & Towell, 2004). Painful stimuli that are objectively uncontrollable are perceived as more distressing and intense than controllable stimuli (Carlsson et al., 2006). To be effective in reducing pain, control over the stimulus can be perceived as instrumental, as is the case when it is possible to implement a behavioral response (e.g., interrupt the stimulus), or cognitive, when there is a cognitive strategy available (e.g., distraction; Litt, 1988). As reported in other situations, control does not have to be actual, it just needs to be perceived as available (Thompson, 1981). In people with chronic pain, perceived helplessness is generally the strongest predictor of disability and pain level (Samwel, Evers, Crul, & Kraaimaat, 2006; Turner, Jensen, & Romano, 2000). Clinical implications are relevant, as health care professionals could support the perception of control in patients, for example by making them more engaged in the care process or in other activities where they can have control (McCracken & Eccleston, 2005). It should be noted, however, that if multiple attempts of gaining control over pain fail, that can exacerbate frustration and pain (McCracken, Carson, Eccleston, & Keefe, 2004). Rather than trying to control pain itself, sometimes it could be preferable to try to control one's reaction to the pain, including minimizing catastrophic thinking and perseverating on the pain sensation (Gatchel et al., 2007).

In addition to physical health, much research has investigated the relationship between perceived control and psychological well-being. Several psychological outcomes generally associated with well-being seem to be related to a sense of control over one's life. Among these outcomes are resilience, motivation, and life satisfaction across the socioeconomic spectrum (Lachman & Weaver, 1998) and across a variety of cultures (Cheng, Cheung, Chio, & Chan,

2013). Perceived control allows one to adapt to a variety of stresses including economic stress, job loss, and caregiver burden (Zautra et al., 2012).

Laboratory experiments have demonstrated that stress tolerance is related to perceived control over aversive stimuli. For example, participants who were able to administer the timing of shocks reported less anxiety than participants who were not in control of the shock (i.e., when the experimenter administered the shock; Pervin, 1963). In the clinical realm, anxiety and depression have both been linked to low levels of perceived control (e.g., Brown & Siegel, 1988). Low perception of control seems to be a constant across people with many different anxiety disorders (for a meta-analysis, see Gallagher et al., 2014), suggesting that those suffering from these disorders may benefit from increasing their perception of control. These and other psychological issues can be reduced by increasing a sense of control (Averill, 1973), either through promoting coping behavior or initiating a reappraisal process (Bandura, 1982). Langer et al. (1975) demonstrated the integration of these strategies in patients preparing for surgery. Specifically, they found that a comprehensive strategy consisting of cognitive reappraisal, calming self-talk, and selectively attending to the more favorable aspects of the present situation led to lower pre- and postoperative stress levels.

Adopting a sense of control over one's past, present, and future circumstances does not equally benefit those suffering from anxiety. In the temporal model of control, Frazier, Berman, and Steward (2001) hypothesized that perceived control over past events (i.e., self-blame, "What could I have done to prevent this?" or counterfactual thinking, "If things had gone differently, I wouldn't be in this situation") may lead to more distress, whereas control over the present (i.e., "What can I do now?") and future (i.e., "How can I prevent this from happening again?") may lead to less distress. Indeed, longitudinal data from a sample of female sexual assault victims supported this temporal model of control, with higher levels of perceived control over the past sexual assault related to more distress, and more perceived control over present (recovery) or future circumstances related to less distress (Frazier, 2003). Two studies found that perception of present control (but not past

or future control) was related to reduced post-traumatic stress symptoms (Frazier, Steward, & Mortensen, 2004; Najdowski & Ullman, 2009). Similarly, Larsen and Fitzgerald (2011) found that for women who had been sexually harassed, perceived control over the recovery process along with the perception that future harassment was unlikely were both linked to fewer posttraumatic stress disorder symptoms.

In the context of panic disorder, experimental research has demonstrated that giving patients more control over their environment reduces symptoms. For example, Sanderson and colleagues (1989) found that when exposing panic disorder patients to a stressful environment conducive to panic (i.e., a 5.5% carbon-dioxide enriched atmosphere), patients who were led to believe that they were able to change carbon-dioxide levels with personal dials demonstrated fewer symptoms, including fewer catastrophic cognitions and fewer reports of a panic attack. Not surprisingly, compared to a nonclinical sample, those diagnosed with panic disorder and social phobia reported a lower sense of internal control as measured by Levenson's (1973) locus of control scale. Specifically, those diagnosed with panic disorder perceived that events were proceeding in a random and uncontrollable way, whereas those diagnosed with social phobia perceived interactions as controlled by more powerful others (e.g., those who judge them; Cloitre, Heimberg, Liebowitz, & Gitow, 1992).

Another anxiety disorder, obsessive-compulsive disorder, has been previously characterized by the patient's relationship with control. Specifically, obsessive-compulsive disorder is characterized by an individual's attempts to control their own thoughts and environment through rituals (Carr, 1974; Reuven-Magril, Dar, & Liberman, 2008). Researchers have suggested that clinicians use cognitive therapy to help their patients find alternative ways to increase sense of control (Moulding & Kyrios, 2007).

Along with anxiety, low perceived control is also related to depression, as described in detail by Seligman's application of learned helplessness theory to depressives (e.g., Miller & Seligman, 1975). Specifically, Seligman ascribed depression to feelings of helplessness over one's life circumstances. Later, Seligman described how one's attributional style could predict

whether or not learned helplessness would occur. Seligman, Abramson, Semmel, and von Baeyer (1979) found that individuals who view the etiology of negative life events as internal, global, and stable (i.e., displaying a pessimistic attributional style) were more likely to be depressed than those with an optimistic attribution style (i.e., belief that causes of negative events are external, specific, and unstable). Although someone with a pessimistic style blames him or herself for negative events (e.g., "I always miss that highway exit"), a person with an optimistic style would attribute the error to external factors (e.g., "That exit is not very well marked"). In addition, a person with a pessimistic attributional style will not limit self-blame to a specific domain (e.g., "I can't do anything right") or special circumstances ("I'm always messing up"). Researchers have demonstrated that depressive symptoms may be attenuated with interventions that aim to improve mastery and personal control (Zautra et al., 2012).

### Mindfulness and Perceived Control

Perceived control can be understood through the theory of Langer's conceptualization of mindfulness (Langer, 1989). In contrast to the Eastern approach to mindfulness, which often involves meditative practices, *Langerian mindfulness* is defined as the process of drawing novel distinctions (Langer, 1989). It is the opposite of mindlessness, which is the reliance on previously established categories that may have worked before, but do not consider the current contextual demands. In other words, the idea that things remain stable is mindless. Perceived lack of control often reflects a feeling of stuckness, even imprisonment. The view that reality is stable and unchangeable may drive the person into a sense of fatalism, which hinders the perception of control (Caplan & Schooler, 2003).

When mindful, individuals are aware that everything is in constant change and therefore can respond accordingly (Langer, 1989). For example, one can adapt the contents of a presentation to the audience's needs. If the audience looks confused, a mindful person would simplify the content instead of proceeding as planned. In this way, they do not rely on previous categories to understand the present moment, as they are aware that nothing stands still. Therefore, the essence of being mindful is noticing that their

life situation has changed and therefore flexibly adapt to these changes. Each moment is an opportunity to react anew. When mindful, an individual can act from a framework of continually emerging possibilities. This framework allows people to experience more control because they perceive reality as something in constant change, and therefore with endless potential entry points for beginning or trying again. For example, by using biofeedback, a person learns how to gain control over the body, paying attention to subtle bodily changes that are also reported by a machine (Carlson, 1982). The self-regulation ability that follows biofeedback training would not be possible without a mindful attention to constant changes.

The connection between mindfulness and perceived control deals with both primary and secondary perceived control. *Primary control* can be attained by realizing that there is often the possibility to change the situation, even if it is not immediately obvious. For example, a person with amputated legs could initially believe that he or she will not be able to run anymore, but then realizes that running is possible with prosthetics. *Secondary control* involves the changing of one's perception of the situation, and is possible in instances where one cannot change the environment. For example, a person who becomes blind as a result of a disease can change his or her perspective toward the situation by accepting it and even finding positive aspects (e.g., improvement of other senses).

Not surprisingly, both mindfulness and perceived control have similar correlations with physical and psychological health. Similar to perceived control, Langerian mindfulness is associated with lower anxiety and depression levels, physical well-being, and longevity (Alexander, Chandler, Langer, Newman, & Davies, 1989; Haigh, Moore, Kashdan, & Fresco, 2011; Pagnini et al., 2015).

### Mindless Threats to Perceived Control

As suggested above with regard to Langerian mindfulness theory, many threats to perceived control can be understood as manifestations of mindlessness. Relying on past categories creates expectations for the present, which may limit the perception of control. Specifically, negative expectations about the context, other

people, and oneself narrow the perception of possible realities, contributing to a passive mindset (Langer, 1989). For example, a negative expectation about an exam (i.e., failing) could increase the chance of making it happen with a self-fulfilling prophecy (Merton, 1948). These mindless expectations have been widely investigated in the realm of social psychology, described under various headings, including prejudice, stereotypes, social comparison, attitudes, priming, and in-group/out-group effects.

One example of how expectations can reduce the perception of control is stereotype threat. When a negative stereotype about an individual's group (specifically about the group's ability) is made salient, the individual's performance suffers (Spencer, Steele, & Quinn, 1999). For example, the mere act of identifying as African American (i.e., indicating it on a form) before a test resulted in lower performance on a verbal test (Steele & Aronson, 1995). In addition to expectations about one's own abilities, expectations about others can also affect levels of perceived control. For example, people may mindlessly relinquish control to someone in charge even to the extent of putting themselves in harm's way (Miransky & Langer, 1978). Specifically, Miransky and Langer found that people living in New York City did not take overt precautionary measures to prevent burglary if they perceived safety was a duty of public authorities. Another example about how expectations of others affects perceived control is provided by Milgram's classic obedience study (Milgram, 1963), as people tended to trust and give over control to the person with perceived authority, sometimes mindlessly following the cue of the experimenter's white coat to infer authority.

Another example of how expectation reduces one's perception of control is learned helplessness. This phenomenon comes from a repeated exposure to an inescapable aversive stimulus (Seligman & Maier, 1967). In this classic study, dogs that were exposed to an inescapable shock soon learned that it was futile to make escape attempts, maintaining the response even when escape was possible. The same phenomenon has been found in the human realm (e.g., Miller & Seligman, 1975) and manifests itself as the feeling of impotence in a certain situation, leading one to overlook opportunities for relief or change. Learned helplessness can be understood

as an intense form of mindlessness. In this case, the associations made in the past (at the time of the aversive stimulus) are mindlessly carried into the present, even though the situation has changed. When mindful, an individual can flexibly adapt to the present situation, not relying on past knowledge that the situation is inescapable. Therefore, learned helplessness does not occur when a person is in a mindful state.

### Implications for Clinical Practice

As reviewed in the above section, high perception of control is related to good health, both physical and psychological. Therefore, perceived control is a relevant construct for clinical practice. The perception of control overlaps with several clinical concepts and many psychotherapeutic techniques refer to it. For example, rather than depending on the therapist, clients are often encouraged to become their own therapists, increasing their perception of being in control of their own health (Beck, 1979). Another example is the attribution of positive changes to the client's efforts rather than the therapist's suggestions or interventions. Understanding that one has direct influence over changes leads to increase the perception of control. Sometimes, specific successful therapeutic techniques promotes, either directly or indirectly, personal control. For example, exposure therapy allows clients to be in control of how and when they experience feared situations (Mineka & Thomas, 1999).

Clinicians can promote the perception of control by encouraging Langerian mindfulness in their clients. Mindfulness can easily be implemented and incorporated in everyday life (Langer, 1989). Specifically, people can learn how to be mindful with simple educational and cognitive reframing exercises (Carson & Langer, 2004). Mindfulness can be understood as a common factor that is present in most forms of psychotherapy (Martin, 1997). Indeed, a most relevant part of the therapeutic process could be interpreted as the transition from mindlessness to mindfulness. For example, irrational (mindless) beliefs are considered by most forms of therapy as important cause of anxiety and depression (Beck & Clark, 1988; Langer et al., 1975). There are various ways in which mindfulness can be encouraged. Thus, during a cognitive intervention, these beliefs are recognized

and challenged with alternative thoughts. Another example of a mindfulness implementation during psychotherapy is the use of paradoxical interventions (Shoham-Salomon, Avner, & Neeman, 1989), which force clients to change their perspective on a specific situation, creating the conditions for a more mindful elaboration. For example a paradoxical treatment of obsessive-compulsive disorder may ask the patient to enact the compulsions on purpose. In this way, the patient will experience the symptoms from a new perspective (e.g., potentially that the symptoms could be controllable). The use of metaphors in therapy is still another example (Witztum, van der Hart, & Friedman, 1988), as they stimulate parallel thought processes. In Milton Erickson's "cactus treatment," he successfully treated an alcoholic by asking him to go to the botanical gardens and contemplate a cactus plant, which can live for three years without "drink" (Rosen, 1982).

Transitioning from mindlessness to mindfulness is important in the process of psychotherapy, occurring across different orientations (Castonguay & Hill, 2007). Although this transition is not generally recognized with these terms specifically—instead calling it "insight" or "cognitive restructuring"—viewing the therapeutic process through the mindfulness/mindlessness theory provides a different lens for interpreting different conditions. There are many ways to intentionally include perceived control and mindfulness into the clinical practice, some of which are noted below.

### Providing More Than One Point of View

Clients are often stuck in a fixed point of view and can benefit from a broader perspective. Interpretation is a common technique in several psychotherapeutic approaches, including psychodynamic therapy. Although interpretation provides a different perspective, so as to broaden a patient's view, sometimes it may result in a mindless strategy, moving from one narrow perspective to another. For example, interpreting a behavior as "absolutely" related to a childhood issue may prime the patient to use the same explanation for different actions when it may not be so. Rather than just providing one alternative narrative, a clinician can help the client generate several explanations. This process may help clients' understanding

that events can always be perceived from multiple perspectives, demonstrating that there is not a “correct” one. The use of multiple perspectives can be applied to discuss and analyze both personal and interpersonal situations, also considering that, in any situation, behavior makes sense from the agent/actor’s perspective (Langer, 1989). Moreover, when the clinician gives an alternative view to the client’s view, it may be mindlessly accepted as correct due to the clinician’s authority and be applied inappropriately without considering the context. For example, sometimes giving a suggestion that can be inappropriately generalized (e.g., “maybe you could consider not always being so sensitive”) can be detrimental to the client (e.g., rejecting feedback entirely). If the therapist realizes that a patient is mindlessly stuck on one perspective (even if it is the one provided by the therapist), he or she could challenge it by asking the patient to generate alternatives.

### Contextualizing “Good” and “Bad”

Nothing is bad or good, in itself. Instead, the valence depends on the view the person takes of the event. Events that are initially perceived as negative can be viewed from a different perspective, a process that may help one discover the “positive” sides (Pagnini & Philips, 2015). As considered in traditional cognitive therapy, evaluations lead to emotional reactions (Maddux, 2011); therefore, undesired emotions such as fear and sadness can be modified by taking a different perspective. The awareness that one’s perspective can actively change (which in turn can alter one’s mood) is one way to increase perceived control over one’s well-being. For example, exploring the connections between one’s belief of being a failure and a depressed mood can lead to one to feel more control over mood fluctuations.

### Accept Uncertainty

Clinical experience suggests that clients sometimes seek support because they are afraid of something that they feel they cannot control. That may be reflected in anxiety and worrying about future events. From a mindful perspective, the future is always unpredictable, as things are constantly changing (Langer, 1989). This makes prediction impossible and mindless. Therefore, uncertainty can be a resource, re-

mindful one to stay engaged in the present moment. Clinicians can work on the false perception of stability by questioning the certainty that something will or will not happen. For example, a clinician can ask, “What are three reasons why that event may not happen?” Playing with and accepting uncertainty reflects higher mindfulness and improves perceived control (Carson & Langer, 2004). To further gain a perspective on uncertainty, it may be beneficial to introduce puzzles and stories that feature paradoxes (e.g., koans or parables). Consider the classic koan: “What is the sound of one hand clapping?” The purpose of contemplating koans is not to “solve” them, but to foster comfort in uncertainty (Brazier, 2012).

### Encouraging the Active Attention to Variability

Clinicians can increase perceived control by inviting their clients to pay attention to the variability in their everyday life, in particular in their maladaptive behaviors and symptoms. People with a chronic disease (e.g., amyotrophic lateral sclerosis; Pagnini et al., 2015) can learn that “chronic” does not mean that their symptoms are stable all the time. As a result of a more mindful outlook, people may start viewing their conditions with less rigidity, allowing them to realize that they have the freedom to respond to familiar circumstances in new ways. More important, perhaps, clients will come to see that neither they nor others “always” respond in the predicted way. Similarly, people with depressed mood or anxiety could benefit from the mere act of paying attention to when they feel their symptoms more or less acutely and try to make sense of the variability.

### Using Conditional Language

In the interactions between the clinician and the client, it may be useful to introduce information in a conditional way, replacing “certainty” words with “possibility” words (Langer, 2000). For example, a clinician may consider using “could be” instead of “should be” and “may be” instead of “is.” This shift in language promotes creativity and an increased generation of new solutions. The use of conditional language challenges the stability of reality as perceived by the person, inviting him/her to become more open to new interpretations.

### Adding Humor

Without being insensitive, and in the context of a good therapeutic alliance, clinicians can use humor and encourage it in their clients, especially referring to the client's situation. For example, making a joke about a stressful situation, if contextually appropriate, can reduce anxiety and help the person see the situation from a different perspective. Humor is intrinsically mindful, as it forces the person to consider a new and unexpected side of a certain situation (Carson & Langer, 2004).

### Managing the Mindless Effects of Labels

Labels such as "diagnoses" can narrow the experiences of a person, reducing them into the constraints of a self-fulfilling prophecy (Langer & Abelson, 1974; Khoury, Langer, & Pagnini, 2014). The mindless identification with any kind of label restricts one's perspective and perceived futures. For example, a person who has received a diagnosis of a chronic disease may start defining him/herself in terms of the disease. A clinician can help a client explore vital aspects of the self outside of the suffering, keeping in mind that a "multiple self" is more resilient than a unidimensional one (Linville, 1985), especially when there is less overlap among these multiple identities (Constantino, Wilson, Horowitz, & Pinel, 2006).

### Being Mindful, Yourself

To encourage mindfulness in a client, a clinician needs to adopt a mindful perspective as well. Clinicians are not immune to the threats of mindlessness. For example, one could mindlessly adhere to a psychotherapeutic protocol without adapting it to the specific situation and its evolutions. Indeed, a growing body of research is describing that psychotherapists' mindfulness is an important predictor of a positive psychotherapeutic process (Bruce, Shapiro, Constantino, & Manber, 2010) and outcomes (Ryan, Safran, Doran, & Muran, 2012).

### Conclusions

The perception of being in control is important for both psychological and physical health. We believe it is most useful to approach the

construct through the lens of Ellen Langer's conception of mindfulness, which is based in the simple act of noticing new things and flexibly responding to changes in context (Langer, 1977, 1989). Specifically, we have drawn a parallel between mindfulness and perceived control that may allow new clinical tools derived from the former to improve the latter. By incorporating an understanding of mindlessness and mindfulness into their practices, clinicians can increase perceived control both for their clients and themselves.

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Received February 29, 2016

Accepted March 1, 2016 ■