Empirical investigations of thought suppression in OCD

Christine Purdon*

Department of Psychology, University of Waterloo, Waterloo, Ont., Canada N2L 3G1

Abstract

Cognitive-behavioural models of obsessive-compulsive disorder (OCD) implicate thought suppression as a key factor in the development and persistence of the disorder. There is now more than a decade of research on thought suppression and its effects as they pertain to OCD. This paper briefly reports on initial thought suppression research and then offers a detailed review of recent thought suppression research that has directly examined the role of suppression in OCD. Theoretical and methodological issues in using thought suppression paradigms to understand OCD are discussed. It is concluded that this body of work continues to yield inconsistent findings with respect to the effects of suppression on thought frequency, although there are some consistent findings that suggest that suppression is driven by negative thought appraisal and is associated in turn with greater OCD symptomatology. Thus, there is support in this work for key tenets of cognitive-behavioural models of OCD. Suggestions for future research directions are offered.

Leading cognitive-behavioural models of obsessive-compulsive disorder (OCD) implicate thought suppression as a key factor in its development and persistence. Empirical investigations of the effects of thought suppression on thought frequency and other factors have thus become very relevant to understanding and treating OCD. This paper reviews recent research on thought suppression research that is directly relevant to obsessional problems and examines the validity of various experimental paradigms for understanding the effects of thought suppression on obsessional problems. Recommendations for future research are offered.

*Tel.: +1-519-888-4567 x3912; fax: +1-519-746-8631.
E-mail address: clpurdon@uwaterloo.ca (C. Purdon).
1. Obsessional thoughts

Obsessions are thoughts that give rise to immediate resistance. Active resistance is a defining feature of obsessions in the Diagnostic and Statistical Manual of Mental Disorders (Text Revision) (American Psychiatric Association, 2000), and is an important criterion for distinguishing obsessions from other kinds of persistent, negative, unwanted thoughts such as worry and depressive rumination (Rachman & Hodgson, 1980; Turner, Beidel, & Stanley, 1992; Wells & Morrison, 1994). Phenomenological reports of OCD emphasize that in many cases of OCD the significant complaint is that the subjective level of control over obsessional thoughts is inadequate, as assessed by thought frequency, intensity and duration. That is, the usual powers of exclusion and removal are weakened (e.g., Calamari & Janeck, 1998). Successful treatment is characterized by restoration of an appropriate degree of self-regulation (e.g., Rachman & Hodgson, 1980, pp. 15, 215, 265). At the same time, the person is often highly motivated not to reveal the content of their obsessions to anyone in order to avoid feeling ashamed, humiliated, rejected or feared (Newth & Rachman, 2001).

2. Cognitive-behavioural models of OCD

Cognitive-behavioural models argue that negative appraisal of the obsessional thought is the key factor in thought escalation and persistence. Salkovskis argues that thoughts give rise to active resistance when they activate overvalued beliefs that (a) thoughts can cause harm; and (b) that the individual is honour-bound to prevent harm, even if his/her responsibility for harm or to the potential victim of harm is remote, minute and uncertain (Salkovskis, 1985, 1989, 1998; Salkovskis, Richards, & Forrester, 1995; Salkovskis et al., 2000). Thus, the individual must control thoughts that signify potential harm in order to avert harm and the aversive sense that one may become responsible for harm otherwise.

Rachman proposes that active resistance to thoughts arises from beliefs that having a thought about an action that is immoral is akin, morally, to actually conducting that action (‘moral thought-action fusion’) and that having thoughts about an event increases the likelihood of that event happening (‘likelihood thought-action fusion’) (Rachman, 1997, 1998; Rachman & Hodgson, 1980). The individual attempts to control the thought because it offends her/his moral sensibilities both by its occurrence and because it may potentiate the occurrence of morally objectionable events. Clark and Purdon (Clark, 1989; Clark & Purdon, 1993; Purdon & Clark, 1999) offer an elaboration and extension of these core ideas, and suggest that beliefs about thoughts and thought processes in general also lead to active resistance. For example, individuals who believe that mental control is an important part of self-control will have a high stake in being able to control thoughts. Individuals who believe that unwanted thoughts represent a lapse in mental control and who strive for perfect control will be invested in regaining mental control after such a thought occurs.
Finally, Purdon and Clark (1999) argue that individuals prone to developing OCD have difficulty assimilating obsessional thoughts into their existing self-view, and instead worry that their view of themselves is inaccurate. For example, the loving parent who has an unwanted, unacceptable and highly distressing thought of harming her child can assimilate the thought (e.g., “even a good, loving parent like me can have a thought like this”), or begin to accommodate the thought (e.g., “maybe I am a homicidal maniac at heart”). The latter response is more likely to lead to an obsessional problem. The occurrence of the thought itself is the only piece of evidence that undesirable personality characteristics are lurking so its absence would signify the absence of these undesirable characteristics. Thus, the individual becomes highly invested in not having the thought and is exquisitely sensitive to its recurrence.

In sum, thought suppression is said to have insidious effects because it (a) leads to a paradoxical increase in thought frequency (e.g., Clark & Purdon, 1993; Rachman, 1997; Salkovskis, 1989, 1998); (b) makes the individual hypervigilant to thoughts and thought processes so that thought triggers and thought traces are much more salient (e.g., Rachman, 1997, 1998; Salkovskis, 1998); (c) terminates exposure to the thought thereby preventing new learning about its importance (e.g., Newth & Rachman, 2001; Rachman, 1997, 1998; Rachman & Hodgson, 1980; Salkovskis, 1998); and/or (d) the inevitable thought recurrences during suppression enhance negative appraisal of the thought’s meaning (e.g., Purdon & Clark, 1999; Purdon, 2001). Increased frequency and enhanced negative appraisal induce a more negative mood, which makes negative thoughts and appraisal more accessible and in turn enhances the individual’s motivation in controlling the thought.

3. Early investigations of thought suppression and their relevance to OCD

Wegner, Schneider, Carter, and White’s (1987) seminal experiment of the effects of thought suppression on thought frequency suggested that efforts to suppress a thought may lead to a later thought rebound. They argued that successful suppression relies on the individual’s ability to find suitable distractors from the ‘to-be-suppressed’ thought, which in turn relies on automatic processes operating to determine when the forbidden thought is about to enter consciousness. The stimuli used to distract oneself from the thought become associated with it and therefore serve to trigger it after suppression efforts have ceased. Hence, the ‘rebound’ effect of suppression. This finding has obvious relevance for OCD and has spawned many further investigations of thought suppression, mostly in nonclinical samples. Comprehensive reviews of this literature have been offered by Purdon and Clark (2000), Purdon (1999) and Rassin, Merckelbach, and Muris (2000a). What is striking about this literature is the inconsistency of the thought suppression effect across studies, with some studies replicating the rebound effect, others finding no paradoxical effect on frequency and others still finding an immediate, as opposed to a delayed, effect of suppression.
Furthermore, Purdon (1999) and Purdon and Clark (2001) argued that some thought suppression studies may have little relevance for understanding obsessional problems because they have methodological problems or lack ecological validity. Methodological problems that have been identified include use of a cross-over design (i.e., one group expresses the thought then suppresses it, the other suppresses the thought then expresses it). The problem with this design is that the important comparison is between the two ‘express’ conditions. However, given that participants in one group receive those instructions first and those in the other receive them second the experimental instructions are confounded with order. As observed by Clark, Ball, & Pape (1991) and Purdon (1999) practice and ceiling effects therefore cannot be ruled out as causal factors in any noted ‘rebound’ effect.

Another methodological problem lies in how target thought occurrences are reported. Many studies assess target thought frequency by using stream of consciousness verbalization and then coding responses for thought occurrences. This may be a problematic means of assessing target thought frequency because participants may feel self-conscious about reporting thought occurrences when they are supposed to be suppressing it (Purdon & Clark, 2000).

Some studies lack ecological validity if findings are to be applied to understanding OCD. For example, obsessional thoughts by definition give rise to active resistance rather than active, deliberate elaboration. Thus, studies that use thought expression as a control for thought suppression may not help us understand the role of suppression in OCD (Lavy & van den Hout, 1990; Merckelbach, Muris, van den Hout, & de Jong, 1991). Purdon (1999) also observed that obsessions are highly emotionally charged. As such, elaborate memory and emotional associative networks are activated by a thought occurrence. This may make suppression especially difficult and may influence mood state, which in turn decreases controllability of negative thoughts. Studies examining emotionally neutral thoughts may thus have limited utility for understanding OCD.

Finally, Purdon and Clark (1999, 2000, 2001) observed that because obsessional thoughts naturally give rise to active resistance, it is important to control for spontaneous active resistance in the suppression control group. Indeed, in a pilot study, they found when the target thought was an obsessional thought their control group (instructed to ‘think anything you like’) reported as much suppression effort as the group instructed to suppress. They recommended that instructions for the suppression control condition specify that participants should not suppress any thoughts, including the obsessional thought.

However, even studies that are methodologically sound and appear to have good ecological validity yield inconsistent findings. Salkovskis and Campbell (1994) preselected participants who experienced obsessional thoughts more frequently than average and had them either suppress or ‘think anything’ during one interval, and ‘think anything’ in a second interval. They observed an immediate effect of suppression such that frequency was greater during suppression than at other times (an “immediate enhancement” effect), except for participants given an attentionally engaging task to perform during the suppression interval. Trinder and Salkovskis (1994) obtained similar results when frequency of thoughts experienced outside the
lab for a four-day period were experienced. Purdon and Clark (2001) had nonclinical participants visualize and then either suppress or ‘not suppress’ their most upsetting obsessional, most pleasant positive thought or an emotionally neutral thought. No effect of suppression on frequency was observed for any type of thought. However, more frequent occurrences of the obsessional thought were associated with more negative mood state, controlling for baseline mood. Janeck and Calamari (1999) conducted the first published study of suppression of obsessions in a clinical sample of individuals with OCD. Baseline occurrences of obsessional thought occurrences were assessed and then participants were instructed to either suppress or ‘think anything’. In a third interval all participants received the ‘think anything’ instructions again. Thought occurrences were marked with a key press. No effect of suppression on frequency was observed.

The inconsistencies are puzzling and make it quite difficult to determine the role of suppression in OCD. How to reconcile the diverse findings? Abramowitz, Tolin, and Street (2001) conducted a meta-analysis of controlled studies of thought suppression. In this excellent analysis they found that there was a “small to moderate” rebound effect of thought suppression (p. 695) but no immediate enhancement effect of suppression on frequency. They also found that studies that used thought expression instructions (i.e., instructions to actively generate the thought) as opposed to ‘think anything’ instructions (i.e., think anything you like, including the target thought) had a greater rebound effect. Studies in which thought frequency was assessed by overt means (e.g., stream of consciousness reporting, ringing a bell when the thought occurred) exhibited a greater rebound effect than studies that used more covert means (e.g., pressing a key when the thought occurs). The rebound effect was stronger for studies in which participants were suppressing thoughts about an entire story rather than suppressing a specific, discrete thought. Finally, they found no difference in the size of the rebound effect between clinical and nonclinical samples, or whether the target thought was emotionally relevant or neutral. However, Abramowitz et al. (2001) observe that very few studies in their meta-analysis actually examined thought suppression in clinical samples of individuals suffering from repetitive, negative and unwanted thoughts, and in fact there was only one study that investigated a sample of individuals with OCD.

This important study suggests that deliberate thought suppression may indeed have an ironic effect on frequency, thereby helping resolve the problem of inconsistent findings across studies. However, the study also highlights the extent to which the suppression effect is influenced by experimental artifact. It would seem that participants’ comfort level in reporting thought occurrences when they have been instructed to suppress the thought is an important factor to consider when interpreting the meaning of thought frequencies. It is also possible that people use different standards to determine whether a thought has occurred or not and that participants’ standards for determining whether a thought had occurred also vary according to whether they are supposed to be suppressing or not, such that when suppressing they may choose to only report vivid or complete mental representations of the thought in order to be helpful to the researcher by appearing compliant with instructions.
It is important to note that cognitive-behavioural models of OCD propose that the effects of suppression on obsessional thoughts are more complex than a straightforward paradoxical effect on frequency, instead positing that appraisal of the obsession interacts with thought suppression, mood state, and thought occurrences during suppression. In their examination of the strategies individuals with OCD use to control obsessions, Rassin and Diepstraten (2003) found that punishment, rather than distraction, was correlated with a retrospective self-report measure of thought suppression. If Wegner's model for the ironic effect applied directly to obsessional problems we would expect to see distraction correlated most strongly with repeated use of suppression. The authors suggest that thought recurrences give rise to highly negative appraisal, which in turn evokes self-punishment as a means of managing them.

These findings are consistent with Amir, Cashman, and Foa (1997) who found that use of self-punishment and worrying as thought control strategies were more strongly associated with obsessional symptoms than were other control strategies, including distraction. Purdon (1999) and Purdon and Clark (1999, 2000, 2001) thus argued that even if suppression does not result in a paradoxical increase in frequency, it may have insidious effects on factors such as thought appraisal and mood state. Abramowitz et al. (2001) similarly observed that we need to investigate the effects of thought suppression on factors other than thought frequency. However, very few studies have examined the relationship between suppression, appraisal and mood.

In sum, the early body of work discussed above has not yielded any conclusive evidence of a paradoxical effect of suppression on obsessional thoughts, but it has not conclusively ruled out potential effects of suppression on obsessional thoughts either. We also know from clinical anecdotal experience that individuals with OCD truly have a more difficult time with their thoughts when they try to control them. When they stop trying to control them their symptoms improve. Cognitive models still implicate thought suppression as a key factor in the persistence of obsessional thoughts. Thus, interest in understanding the role of thought suppression in OCD has not diminished.

4. Recent investigations of thought suppression in OCD

4.1. Correlational designs

Several studies have examined the mediational role of appraisal and suppression in thought frequency and OCD symptoms using correlational designs. Correlational designs get around the problem of designing adequate suppression control conditions, and sophisticated statistical techniques can be used to help establish the direction of causality of the predictors. Smári and Hólmsteinsson (2001) administered measures of responsibility, thought-action fusion, OCD symptoms and the WBSI to a large undergraduate sample. Path analyses revealed that negative appraisal predicted suppression which in turn predicted OCD symptoms. Rassin,
Muris, Schmidt, and Merckelbach (2000b) conducted a similar study using structural equation modelling to examine the relationship between appraisal, suppression and OCD symptoms in an undergraduate sample. Participants were administered the Thought Action Fusion scale, the White Bear Suppression Inventory (WBSI) and a measure of OCD symptoms. The findings were similar; thought action fusion appeared to drive thought suppression, which in turn predicted OCD symptoms.

Markowitz and Purdon (2003) noted that these studies examined suppression using the WBSI, which is a retrospective self-report measure of general tendency to suppress unwanted thoughts. One problem with this measure is it confounds tendency to have unwanted thoughts with tendency to suppress them, and may in fact be little more than a symptom measure. Furthermore, it relies on retrospective self-report of past experiences rather than actual behaviour associated with current thought occurrences. Markowitz and Purdon (2003) also note that no studies to date have examined the extent to which a general factor such as neuroticism might predict negative appraisal of an obsessional thought and tendency to suppress.

In order to address these issues, Markowitz and Purdon (2003) had nonclinical participants complete measures of OCD symptoms and appraisal of obsessional thoughts using the Interpretation of Intrusions Inventory (III; OCCWG, 1997, 2001), which assesses responsibility, control and thought-action fusion related appraisals. Participants’ most upsetting obsessional thought was identified and primed by having them visualize it for 30 s. Immediately afterwards, participants wrote out their stream of consciousness for 6 min (having had practice at doing so prior to the visualization task). Effort at suppressing the obsessional thought was then assessed, and this was used as a measure of thought suppression. Note that this procedure allowed for assessment of natural, rather than imposed, active resistance to the thought. Mood state was also assessed before and after the thought recording task. A large sub-sample (70%) of participants was contacted 4 h after the study and asked about the frequency of and distress caused by their obsessional thought since leaving the lab.

Path analyses revealed that thought appraisal (as assessed by the III total score, the three III subscales being too highly correlated to enter them separately) predicted suppression effort, which in turn predicted OCD symptoms, controlling for time 1 mood and neuroticism. More importantly, when distress over thought occurrences after leaving the lab was examined, it was found that negative appraisal of the thought predicted greater suppression effort, which in turn predicted more distress. However, there was no mediational effect of suppression and appraisal on thought frequency since leaving the lab (note that frequency of thoughts during the stream of consciousness task was not assessed due to concerns that frequency may be influenced by attempts at impression management). Thus, partial support for key tenets of cognitive-behavioural models was found.

4.2. Experimental investigations

Purdon (2001) examined suppression, appraisal and mood state in an unselected nonclinical sample. Participants completed the III, then identified their most
upsetting obsessional thought and visualized it for 30 s in order to prime it. They then monitored and recorded occurrences of that thought over two 4-min intervals. In the first interval, half were instructed to suppress their thought and the other half were instructed not to suppress any thoughts, including the obsessional thought. In the second interval, all participants were given the ‘do not suppress’ instructions. Participants then completed a self-report measure of their appraisal of thought recurrences during the first interval. Items tapped responsibility/thought action fusion appraisal and appraisals about the need to control thoughts. Examples include “the more I had the thought the more concerned I became that it was going to come true”, “the more I had the thought the more responsible I felt for making sure it didn’t happen in real life”, and “the more I had the thought the more worried I became about not controlling it”. Ratings of anxiety over thought occurrences and suppression effort were taken after the first interval and mood state was assessed before the visualization task and after the experiment.

No effect of suppression was found. However, discomfort over thought occurrences in the first interval was predicted by in vivo thought-action fusion/responsibility appraisal, controlling for general appraisal, group and thought frequency. Individuals in the ‘do not suppress’ condition reported considerable suppression effort (although it was significantly less than that reported by the ‘suppress’ group). Suppression in this group was predicted by in vivo appraisals reflecting concern about failures in thought control. Finally, time 2 mood state was predicted by in vivo appraisals that the thought might come true, controlling for time 1 mood, general appraisal, thought frequency and experimental group. Purdon (2001) concluded that in vivo appraisal of thought recurrences is clearly associated with thought suppression and mood state.

Purdon, Rowa, and Antony (in press) conducted the same study with a clinical sample of individuals with OCD. The same analyses were conducted and the results were quite similar; there was no effect of suppression on frequency, discomfort over thought occurrences during the first interval was predicted by in vivo appraisals reflecting thought-action fusion beliefs, interval 1 suppression effort for the ‘do not suppress’ group was predicted by in vivo appraisals reflecting concern about the need to control thoughts as was time 2 mood (again controlling for time 1 mood).

Taken together, these findings support the role of appraisal in thought control efforts and in mood state. That the same pattern of findings occurred in the clinical sample as in the nonclinical sample suggests that the same factors responsible for thought persistence may be responsible for the development of the disorder. It is important to note that suppression effort was related not to general appraisal assessed by the III prior to the experiment, but to in vivo appraisals of thought recurrences. This suggests that failures in thought control may be much more meaningful to examine than the relative success of control efforts themselves.

However, in an attempt to control for spontaneous suppression by participants in the suppress control condition, Purdon instructed participants in the control condition not to suppress any thoughts. Purdon (2001) observes that this is actually
problematic. Individuals typically suppress their obsessional thoughts; in fact, active resistance is a defining feature of obsessional thoughts. The findings regarding the effect of suppression on thought frequency are somewhat muddied by the fact that the suppression control group was actually acting against what they would naturally be inclined to do. Tolin, Abramowitz, Przeworski, and Foa (2002b) make a similar observation, noting that instructing participants to suppress an obsessional thought is essentially a ‘non-intervention’. Purdon (2001) suggested then that in order to study the effects of suppression on obsessional thoughts it may be best to study natural active resistance to the thought; that is, it may be best to instruct participants to think anything they like, and then assess suppression effort afterwards.

Rassin (2001) conducted a very interesting study in which he had participants study a sentence that read “I hope that...[a loved one] will soon be in a car accident”. This is the kind of thought that individuals with high thought-action fusion beliefs would find especially discomforting. Participants then were instructed to either suppress that thought or not to suppress it, and then reported on suppression effort and distress caused by thought occurrences. They were then allowed to perform any action they liked to ‘undo’ the thought. Next participants monitored their thoughts for another interval, with no instructions regarding suppression. Results indicated that suppression actually appeared to serve participants well; that is, they had fewer thought occurrences, felt less distress over the thought and felt less responsible and guilty over their participation. The authors note that perhaps in the short-term, suppression is a useful strategy, much like a compulsive, neutralizing act.

It is noteworthy that this study used the ‘do not suppress’ instructions advised by Purdon (1999) and found that the suppression group was actually better off. Again, this suggests that suppression may well be a nonintervention and that depriving people of their natural coping strategy makes matters worse, at least in the short term. These findings also speak to the complexity of the relationship between appraisal, suppression and negative affect. People who endorse thought–action fusion beliefs are more likely to be relieved by suppression because having the thought increases the likelihood of the event coming true and causes them to feel immoral for having it. Thus, it does make sense that suppression can be an effective means of managing thought frequency and distress in the short term. Of course, this is the reason why individuals with OCD do it; it affords relief, even if only intermittently.

Tolin et al. (2002b) conducted a novel series of studies to examine the effects of suppression in individuals with OCD, anxious controls and nonanxious controls. In response to their concern that instructing participants to suppress an obsessional thought is a nonintervention, they decided to examine the effects of suppression of neutral (white bear) thoughts. They reasoned that if individuals with OCD have general deficits in their ability to control thoughts this will be manifested in their ability to control neutral thoughts. This design also overcomes the problem of spontaneous suppression as presumably people are not naturally motivated to suppress white bear thoughts. Results revealed that individuals with OCD had more
white bear thoughts overall, and had more thought occurrences during suppression compared to baseline (i.e., exhibited an immediate enhancement effect). No immediate enhancement or rebound effect was observed in the other two groups.

Tolin et al. (2002b) conducted a second study, this one designed to address the problem of reliance on participants’ self-report of target thought occurrences. They devised a paradigm that essentially assessed the extent to which individuals suppressing a thought were sensitive to thought related stimuli. In this study, participants were told to suppress a white bear thought and then were given a lexical decision task that included words relevant to white bears, words not relevant to white bears and non-words. Latency to respond was assessed, the hypothesis being that individuals with OCD may be more vulnerable to target thought primes, which would be reflected in lower latency to respond to stimuli relevant to the white bear relative to other stimuli. As predicted, individuals in the OCD group exhibited less latency to respond to target related words during the suppression interval compared to after suppression. This was not observed in the other two groups, in which latency to respond to target-related words and nontarget-related words was equal. Tolin and colleagues concluded that individuals with OCD appear to have a general deficit in their ability to control thoughts.

Why they have that deficit is unclear. The authors suggest that when individuals with OCD are attempting to suppress, they have stronger priming representations of the thought, which in turn makes the thought more accessible. Individuals with OCD may also have 'hyper-efficient' processes for detecting thoughts. This is highly consistent with Janeck, Calamari, Riemann and Heffelfinger (2003) who found that individuals with OCD were distinct from individuals with generalized anxiety disorder on their tendency to be aware of and evaluate negative thinking. The authors posit that there may also be neurological factors that make it difficult for individuals with OCD to inhibit stimuli. This latter explanation is certainly consistent with Clayton, Richards and Edwards (1999) who found that individuals with OCD, as compared to anxious controls, clearly exhibit a deficit in their ability to selectively ignore competing internal and external stimuli.

Tolin, Abramowitz, Hamlin, Foa, and Synodi (2002a) elaborated their findings by examining individuals’ attributions for suppression. They selected participants from the previous study who had had difficulty suppressing thoughts. These participants were administered a self-report measure of thought suppression attribution which assesses respondents’ reasons for suppression failure. Items reflect either an internal attribution (e.g., that there is something wrong with one’s brain) or an external attribution (e.g., there is no way to prevent thoughts from happening). The OCD group had higher scores on the ‘internal’ subscale compared to nonanxious controls, suggesting that they appraised thought recurrences more negatively. This is consistent with Purdon (2001), Purdon, Antony & Rowa, (2003a) and Purdon et al. (2003b) who found that negative appraisal of the thought was closely related to suppression effort, mood state and discomfort over thought occurrences.
5. Naturalistic observations

Rassin (2001) suggests that suppression potentially serves the same function as neutralizing. This is an important observation and introduces the possibility that the most important effect of suppression on the persistence of OCD is the same as other neutralizing strategies, such as washing and checking. Certainly, Rachman and Salkovskis argue that suppression serves many of the same functions as a neutralizing strategy. Purdon et al. (2004) had 24 individuals with OCD monitor their thought suppression attempts over three days. They completed structured diaries on three suppression attempts daily (morning, afternoon and evening), and also kept a tally of every suppression attempt. The number of daily suppression attempts reported was enormously variable, ranging from 3–482 with a median of 32–37.5 attempts per day. Suppression was typically used prior to neutralizing, and participants typically had mixed motives for suppressing. In descending order these were: to get rid of the thought before it escalated in intensity and caused emotional distress; to get the obsession out of their mind before a ritual was necessary; and to get rid of it before it caused harm to self or others. The primary suppression strategy was to say ‘stop’, followed by distraction (e.g., find another activity), thought replacement, and ‘rationalizing’ the thought. Suppression attempts were wholly successful 11% of the time, successful with protracted effort 30% of the time and successful with little effort 27% of the time.

These data suggest that suppression may be a first line of defense against an obsession and is used to avoid having to perform a ritual. This is quite interesting, as it reveals the insight people with OCD generally have into the senselessness of the ritual; if the ritual was truly important why try to get rid of the thought first? It may be that rituals are performed when the obsession causes a threshold level of distress. The data also reveal that suppression attempts are not highly successful, but perhaps are successful enough to be intermittently reinforcing. Finally, suppression does appear to be used as a neutralizing strategy (that is, to ameliorate negative affect and prevent harm), as suggested by Rassin (2001). Thus, it may be very important to investigate the role of suppression in alleviating negative affect associated with the obsessional thought.

6. Summary and recommendations

Correlational models have consistently indicated that negative appraisal drives suppression effort, which in turn predicts OCD symptoms. This is consistent with Purdon (2001) and Purdon et al. (2003a, b) who found that appraisal of failures in thought control predicted anxiety over thought occurrences and more negative mood state. However, Rassin (2001) found that suppression alleviated negative appraisal of and distress over thought occurrences. It is possible that when an obsession-like thought is imposed by the researcher, rather than being naturally experienced, it is readily resolved through neutralizing. With naturally occurring obsessions, resolution may not come easily because the individual is left with the question “Why would
a person like me have a thought like this?’’. It also may the case that assessing concern over thought recurrences makes a crucial difference in findings. As noted above as well, we may want to investigate suppression as a form of neutralizing. Future work might benefit as well from more creative ways of assessing failures in thought control, such as the lexical decision task used by Tolin et al. (2002a,b).

The work by Tolin et al. (2002a,b) indicates that OCD may be characterized by a general deficit in inhibiting attentional processes. However, the question remains whether this inhibitory deficit is a vulnerability factor or a consequence of experiencing unwanted, highly upsetting thoughts. Abramowitz et al. (2001) note it is unclear whether thought suppression is a response to or cause of frequent and distressing thoughts. It could be similarly argued that hypervigilance to one’s stream of consciousness may result from a perceived need to detect and preempt the occurrence of the obsession, which in turn makes individuals with OCD quite practiced at observing their stream of consciousness. This possibility makes it difficult to interpret the findings of studies that examine general tendency to suppress with self-report questionnaire measures, such as the WBSI, which consists of items about frequency of unwanted thoughts and tendency to cope with them by suppressing them. Are higher scores on this measure a reflection of the tendency to have unwanted thoughts in the first place, or are unwanted thoughts a result of suppression? The key vulnerability factor of interest may in fact be beliefs about the need to control thoughts and the meaning of thought occurrences, which in turn enhance the individual’s stake in controlling thoughts, as argued in cognitive behavioural models (e.g., Purdon & Clark, 1999; Rachman, 1997, 1998; Salkovskis, 1985, 1989).

Another important issue in applying thought suppression research to obsessional problems is the means by which we assess the paradoxical effect of suppression on thought occurrences. The vast majority of thought suppression studies have investigated thought frequency as the primary dependent variable. However, Markowitz and Purdon (2004) observe that this is actually quite problematic because frequency is confounded with duration. A person instructed to suppress a thought could have one thought occurrence that lasts the entire monitoring interval. That person would appear to have less control than the person who has several thought occurrences that are readily dismissed. Yet the latter person may feel much more in control of her/his thoughts. Thus, it may be more interesting to examine the effect of suppression efforts on thought duration. Indeed, previous research on thought suppression has indicated that (a) thought suppression is more effective if cues opposite in emotional valence to the target thought are used as distractors; and (b) individuals in a negative mood state have a more difficult time dismissing mood-congruent cues (e.g., Reynolds & Salkovskis, 1991; Sutherland, Newman, & Rachman, 1982; Wenzlaff, Wegner, & Klein, 1991; Wenzlaff, Wegner, & Roper, 1988). This would be consistent with the idea that the problem is not so much thoughts returning repeatedly following suppression as individuals not being able to get rid of them in the first place.

There is little research on thought dismissability. Edwards and Dickerson (1987) examined nonclinical participants’ ability to dismiss an unwanted obsessional
thought by replacing it with a neutral thought. Participants were given signaling buttons and received instructions from the experimenter to form their obsessional thought. After a pre-determined amount of time (based on a variable interval schedule) the researcher instructed participants to replace the thought with a specific neutral thought. They would then be instructed to replace the neutral thought with the obsessional thought (again according to a time schedule). Latency to replace one type of thought with the other served as a measure of dismissability. They found that participants took longer to dismiss the obsessional thought (i.e., to signal that the occurrence of the neutral replacement thought) than they did the neutral thought. The authors argued that because participants were provided with a specific replacement thought, the greater latency to dismiss the obsessional thought was due to participants’ inability to disattend to the thought, rather than their ability to find a suitable replacement thought. They suggested that what makes the thought harder to dismiss is that it may give rise to negative appraisal, as argued in cognitive-behavioural models of OCD. Consistent with this is a body of research that establishes that mood-congruent thoughts are more difficult to dismiss or control than mood-incongruent thoughts (e.g., Sutherland et al. (1982); Wenzlaff et al., 1991, 1988). Thus, dismissability rather than frequency may be the variable of interest in future work.

A final direction for research is to determine the specificity of the relationship between appraisal and suppression as it pertains to OCD symptom severity. Rachman (1997, 1998) suggests that it is a catastrophic misinterpretation of the obsession that drives suppression. Yet catastrophic misinterpretations of bodily sensations in panic disorder are not said to lead to suppression of thoughts about those sensations. Why not? We need to understand what other people who experience anxious thoughts are doing or not doing with those thoughts in order to understand what is unique about OCD.

7. Summary

Research on thought suppression has advanced our understanding to some extent, but whether or not suppression actually leads to enhanced frequency is still questionable. Innovative designs have been developed that overcome previous methodological problems and enhance ecological validity. This more recent body of work suggests a clear relationship between negative thought appraisal and suppression effort. Future work needs to consider investigating natural, as opposed to imposed, thought suppression and examine thought dismissability as opposed to thought frequency. The period of time may during which the effects of suppression are studied also needs to be examined carefully, as suppression may not have insidious effects, at least initially, especially in nonclinical samples. We also need to investigate suppression as a form of neutralizing. Future work might also examine the extent to which suppression is a feature of other anxiety disorders, such as generalized anxiety disorder, panic disorder and social phobia.


