



«Mental control» from a third-wave behavior therapy perspective

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ABSTRACT. Most third-wave behavior therapies and, more specifically, Behavioral Activation (BA), Acceptance and Commitment Therapy (ACT), Mindfulness-Based Cognitive Therapy (MBCT) and Dialectic Behavior Therapy (DBT), have proposed alternatives for intervention for intrusive thoughts, painful memories, unpleasant daydreams or ruminative depressive discourses. While traditional behavior therapy seeks to eliminate such thoughts (or at least reduce their duration, frequency and intensity), or otherwise question their credibility and then replace them with other more positive or adapted thoughts, in the new forms of behavior therapy, direct intervention for them is discarded, and therefore, techniques such as distraction or thought replacement, thought stopping or cognitive restructuring are no longer considered advisable. In this paper, we review the body of scientific evidence on the usefulness of acceptance and mindfulness based interventions. Although the results are promising, it is true that more data is necessary to demonstrate that these techniques are always recommended over the traditional therapies.

KEYWORDS. Third Wave Behavior Therapy. Thought suppression. Mindfulness and Acceptance-based therapies. Mental control. Theoretical study.

RESUMEN. La mayoría de las denominadas terapias de conducta de tercera generación -y, más en concreto, la Activación Conductual (BA), la Terapia de Aceptación y Compromiso (ACT), la Terapia Cognitiva con base en el Mindfulness (MBCT) y la Terapia Dialéctica Comportamental (DBT)- proponen una intervención alternativa ante la aparición de pensamientos intrusivos, recuerdos dolorosos, ensañaciones desagradables o discursos mentales depresivos. Si en la terapia de conducta tradicional se procura

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eliminar estos pensamientos (o, al menos, disminuir su duración, frecuencia e intensidad), o bien cuestionar su verosimilitud para sustituirlos por otros más positivos o adaptados, en las nuevas formas de terapia conductual se desestiman las intervenciones directas sobre ellos, y, por tanto, dejan de aconsejarse y practicarse técnicas como la distracción o sustitución de pensamientos, la parada de pensamiento o la reestructuración cognitiva. En este artículo se presenta el cuerpo de evidencias científicas sobre la utilidad de las intervenciones basadas en la aceptación y el mindfulness. Aunque los resultados son prometedores, es cierto que resulta imprescindible recabar más datos para demostrar que estas técnicas son siempre más recomendable que las tradicionales.

PALABRAS CLAVE. Terapias de conducta de tercera generación. Supresión de pensamiento. Terapias basadas en el mindfulness y en la aceptación. Control mental. Estudio teórico.

Controlling the mind, regulating its content and activity, have been human desires for millennia, and probably inherent in the way we are. In fact, the desire to get rid of certain thoughts is common in the normal population (Shingler, 2009) and not just something characteristic of clinical populations. However, the means for achieving this goal do differ from one person to another, as do also the psychological intervention models proposed for it.

Scientific literature has repeatedly found that strategies designed to free oneself from uncomfortable thoughts often lead to paradoxical results, in which the rate and intensity of the very thoughts that it is attempted to avoid are increased (see Rassin, 2005, for a complete review). Najmi and Wegner (2008) have suggested that attempts at thought suppression are a factor complicating and aggravating many psychopathological symptoms, as the effort of not being in contact with certain thoughts could represent a cognitive load that undermines the ability to keep them away, and would thus lead to a vicious circle of frustrated expectations and greater stress with its reappearance. In recent decades, this type of conclusion has led to doubting the cognitive-behavioral procedurals directed at making certain thoughts disappear (paradigmatically, thought stopping).

The purpose of this article is to offer a summarising review of experimental studies that have evaluated the efficacy of coping with undesirable thoughts and memories based on third-wave behavior therapy strategies. First research on thought suppression and its conclusions is briefly described. Then four third-wave therapy approaches to controlling intrusive thoughts are explained. Finally, studies that have empirically analyzed their efficacy are described.

Experimental study of thought suppression

Since their first publications in the eighties, laboratory studies by Wegner and his colleagues have been a fundamental inspiration for a multitude of clinicians who have questioned the usefulness of direct mental control strategies. In a first experiment, Wegner, Schneider, Carter and White (1987) found that the participants were unable to free themselves of a mental image (a white bear) for five minutes when they were

specifically instructed to do so. Contrary to expectations before the experiment, remaining free of the thought became statistically improbable after only a few minutes. Once more, trying to eliminate it for a while later in the experiment seemed to cause more frequent and intense reappearance. In a word, voluntary suppression of the thought ended up being counterproductive.

Wegner (1994) postulated «the ironic process theory» to explain why thoughts that it is attempted to get rid of return again and again to consciousness. The theory argues that two processes intervene in the suppression effort, one conscious, operative and cognitively costly, which is directed at distracting attention from the unwanted thoughts, and the other unconscious and effortless monitoring, which on one hand, watches out for occurrences of those thoughts, and on the other triggers the operative process should the avoided thoughts arise. Both processes work together to ensure control, but ironically, by maintaining constant watchfulness, the second process causes the undesired thought to always remain latent.

According to this model, when distracting strategies (unfocused distraction), for example, focusing on the surroundings, trying to think of something else, remembering a song, etc., end up causing a «rebound effect» in the thought that it is being attempted to eliminate, as in the end, all these stimulations turn into keys to the memory. However, by recurring to focused distraction, like continually substituting the thought of the white bear with a thought about a red car, the possibilities of undergoing the rebound effect are lower, at least in the short term (Salkovskis and Campbell, 1994; Wegner *et al.*, 1987).

Whether the ironic theory is correct or not, the rebound effect has been experimentally studied repeatedly (Abramowitz, Tolin, and Street, 2001; Rassin, 2005; Wenzlaff and Wegner, 2000) and, in general, although not without some exceptions, replicated. On the other hand, it has been found that this effect is more frequent the greater the mental overload.

Research has also demonstrated that, along with the mental load, the mood state influences the ability for suppression. Depressed subjects are less able to free themselves of intrusive thoughts. There is also interaction with the type of thoughts. If they are congruent with the mood state, they are harder to get rid of. That is why depressed subjects have a significantly harder time freeing themselves of sad thoughts than happy thoughts (Howell and Conway, 1992; Purdon and Clark, 2000).

Third-wave behavior therapies and their intervention in the control of intrusive thoughts

The studies by Wegner *et al.* (1987), and also those by Clark, Ball, and Pape (1991) and Cioffi and Holloway (1993), were collected by Hayes, Strosahl, and Wilson (1999, pp. 60-61) to support arguments in favor of intervention with Acceptance and Commitment Therapy. Nevertheless, they are not only deemed useful for this intervention, but also in other therapies called third-generation or third-wave behavior therapy (Hayes, 2004).

Third-generation therapies have some things in common (in particular, the use of mindfulness, of distancing and acceptance-based procedures) in the management of

intrusive thoughts, but there are also differences. The strategies of four of these therapies (Acceptance and Commitment Therapy, ACT, Mindfulness-based Cognitive Therapy, MBCT, Behavioral Activation, BA, and Dialectical Behavior Therapy, DBT) for dealing with the appearance of thoughts judged to be inappropriate or painful are discussed below.

ACT

To begin with, as postulated, ACT suggests that internal experience must be managed differently from external. It therefore speaks of the «rule of private events» (Hayes *et al.*, 1999, p. 120), which are the opposite of external events. Intentional behavior would be appropriate for controlling the second of these, but not the first. «In the world inside the skin, the rule actually is, If you aren't willing to have it, you've got it» (p. 121). Coherent with this hypothesis, internal experience, whatever it is, thoughts, memories, bodily sensations, etc., must be left alone, without trying to stop it, control it, modify it, magnify it, minimize it, etc. In fact, the repeated attempt to alter this experience, to try and change it and not achieve it, would lead to a psychopathological problem known as «experiential avoidance disorder» (Hayes, Wilson, Gifford, Follette, and Strosahl, 1996) or «destructive experiential avoidance» (Luciano, Páez-Blarrina, and Valdivia-Salas, 2010). To summarize, according to ACT, reiterated attempts to achieve mind control would lead to greater distress.

The alternative to intrusive thoughts is their radical or unconditional acceptance, no matter how frequent or intense and whatever their content. This implies that, for example, the patient who suffers from an anxiety disorder must try to accept his anxiety crises and feel them as they are, the depressed person his sadness, the obsessed his obsessive thoughts, the psychotic his voices and his hallucinations. However, it is not a matter of passive acceptance (of resignation to the symptom), but abandoning those attempts to change the thoughts that are blocking life.

As an aid to this path, ACT proposes a diversity of procedures (Hayes *et al.*, 1999; Hayes, Luoma, Bond, Masuda, and Lillis, 2006), such as acceptance, «cognitive defusion», «being present», conceiving «self-as-context», working with values and committed action. These processes are incorporated by means of experiential exercises, metaphors and paradoxes and not so much by logical or discursive explanations.

Cognitive defusion is a component of ACT especially related to managing intrusive thoughts. One of its goals consists of achieving «deliteralization» of word-concepts, that is, understanding that thoughts are only thoughts or only memories and must not be confused with their referents, or present real events that it becomes impossible to act on as valued. This deliteralization process can be achieved by various methods, such as detached contemplation of the thought, repeating it out loud until it is just a sound (no sense), contemplating it as an outside event which can be judged as to shape, color, speed or look, appreciating that the mind has provided such a curious, interesting thought, etc. (Hayes *et al.*, 2006). Such attitudes would lead to a more objective and distanced attitude to the thoughts, although not necessarily alter their frequency.

Other ways to help along this path are «being present» and «self-as-context», comparable to the mindfulness attitude which, as the basis of the following therapy, is explained below.

MBCT

Within the cognitive-behavioral tradition, diffusion of mindfulness has basically been due to the work of Segal, Williams, and Teasdale (2002), although it has also been proposed in DBT by Linehan (1993) and in ACT (Hayes *et al.*, 1999). Mindfulness is a procedure that has its roots in meditation of the Buddhist Zen tradition. Therefore, from a philosophical-religious perspective, it would not be as much a technique being carried out at a particular moment as an attitude that spans all time and corresponds to a way of being and contemplating the world. However, here it would refer to a concrete procedure, an instrument for managing intrusive thoughts. In this sense, its inclusion in psychological therapy is recent.

Mindfulness as a technique has a series of characteristics, which according to Vallejo (2006), include: a) concentrating on the present moment; b) being open to experience and to facts (understood without interpretation or mediation by language), c) radical nonjudgmental acceptance of experience, d) choice of the experiences to concentrate on, look at, act on or become involved in, and e) rejecting direct control of emotions, reactions, feelings or thoughts, and allowing them to be whatever they are, without trying to change them.

The practice of mindfulness would lead to coping with intrusive ideas better, because it favors distancing from the content of the thought, and therefore, conferring it less credibility, all of which contributes to being less affected by its presence.

BA

BA is a therapy directed at counteracting depressive symptoms and recovering functionality of patients by means of concrete techniques (monitoring activity, evaluating life goals and values, hierarchical programming of reinforcing activities, training in social skills and contingency control). In the intervention protocol designed by Martell and colleagues (Martell, Addis, and Jacobson, 2001; Martell, Dimidjian, and Herman-Dunn, 2010) strategies are proposed to confront negative intrusive thoughts and, more specifically, depressive rumination. In his opinion, although the techniques proposed are effective for treating depressed patients, they could lose effectiveness from cognitive activity, so the possibilities for improving mood are lowered if not treated directly.

But in BA, cognitive activity is not approached much differently from any other manifest behavior and, therefore, is evaluated using the same functional analysis employed in the rest of their actions. That is, it is determined based on what the thoughts are, and not so much their logic or content. Therefore, a contextual analysis is performed of the depressive rumination and no cognitive restructuring is undertaken (Kanter *et al.*, 2010). The BA therapist does not discuss the veracity of a patient's thoughts and does not try to refute them, but considers whether they are ways of avoiding certain situations, and evaluates how the patient feels after a period of rumination or whatever other things (instead of rumination) he could be doing (Martell *et al.*, 2001).

Along with this focus, the authors of BA also propose the use of mindfulness, although not as much with formal exercises in conventional training as suggesting that when an activity is performed, attention should be directed at it and not at the mental content that may appear simultaneously. In brief, in the face of negative intrusive thoughts, the client is invited to «attending to experience» (Martell *et al.*, 2001, p. 124), notice what he is doing and what is around him, focusing on what comes to him through his senses.

DBT

Within the wide therapy developed by Linehan (1993) for the treatment of Borderline Personality Disorder, the use of some strategies for managing intrusive thoughts are necessary because of the frequency of these problems in these patients (in particular, suicidal ideation). As mentioned above, in DBT the use of mindfulness is recommended to live experiences as they are, and not distorted by the catastrophic or negative interpretation typical of persons who suffer from this personality disorder.

Practice of mindfulness is not restricted here to managing distorted and intrusive thoughts, but is also conceived as useful training to gain skills tending to decrease suicidal or parasuicidal behavior, as well as to eliminate other actions that interfere with a healthy and productive life (for example, substance abuse, food disorders, constant changes in residence or job, etc.). Along with mindfulness, specific training in other areas is suggested, as DBT has classic behavioral therapy components. This integration sometimes has led to contradictions, since while in some cases (with mindfulness) it is suggested that thoughts be accepted as they are, in others it is attempted to fight against them through training Distress Tolerance, Emotion Regulation and Interpersonal Effectiveness (Holmes, Georgescu, and Liles, 2006).

Linehan (1993) advises therapists to constantly validate their patients, who also end up doing it themselves. The procedures for validation have a direct connection with acceptance, although they are restricted to personal acceptance; that is, legitimization of the way one is, and the thoughts or feelings about oneself, more than acceptance in general of what life (or the mind) might bring. Along this line, in therapeutic skill groups carried out in DBT, it is emphasized that thoughts (and feelings) are private responses that naturally accompany a person and not something obligating them to certain reactions (Holmes *et al.*, 2006).

Empirical evidence review

Objective

Most studies done on these therapies have analyzed their effectiveness as treatments of various psychopathological disorders (see, for example, the meta-analysis carried out by Öst, 2008, or by Powers, Zum Vörde Sive Vörding, and Emmelkamp, 2009) more than their usefulness for eliminating any symptom, such as the intrusion of unwanted thoughts. However, in this specific respect, some experimental studies have compared the usefulness

of acceptance or mindfulness-based techniques (procedures, as observed, common to ACT, BA, DBT and MBCT) to conventional methods used in research (thought suppression, distraction, focused or undifferentiated, and reevaluation). The objective of this section is to offer an overview of these kinds of studies, not already done systematically.

Method

Materials

The review was carried out from 45 published papers (40 research articles and 5 doctoral dissertations).

Procedure

The databases searched were PSICODOC and PSYCINFO. The range of dates: from 1991 to 2011. The criteria tool for inclusion in the search field (only in Identifiers, ID) was: [thought suppression *or* mental control *or* intrusive thoughts *or* cognitions] & [acceptance *or* mindfulness *or* distraction]. With this approach 34 articles and 5 doctoral dissertations were found. The review of these 39 documents allowed to find another 6 articles whose content was considered relevant for this review. The search language was English.

Information analysis

Items found in the review were analyzed according to its relevance in these parameters: (1) importance of the information on the purpose of this review; (2) empirical study assessment: (2.1) sample size, (2.2) type of design (case study, quasi-experimental, experimental), (2.3) usefulness and relevance of the instruments used, (2.4) type of analysis, (2.5) clarity / quality of results; (3) utility and objectivity of conclusions; (4) and quality of references. Only the articles who meet these criteria are review in the results.

Results

In two empirical studies, Marcks and Woods (2005) demonstrated that acceptance-based methods are more recommendable than suppression for intrusive thoughts relevant to one's own life. According to their research, the effort to avoid thoughts associated with psychopathological conditions causes greater subjective distress, and even a rebound effect of frequency and intensity of the thoughts. In the first study, the authors concluded that people who habitually try to directly suppress relevant intrusive thoughts become increasingly more stressed and suffer more from an urge to «do something» about these thoughts. On the contrary, those who are naturally more accepting of them have lower levels of depression, are less anxious and less obsessional. In the second

study, they found that in people who used acceptance, distress decreased, but not the rate of intrusive thoughts, which is coherent with ACT.

Another study published later (Marcks and Woods, 2007), corroborated that by imagining and telling about a loved one in a traffic accident, those who chose the acceptance strategy suffered from fewer intrusions, less anxiety and fewer negative evaluations than those who tried to suppress it.

In patients diagnosed with an obsessive-compulsive disorder, Najmi, Riemann, and Wegner (2009) found that subjects who tried to suppress clinically significant thoughts suffered from greater distress than those in the acceptance group, who, however, did not differ from the participants in the group instructed in focused distraction. Similar results on the effectiveness of acceptance and focused attention methods have also been found in other studies (Luciano and Algarabel, 2007), although with slight differences, since the effect is determined by the content of the alternative thoughts to be focused on (Kimura, 2004).

Studies that have compared coping strategies such as suppression, reevaluation of the situation and acceptance have found that reevaluation and acceptance are clearly superior to suppression, although it is difficult to establish differences in effectiveness between them. The reevaluation strategy, at least from its description in some studies, could be compared to an abbreviated form of cognitive restructuring. Thus, for example, in the study by Hoffman, Heering, Sawyer, and Asnaani (2009), in which the participants were asked to control themselves, as they would soon have to improvise a speech on controversial subjects in front of a camera, the subjects in the reevaluation group were invited to take a realistic attitude and consider that the situation they were going to face really did not represent a threat and that although it generated a certain amount of distress, in the end it was only an experiment with no negative consequences of any kind.

It was already mentioned above that in ACT, acceptance and cognitive defusion are facilitated by exercises, such as those directed at achieving deliteralization. One of them consists of quickly repeating a thought over and over again until it no longer makes sense. In several of the experiments designed by Masuda and colleagues (Masuda, Hayes, Sackett, and Twohig, 2004, Masuda *et al.*, 2009, Masuda *et al.*, 2010) it was found that application of this procedure reduced credibility of negative thoughts about oneself and distress from them, and made them easier to manage. Compared to other coping techniques, such as distraction tasks (reading about a neutral subject), abdominal breathing and attention to pleasant thoughts, deliteralization with the method proposed by Hayes *et al.* (1999) was more effective in decreasing distress and credibility of the thought.

There is also specific evidence with regard to the use of mindfulness techniques for counteracting obsessive and intrusive thoughts. In a study with a case series design, Wilkinson-Tough, Bocci, Thome, and Herlihy (2010) found that all of the participants who complained of obsessive intrusive thoughts reduced their scores on the Yale-Brown scale to subclinical levels after six sessions of mindfulness training (with

daily practice), gains which were maintained in the follow-up. Previously, Hanstead, Gidron, and Nyklicek (2008), with a sample of 17 obsessive-compulsive patients assigned to a control waiting list or a treatment with eight mindfulness sessions, also found that obsessive thoughts were significantly reduced after training, and, as in the case of Wilkinson-Tough *et al.* (2010), thought-action fusion was considerably reduced, while it increased the capacity for «letting go» (or «not paying attention»), which is good for coping with this type of problem.

Hepburn *et al.* (2009) found that mindfulness procedures were effective in decreasing thought suppression in suicidal patients, which is associated with less vulnerability. In patients with bipolar disorder, Miklowitz *et al.* (2010) and Williams *et al.* (2008) found that MBCT facilitated lessening symptoms of depression and anxiety, among which was suicidal ideation.

Feldman, Greeson, and Senville (2010), in a sample of 190 women, compared a mindfulness method (concentrating on breathing) to muscular relaxation and meditation (concentrating on loving-kindness) to evaluate decentering and frequency of repetitive thoughts and negative reactions to them. The participants in the mindfulness condition were able to decenter better, and furthermore, the association between repetitive thoughts and negative reactions to them was weaker. In brief, the results of this experimental study show that mindfulness helps reduce reaction to repetitive thoughts.

There is at least one empirical study on chronic ruminating thoughts (Harrington, 2008) that has revealed that acceptance-based training provides a promising alternative to a conventional thought control technique.

Finally, we should mention the study by Dunn, Billotti, Murphy, and Dalgleish (2009), in which a video of traffic accidents was used and participants' physiological (heart rate, electrodermal response) and cognitive (memory, probability of intrusions) markers were measured immediately afterwards and after one week. Contrary to what was found in the studies above, the participants in the acceptance condition showed more negative effects (less physiological control, more emotional intensity and stronger memory) than those who used direct suppression methods.

Discussion

Altogether, and with the exceptions pointed out, empirical review provides promising results for acceptance and mindfulness techniques for coping with intrusive thoughts and emotional response associated with them. However, it is no less true that other strategies, such as focused distraction or reevaluation, also show good results. Therefore, at present, it is still premature to assure that the first are going to displace conventional methods.

To determine which strategy a therapist should decide on, it is indispensable to improve research in some respects. In particular, one of the things that should be revised has to do with the inclusion of long-term follow-up of the various techniques. To date, studies have mostly analyzed what happens a few minutes after employing one

strategy or another, or the results after one or a few weeks. With such short-term data, no conclusions can be made about what strategies are better for the clinic, where what is important are results over months and years.

On the other hand, it is erroneous not to establish differences between methods used in scientific literature on thought suppression and those proposed in the behavioral clinic. In fact, Bakker (2009) has pointed out in detail the unequivocal differences between a method such as thought-stopping and thought suppression strategies typically used in experiments such as those by Wegner. Likewise, although reevaluation employed in the studies presented has characteristic or essential components of cognitive restructuring, it is certainly much more complex.

For their part, mindfulness and acceptance must be profiled much more clearly, defined and be replicable in various experiments. It is too generic to mention that a certain number of mindfulness sessions were given, which caused an improvement of intrusive thoughts. It is essential to specify the contents and formats of these sessions, what aspects were emphasized in them and what the concrete effects in participants were.

The same could be said with respect to acceptance, since a treatment that promotes it through the use of metaphors and specifically designed exercises is not the same as offering the participants only a few indications to «accept» and «not modify» the thoughts that overtake them. It is important to remember that for ACT or BA, acceptance of distress or of a painful memory is not an end in itself, but is at the service of the person's values, and is promoted as long as it unblocks the patient and facilitates his taking up a life aimed at his goals once more.

Along with this hitch, it should be mentioned that studies do not usually differentiate adequately between the results in clinical and non-clinical populations. However, Najmi *et al.* (2010) found that, while non-clinical subjects learned the uselessness of trying not to think of something by means of an exemplified demonstration, participants suffering from obsessive-compulsive disorder did not modify their beliefs and continued thinking it was possible to directly control the mind.

More specificity in acceptance and mindfulness methods may be a way to facilitate incorporation of these techniques into standardized cognitive-behavioral treatments, such as in exposure with prevention of response in obsessive symptoms, for which it has already been suggested that inclusion of mindfulness, which favors prevention of the response, is beneficial (Fairfax, 2008). Better specification of the new methods and their incorporation in the accumulation of cognitive-behavioral procedures could be a very promising path to follow, as long as violation of third-wave principles is avoided.

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