The “Thinking Threshold”: A therapeutic concept guided by emotion regulation flexibility

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Abstract

Cognitive reappraisal is an emotion regulation strategy with significant empirical support. However, it is also true that many people have difficulty using cognitive reappraisal—and any cognitive strategy that requires significant mental effort—while experiencing intense emotions. Per the tenants of *emotion-regulation flexibility*, we provide information on a therapeutic concept we call the “thinking threshold” which helps clients identify the level of emotional distress at which their thinking becomes impaired. When clients are above the “thinking threshold” they are guided to use behavioral and bodily-focused emotion regulation strategies, and to use cognitive reappraisal and problem solving when below the “thinking threshold.” In this paper, we outline the rationale for considering emotion-regulation flexibility with clients, identify why level of emotional intensity is an important context to consider when helping clients identify effective emotion regulation strategies, and review research supporting the notion that effortful cognitive strategies are less effective at high levels of emotional distress. We also describe how we teach clients to use the “thinking threshold” concept and provide a brief case study demonstrating the utility of the concept with a client. Finally, we review ways in which the “thinking threshold” could be tailored and adapted alongside acceptance-based approaches, and we describe future directions for both empirical examination of the “thinking threshold” as well as expansion within clinical practice.

Keywords: cognitive reappraisal; emotion regulation; emotion regulation flexibility; transdiagnostic

Clinical Impact Statement: A strategy for helping clinicians teach flexible emotion regulation strategies to clients is discussed. Namely, clinicians are guided to help clients use behavioral strategies when emotions are intense, and cognitive strategies when emotions are less arousing, an approach that is supported by the research on enhancing emotion regulation flexibility.

The “Thinking Threshold”: A therapeutic concept guided by emotion regulation flexibility

Struggles with emotion are ubiquitous in clients seeking psychotherapy. People with major depression struggle with intense sadness and low positive affect (Rottenberg et al., 2005), those with anxiety disorders and PTSD struggle with heightened fear and anxiety (Hirsch & Holmes, 2007; O’Bryan et al., 2017), and irritability and anger often accompany borderline personality symptoms (Chapman, 2012). It is also common for emotional upheaval to occur outside of diagnostic categories. Learning to effectively deal with emotion is thus a core element of therapeutic treatment (Greenberg & Pascual-Leone, 2006). However, it can be overwhelming for clinicians to navigate all of the basic research on emotion as well as the treatment strategies focused on emotion. Which skills and strategies are the *most* important to teach clients?

In this paper, we suggest that clinicians teach their clients how to flexibly regulate their emotions based on their level of distress with a therapeutic concept we call the “thinking threshold.” With this approach, clinicians help clients cultivate a “toolbox” of emotion regulation strategies (Southward et al., 2021) and flexibly employ different strategies depending on the context. In particular, the thinking threshold considers the context of emotional intensity, where we suggest that clients use cognitive strategies when they experience levels of distress below their thinking threshold (i.e., the idiographically defined level at which clients believe that emotions impair their thinking), and behavioral strategies *above* their thinking threshold.

In the sections below, we describe the effectiveness of cognitive emotion regulation strategies—particularly cognitive reappraisal—for treating emotional distress. We also discuss how the “thinking threshold” concept prompts emotion regulation flexibility, and is consistent with work demonstrating that cognitive strategies are not effective when distress is high. We then describe how we teach the “thinking threshold” concept to clients, and we discuss a case

where the thinking threshold concept was used successfully. Finally, we discuss some of the future directions needed for further empirical examination of the ideas embedded within the thinking threshold concept, and additional ideas for clinical practice.

The Effectiveness of Cognitive Reappraisal

Admirers of cognitive-behavioral therapy will likely know that among the variety of cognitively-based strategies people can use to regulate their emotions, cognitive reappraisal is emphasized because it is incredibly effective at reducing distress in many situations and for many people (Aldao et al., 2010; John & Gross, 2004; McRae et al., 2012; Naragon-Gainey et al., 2017). Cognitive reappraisal, sometimes called reframing (McRae, 2016), is centered on the active reinterpretation of an emotion-eliciting situation (Gross & John, 2003). For example, someone who felt hurt by a friend's comment could reappraise the situation by thinking of the friend as misinformed rather than intentionally cruel. Cognitive reappraisal is advantageous because it provides people a more balanced, holistic and flexible perspective (Nook et al., 2020) without avoiding emotions (Milyavsky et al., 2019). Also, if done in the moment of the situation, reappraisal can, theoretically, require relatively few cognitive resources (Gross et al., 2006; Kalisch et al., 2006; Vohs & Schmeichel, 2003). People who habitually use cognitive reappraisal tend to experience fewer symptoms of psychopathology (Aldao & Nolen-Hoeksema, 2010; Naragon-Gainey et al., 2017; Ray et al., 2010) and have greater well-being (Gross & John, 2003), including in cross-cultural samples (Haga et al., 2009). Whether a staunch cognitive-behavioral therapist or not, it seems fair to say that cognitive reappraisal is a useful tool for clients to have in their emotion regulation strategy toolbox.

However, cognitive reappraisal is not a one-size-fits-all solution to emotional distress, just as a screwdriver is not the appropriate tool for every manual job. Cognitive reappraisal has

limitations, in large part because not everyone can use reappraisal successfully. Most therapists—ourselves included—can think of clients who were able to be guided through cognitive reappraisal in a therapy session but were unable to use the skill on their own. Some of that could be due to attempting to use reappraisal in situations where it might not be feasible or useful (Ford & Troy, 2019). For instance, cognitive reappraisal is highly effective and adaptive when the situation is uncontrollable (Haines et al., 2016; Troy et al., 2013; Wenzel et al., 2020), but may be unhelpful in controllable situations (Troy et al., 2013), perhaps because reappraisal can dampen emotions that may actually be useful to motivate effective action (Tamir, 2016).

Other clients refuse to use cognitive reappraisal because it can feel invalidating, like the therapist is essentially saying “you’re thinking about this situation wrong and causing your own distress” (Finlay, 2015; Ford & Troy, 2019), or perhaps “the problem is all in your head—it’s not valid or real.” This issue is particularly important to consider when working with clients from marginalized groups. For example, asking a Black person to reappraise a racial microaggression could discount the oppression they experienced. Reappraisal is not functionally adaptive in these situations and would likely cause harm.

Experts are now suggesting that cognitive reappraisal is not always used effectively and is not always functionally adaptive (Ford & Troy, 2019), suggesting that the utility of cognitive reappraisal might depend on context (Aldao & Nolen-Hoeksema, 2012a; Ford & Troy, 2019; Naragon-Gainey et al., 2017). Understanding the contexts in which reappraisal can be implemented successfully and serve functional goals is an important step for both therapists and emotion regulation researchers.

Emotion Regulation Flexibility

Using cognitive reappraisal strategically based on context is consistent with the concept of *emotion regulation flexibility* (Aldao et al., 2015; Bonanno & Burton, 2013). When a person regulates their emotions flexibly, they choose a method of navigating their emotions that helps them meet their momentary goal within the demands of their current environment. Emotion-regulation flexibility acknowledges the fact that while sometimes emotions need to be harnessed (e.g., sadness prompts people to seek support, anger nudges people to act assertively; Benita et al., 2019; Ford & Tamir, 2012), sometimes emotions need to be regulated. Even when emotion regulation is warranted, no strategy will work *all* of the time. Rather, according to the *strategy-situation-fit* hypothesis (Aldao et al., 2015; Bonanno & Burton, 2013) the most effective way to regulate emotions is to consider the situation and adapt accordingly.

For example, as described in the prior section, cognitive reappraisal tends to work well in uncontrollable situations (Haines et al., 2016; Troy et al., 2013; Wenzel et al., 2020), but problem solving is better when the situation itself can be changed. For another example, expressive suppression (attempting to hide emotions from others) is typically described as a maladaptive strategy because habitual use of suppression is associated with a wide variety of mood pathology (Dryman & Heimberg, 2018; Gross & Levenson, 1997; Zaki & Williams, 2013), and expressing emotions tends to improve social communication (Ford & Tamir, 2012). However, there are situations where hiding emotions from others is helpful (Kennedy-Moore & Watson, 2001), such as when the emotion is inappropriate to the social context (e.g., laughing outrageously at a funeral when everyone else is crying) or if sharing emotions is unsafe (e.g., in the vicinity of a person who has mocked or invalidated their feelings in the past). Context matters when it comes to regulating emotions (Aldao, 2013; Greenaway et al., 2018).

However, there are a multitude of ways in which contexts might be examined, which makes both research and clinical application quite complex. For example, is it most important to think about *who* is present (i.e., does the emotion occur in the context of loved ones, acquaintances, strangers, or when alone)? People tend to put effort into regulating their emotions more often when other people are nearby, and are particularly likely to regulate around strangers compared to close others (Gross et al., 2006). Perhaps the current sense of support in the relationship matters, as people in romantic relationships tend to use more expressive suppression when upset with their partners, and reappraisal when feeling close to their partners (Winterheld, 2016). Other contexts to consider could include location (e.g., at home, at work, while driving), activity (e.g., working, cooking, exercising) and/or perhaps the psychological features of a situation such as the degree of duty (Rauthmann et al., 2014) or controllability (Troy et al., 2013) inherent in a situation. Suffice it to say that even for clinicians who want to teach emotion regulation flexibility, figuring out what contexts to consider is important but quite difficult.

People Cannot Think Clearly When Emotions are Strong

One context that we know is important is the degree of distress intensity in an emotional situation (Dixon-Gordon, Aldao, & De Los Reyes, 2015; Shafir et al., 2016; Sheppes et al., 2014). Intense distress is an important context because people are more likely to want to regulate when distress is strong (Dixon-Gordon, Aldao, & De Los Reyes, 2015). However, people are also more likely to choose distraction than reappraisal during intense emotions (Shafir et al., 2016; Sheppes et al., 2014). Why? Well, to put it simply, most people cannot think clearly when experiencing strong emotional states (Carver & Johnson, 2018; Gabel & Mcauley, 2018; Gable & Harmon-Jones, 2010; Trémolière et al., 2016).

Evidence supports the notion that clear thinking is impaired during strong emotional states. For example, highly arousing emotional states are associated with impairments in associative memory (Guez et al., 2015), difficulties with social problem solving (Dixon-Gordon et al., 2011), and impaired executive functioning (Padmala et al., 2011; Shields et al., 2016). Encountering emotionally arousing stimuli can reduce inhibitory control (Patterson et al., 2016; Yu et al., 2012). One potential explanation for the link between strong emotional states and impaired cognitive functioning may be that emotional arousal is associated with less connectivity among brain regions (Patterson et al., 2016) and lower cerebral blood flow to areas of the brain associated with processing cognitive tasks (Drevets & Raichle, 1998). Specifically, the primitive brain regions most essential to survival take precedence when situations are perceived in a way that evokes intense arousal. Others have suggested that strong emotional states narrow attention onto the emotional situation (Gable & Harmon-Jones, 2010; Matthews & Wells, 1999), making other kinds of cognitive processing more difficult.

If people cannot think clearly during strong, intense emotional states, then it will be difficult to use effortful cognitive regulation strategies. The word “effortful” is important here. Cognitive reappraisal is often discussed as an antecedent regulation strategy which can be—*theoretically*—successfully employed before the emotion is fully experienced (Gross, 1998, 2015). When used as an antecedent strategy, and when used habitually, the cognitive resources required are likely low. However, when people are unpracticed at reappraisal and have not developed the skills required to employ it with automaticity, the cognitive effort to use it is high (Denson et al., 2014). Thus, when using reappraisal *after* an emotion is fully experienced (i.e., during the response phase of an emotion) the likelihood of successfully using reappraisal is diminished, perhaps particularly for people who find reappraisal effortful.

A Point About Repetitive Negative Thinking. We have made the claim that people have difficulty thinking in a balanced, flexible, and holistic way when emotions are strong, but this isn't to say people don't think at all when extremely emotional. People often *try* to think when they are in these intense emotional states, whether they are flooded with racing thoughts or paralyzed with hopelessness (Corrigan et al., 2011). Adaptive and balanced thoughts during heightened emotional states, such as when triggered by a trauma, during a panic attack, when extremely angry, or when feeling numb, are often inaccessible. In fact, we suspect that regularly trying to think when emotionally activated will often look like repetitive negative thinking (rumination and worry; McDermott et al., 2019; Watkins & Ehling, 2008), which is characterized by repeatedly thinking about negative content in a way that feels uncontrollable. Yet, rumination (and to a lesser extent, worry) are sometimes categorized as emotion regulation strategies (Nolen-Hoeksema, 2000; Watkins & Ehling, 2008) because the *intention* of them is often to regulate emotions. People engage in rumination to figure out *why* things occurred the way they did, and people worry to prevent future harm (Papageorgiou & Wells, 2001). However, rumination and worry are often ineffective, because they fuel self-criticism and extend distress rather than providing any real resolution or reflection (Aldao & Nolen-Hoeksema, 2012a; Naragon-Gainey et al., 2017).

While repetitive negative thinking is certainly possible at any level of emotional intensity, rumination and worry are particularly likely when emotions are intense (Dixon-Gordon, Aldao, De, et al., 2015; Watkins, 2018). Because intense negative affect tends to narrow attention (Gable & Harmon-Jones, 2010), when people are feeling negative emotions strongly, they are likely to think in emotionally-reflexive ways without the benefit of perspective (Carver & Johnson, 2018). This has been called cognitive impulsivity (Carver & Johnson, 2018), which

involves mentally generalizing momentary responses to the self and the world, as well as increased motivation to withdraw from others (Carver et al., 2017; Johnson et al., 2013). Cognitive impulsivity has been likened to repetitive negative thinking (Dekker & Johnson, 2018). We also suspect that people's attempts to explain *why* things are happening or ineffectively trying to problem solve when acutely emotional (e.g., by worrying about possible future scenarios) may fuel and reinforce these cognitively impulsive thinking processes.

Essentially, when people are intensely emotionally distressed, they are likely to think in unhelpful ways (e.g., automatic thoughts, repetitive negative thinking) and demonstrate a decreased capacity to effectively use cognitive regulation strategies such as cognitive reappraisal. We think that other cognitive regulation/coping strategies that require complex thinking, such as problem solving, are also likely to be impaired during heightened emotional states. Thus, when feeling strongly emotional, cognitive strategies are not recommended.

Behavioral Strategies During High Distress

If people struggle to think adaptively when experiencing strong emotions, what should they do instead? Our proposal is that when emotions are very high, a person in distress should rely on behavioral strategies rather than cognitive ones. This idea, though perhaps laid out here in a slightly different way, is certainly not novel. Many psychotherapies focus on behavioral strategies during heightened emotions. For example, Dialectical Behavior Therapy (Linehan, 1993, 2015) includes a variety of skills (typically categorized as distress tolerance skills) to be used during high emotional arousal to focus on helping people endure an intense emotional crisis without engaging in action that will have negative consequences (e.g., cutting, aggression, etc.). The majority of these skills are behavioral, such as grounding techniques or using temperature (e.g., cold water, ice cubes), intense exercise or progressive muscle relaxation to change body

chemistry (Linehan, 2015). Trauma and other anxiety treatments likewise teach strategies such as deep breathing to help clients regulate when their minds and bodies are preparing for the fight-flight-freeze response (Foa et al., 2007). Suicidal patients are asked to develop a safety plan so that they know what *to do* when feeling intensely distressed—these are typically actions, not cognitive strategies (Jobes, 2015).

The examples in the previous paragraph (e.g., DBT, trauma, suicide) are focused on high-risk clients who are prone to engaging in dysregulated behaviors (e.g., non-suicidal self-injury, drug and alcohol use, binge eating, aggression) when distressed (Bresin, 2020). It makes sense for people who have impulsive urges for dysregulated behaviors to choose alternative actions as a counterpoint (Linehan, 2015). However, the central point here is that the concept—behavioral strategies are more helpful when emotions are intense—likely applies to other people as well. As described above in the previous section, many people who experience anxiety and depression tend to also engage in cognitive impulsivity (Carver & Johnson, 2018). In moments of heightened emotion when thinking is impaired, focusing on actions or bodily sensations can help shift attention away from cognition, which thus prevents repetitive negative thinking from perpetuating emotional distress (Cloitre et al., 2020).

Specifics on the “Thinking Threshold” Technique

The “thinking threshold” concept, when taught to a client, combines psychoeducation about emotion with validation. We introduce the concept after helping a client chart an emotional experience over time (Verduyn et al., 2009). A few examples of emotion charting and thinking threshold identification are presented in Figure 1. The client first sees a blank X-Y axis, where the X-axis is time and the Y-axis is subjective distress from 0 to 100, similar to a Subjective Units of Distress rating (Wolpe, 1969). We prefer to use “distress” rather than a specific negative

emotion to make it general, but a specific label (e.g., “anxiety” or “anger”) could easily go on the Y-axis instead; this could also be used for positive emotion for clients with manic episodes.

The client then identifies their “baseline” level of distress, which is how they were feeling prior to the emotional event. The conversation about “baseline” distress usually involves discussing a client’s “typical” distress level, which for most people ranges between 5 and 20 on a 100-point scale, reflecting the notion that most people tend to experience mildly positive affect with minimal distress during daily life (Yik et al., 1999). Clients then identify and describe an emotional event, and chart how quickly they experienced an internal emotional response (i.e., reactivity), their peak level of distress (i.e., intensity) and how long it took them to return to baseline (i.e., recovery). While working through specific examples from the client’s life, the therapist has the opportunity to provide education about emotion and identify individual differences in emotional responses—some people have strong and quick responses but recover quickly, others take a while to return to baseline, and some people have “delayed” emotional responses where they might not feel anything in the moment but their distress increases later (we call this the “slow burn.”; see Figure 1b). It is worth noting that a given person can experience more than one of these emotion dynamics depending on the specific emotion triggered or the type of situation that elicited it.

(1a) “Emotional Wave”

(1b) “Slow Burn”

Figure 1. *Potential emotional charts for two hypothetical clients.*

We note that the emotion charting itself is therapeutic, because it helps people recognize that emotions are typically triggered by an event, whether internal or external, and that emotions have a “wave” shape—they increase and then decrease. Charting emotions provides opportunities for validation because it helps clients visualize their emotional experience and allows the clinician to comment on things like baseline distress vulnerability (i.e., higher baseline distress levels may make stronger emotional responses to events more intense) and simply describe the client’s emotional pattern (e.g., “You experience emotions intensely and really quickly” such as Figure 2 or “You tend to not have reactions really quickly, but they grow over time the more you ruminate about what happened” such as Figure 1b). The charting also allows for psychoeducation about what an emotional “reaction” is, namely the internal experience of emotion, whether or not that emotion was visible to anyone nearby.

After charting at least one event, the “thinking threshold” concept is introduced, and described as the point at which a person can no longer think straight. The client is asked to identify their “thinking threshold” value, which is a number on the Y-axis, and the clinician then

draws a dashed horizontal line across the graph to identify the thinking threshold visually. Each person's "thinking threshold" is unique given their set of personal circumstances (e.g., temperament, life experience, history), though most clients we have worked with set a value between 70-80 as their thinking threshold. The clinician then talks about how above the thinking threshold, putting effort toward thinking is not advisable, because clear thinking is really not possible. This provides the opportunity to discuss changes in thinking patterns when people are emotional, and how emotions impair clear thinking. The client is then advised to use behavioral/physical regulation strategies above the thinking threshold, delaying cognitive strategies until they are back below their thinking threshold again.

Figure 2. *Example of emotion charting with the thinking threshold imposed upon it.*

In our experience, the thinking threshold concept is fairly easy for clients to grasp. They find the idea intuitive and validating—most people have experienced an inability to think clearly when highly emotional. The concept also meets the tenants of emotion regulation flexibility as it

recognizes that contextual factors can and should guide strategy selection and implementation (Aldao et al., 2015).

Case Study

Carrie, a 29-year-old white female, was in therapy with Annie, a practicum student doing a placement in an integrated behavioral health care setting. Carrie held a diagnosis of borderline personality disorder and had been in therapy off and on since adolescence. She was well versed in therapeutic skills, including problem solving and cognitive reappraisal. However, Carrie had sustained significant injuries to her spine in a car accident, resulting in a near-constant state of physical pain. Carrie reported frustration at being unable to think clearly enough to utilize her cognitive skills. She also described feeling increased emotional vulnerability and lability.

In the context of brief psychotherapy, Annie first provided psychoeducation on chronic pain and on the effects of chronic pain on cognition and emotions. Annie introduced the emotion charting and “thinking threshold” concepts to Carrie to show her that behavioral strategies may be more helpful when she is at high levels of distress, including physical pain. Annie first validated Carrie’s prior success with cognitive emotion regulation skills, and then she worked with Carrie to identify behavioral emotion regulation strategies she could use above her “thinking threshold.” Carrie identified that she could use deep breathing and pet her dog when she was above her threshold, and once she was below her threshold, she could more successfully implement problem solving or reappraisal. Over the course of only a few sessions, Carrie demonstrated she could successfully recognize when she was above or below her thinking threshold, and began using her emotion regulation strategies more flexibly. She told Annie that she was less frustrated with herself when in pain, and felt successful at using cognitive techniques when below her thinking threshold. Annie also noticed that Carrie started putting less

credence in her thoughts when in pain, recognizing that her “pain” thoughts were fueled by emotion and physical distress and were thus less trustworthy than her non-emotional thoughts.

Additional Thoughts and Future Directions

Our clinical experiences using the “thinking threshold” with dozens of clients has suggested that clients find the concept both educational and validating. The “thinking threshold” concept dovetails beautifully with the concept of emotion regulation flexibility (Aldao et al., 2015; Bonanno & Burton, 2013) emphasizing intensity of distress as a crucial context to consider when flexibly selecting an emotion regulation strategy. The “thinking threshold” is also supported by research demonstrating cognitive impairments during heightened distress as well as a variety of therapeutic modalities emphasizing behavioral efforts (relaxation, grounding) when distress is high. In this way, the “thinking threshold” links science with clinical practice. However, there are several things we have not yet mentioned with regards to the “thinking threshold” technique which we address in this section, some of which are linking the technique to other therapeutic concepts, and others are future directions for empirical examination and/or clinical practice.

Is Regulation Always Necessary?

In many ways, the “thinking threshold” concept assumes that a person’s primary goal when experiencing distress is to reduce distress. Considering that most people dislike feeling bad and want to feel better (Baumeister et al., 2001; Tamir, 2016), this assumption makes sense. However, proponents of emotion regulation flexibility, and psychological flexibility more generally (Kashdan & Rottenberg, 2010), would suggest that while regulation is sometimes important, emotions also serve vital purposes for human beings and thus sometimes we need to actually *feel* our feelings rather than modulate them. Acceptance-based therapies are particularly

adept at promoting the ideas that feelings can be experienced without judgment or efforts to control them (Hayes et al., 2006; Linehan, 1993).

Because the “thinking threshold” is based on emotion regulation flexibility, our view is choosing *not* to regulate can also be a discussion point for clients. For example, perhaps above the thinking threshold, a person can simply wait for the emotion to come down without doing anything active to regulate, consistent with exposure treatments (Foa et al., 2007). Alternatively, perhaps grounding or distraction is useful above the thinking threshold to help a client reduce the intensity of their emotion, and then below the thinking threshold they can intentionally use acceptance-based strategies to avoid controlling the emotion. Lower intensity emotions are easier to tolerate (Veilleux et al., 2018), and so actively feeling the emotion may be easier under the thinking threshold. The “thinking threshold” concept is flexible and non-denominational, and can be easily weaved into a variety of therapeutic approaches.

Thinking Threshold as Justification for Avoidance

Although most clients we have introduced to the “thinking threshold” use it effectively, there have been a few clients who have used the “thinking threshold” as justification for avoidance. For example, consider Fatima, a 32-year-old client seen in our training clinic. Fatima’s therapist taught her the “thinking threshold” to manage her very strong and intense emotional reactions coupled with significant ruminative tendencies. Fatima quickly identified her thinking threshold, and learned to use grounding and self-soothing skills to down-regulate her distress. When she was under her thinking threshold, she would allow herself to tune back into her thoughts. However, she did not actually try to use problem solving or cognitive reappraisal in these instances. Instead, she would revert to repetitive negative thinking and her distress would then increase, pushing her back above her thinking threshold. Her rumination would then

perpetuate her distress until she used behavioral strategies to self soothe again. Fatima used *some* of the “thinking threshold” concept to manage her distress, but she over-relied on the behavioral strategies for distress relief and did not actually flexibly use the cognitive strategies to help her gain meaning or perspective. Fatima’s therapist had to remind her that not only are cognitive strategies *possible* below the thinking threshold, they are *valuable* and effective when thinking is clear enough to use them. For example, one specific type of cognitive reframing that Fatima could use under her thinking threshold is a reminder to shift her mental questions from *why* questions (e.g., “Why is this happening to me” or veiled *why* questions like “What about me do people hate so much?”) to *how* questions (e.g., “How did this happen?” “How do I start to solve this problem?”) as is recommended in rumination-focused cognitive therapy (Watkins, 2018). Shifting from “why” to “how” questions can help clients move away from abstract thinking to more concrete problem-solving and could thus prevent Fatima from thinking herself back into heightened emotions. In this case, the “thinking threshold” activity and subsequent struggles with implementation clarified Fatima’s strong motivation to escape from negative emotions, and helped her therapist guide her to respond more strategically to emotional situations (Tamir, 2016).

Future Efforts

Although the “thinking threshold” concept is grounded in science, the full model has not yet been empirically tested. There is some evidence that people gravitate toward using distraction and other behavioral strategies when intensely emotional (Dixon-Gordon, Aldao, De, et al., 2015). However, whether behavioral strategies are more *effective* when emotions are high, and whether cognitive strategies such as cognitive reappraisal tend to be more difficult, more invalidating, or less effective when emotions are extreme remain vital empirical questions for

future research. Ecological momentary assessment (EMA) methods (Shiffman et al., 2008) are likely particularly useful for assessing these questions, as EMA can explicitly examine contextual variation in people's emotions as they are experienced during daily life.

It is also possible that there are some cognitively-based strategies that are *not* impaired above the "thinking threshold." For example, emotional labeling—simply identifying the words to describe a current emotional experience, such as "angry" or "embarrassed"—uses relatively little effort, particularly if a client also uses a feelings wheel or a list of emotions to choose from. Emotion labeling is considered an implicit emotion regulation strategy (Torre & Lieberman, 2018), because there are very clear regulatory functions of labeling (Marks et al., 2019), but it doesn't really "feel" like an actively effortful cognitive process. In some ways, identifying the level of distress via a SUDS rating is a simple type of emotion labeling (i.e., labeling the level rather than the type of emotion) and is thus embedded into the "thinking threshold" concept. Identifying the type of emotion (i.e., angry, sad, anxious) could be a simple cognitive strategy that would be both feasible and effective for high intensity emotions. Similarly, using positive imagery to help regulate is technically a cognitive strategy because it uses the mind, but it does not rely on verbal-linguistic processes (Holmes & Mathews, 2010) which means it may be easier to employ when in an intense emotional state. Further work needs to be conducted to understand the scope of cognitive strategies that are and are not impaired during heightened distress.

We also recognize that people may use multiple strategies at once (Aldao & Nolen-Hoeksema, 2012b), and could perhaps successfully use a mix of cognitive and behavioral strategies when distressed. Some strategies are also not clearly cognitive or behavioral and could be both. For example, perhaps a highly distressed person practices a self-soothing grounding strategy which blends mindfulness with sensory stimulation. Mindfulness is cognitive, because it

involves intentionally involves training mental attention onto a particular target (Linehan, 2015), but there is a behavioral element to mindfulness when focused on the body (i.e., mindfulness to breath) or on one sense (i.e., mindfulness to sound).

Finally, although we identified the “thinking threshold” as a static level for each individual, it is certainly possible that a given person’s “thinking threshold” is itself subject to contextual variation. For example, perhaps when a person is under a lot of stress and is low on sleep or particularly hungry, their thinking threshold actually decreases to a 60 from the normal 80. Identifying this variation could actually help a client give themselves compassion (Neff, 2003) in recognizing that sometimes thinking is simply harder than at others times. It could also be that thinking thresholds shift based on other contextual features. For example, perhaps some people have a lower thinking threshold when alone than with other people, or the reverse. Importantly, although future research can examine these ideas empirically, they can be used immediately and idiographically with any given client by simply using the basic “thinking threshold” chart and asking clients about situational and contextual variations in the relationships between their emotions and cognitions.

Conclusion

Clinicians want to provide clients with a toolbox of strategies for navigating emotion, because difficulty tolerating, regulating, and experiencing emotions are at the core of why many people seek psychotherapy. The “thinking threshold” concept guides clients in building awareness of their internal contexts and provides guidance for implementing contextually flexible emotion regulation strategies they have in their toolbox. The “thinking threshold” concept supports use of cognitive emotion regulation strategies, but recognizes the reality that

many people experience—thinking in the most adaptive way when emotional is really difficult—and in these instances, using behavioral strategies is likely to work better.

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