Addictive Behaviors 44 (2015) 65–70

Contents lists available at ScienceDirect

Addictive Behaviors

To suppress, or not to suppress? That is repression: Controlling intrusive thoughts in addictive behaviour

Antony C. Moss [a,*], James A.K. Erskine [b], Ian P. Albery [a], James Richard Allen [b], George J. Georgiou [c]

[a] Department of Psychology, School of Applied Sciences, London South Bank University, 103 Borough Road, London SE1 0AA, United Kingdom
[b] Division of Population Health Sciences and Education, St George's, University of London, Cranmer Terrace, London SW17 0RE, United Kingdom
[c] Department of Psychology, University of Hertfordshire, Hatfield, Hertfordshire AL10 9AB, United Kingdom

HIGHLIGHTS

- We review evidence for the use of thought control strategies in addictive behaviour.
- Thought suppression, mindfulness and repressive coping strategies are discussed.
- We present a heuristic model suggesting a common mechanism for these strategies.

ARTICLE INFO

Available online 22 January 2015

Keywords:
Alcohol
Mindfulness
Repressive coping
Smoking
Thought suppression

ABSTRACT

Research to understand how individuals cope with intrusive negative or threatening thoughts suggests a variety of different cognitive strategies aimed at thought control. In this review, two of these strategies – thought suppression and repressive coping – are discussed in the context of addictive behaviour. Thought suppression involves conscious, volitional attempts to expel a thought from awareness, whereas repressive coping, which involves the avoidance of thoughts without the corresponding conscious intention, appears to be a far more automated process. Whilst there has been an emerging body of research exploring the role of thought suppression in addictive behaviour, there remains a dearth of research which has considered the role of repressive coping in the development of, and recovery from, addiction. Based on a review of the literature, and a discussion of the supposed mechanisms which underpin these strategies for exercising mental control, a conceptual model is proposed which posits a potential common mechanism. This model makes a number of predictions which require exploration in future research to fully understand the cognitive strategies utilised by individuals to control intrusive thoughts related to their addictive behaviour.

1. Introduction

Several of the leading causes of early death worldwide are preventable, the result of a small number of habitual behaviours. For instance, tobacco use accounts for 9% of early deaths, and alcohol use for 5.9% (WHO, 2009, 2013). This paper will examine the effects of two cognitive strategies individuals use when attempting to control thoughts related to these behaviours (Bien & Burge, 1990; Burton & Tiffany, 1997; Meule, Heckel, & Kübler, 2012); thought suppression and repressive coping.

In this special issue, Baumeister and Vonasch (2015) discuss addictive behaviour from the perspective of self-regulation theory, arguing persuasively that the operation and failure of self-regulatory control both play a key role in the development, maintenance and cessation of addictive behaviours. In this manuscript we will focus on a specific aspect of self-regulation, that is the act of controlling ones thoughts. One area of research which has developed in recent years in this field surrounds the use of thought suppression, and the impact that this has on the maintenance and cessation of smoking and alcohol use. We will begin by reviewing this emerging body of research, and then move towards a discussion of the links which have been proposed between thought suppression and repressive coping (e.g. Geraerts, Merckelbach, Jelicic, & Smeets, 2006). We will conclude by presenting a heuristic model which, based upon the research reviewed, proposes a common mechanism underlying thought suppression and repressive coping.

2. Thought suppression

Thought suppression is a conscious process whereby an individual attempts *not* to think about something. There is evidence that thought suppression is a commonly used self-control strategy when attempting to reduce or stop smoking and drinking (Ingjaldsson, Laberg, & Thayer, 2003; Nosen & Woody, 2013; Salkovskis & Reynolds, 1994; Toll, Sobell,

* Corresponding author. Tel.: +4420 7815 5777.
E-mail address: mossac@lsbu.ac.uk (A.C. Moss).

http://dx.doi.org/10.1016/j.addbeh.2015.01.029
0306-4603/

Wagner, & Sobell, 2001). In spite of its intended purpose – to reduce occurrences of thoughts about the target – previous studies have demonstrated that using thought suppression may cause individuals to think about the thought they are attempting to avoid more rather than less frequently (Wegner, Schneider, Carter, & White, 1987). The increased thinking, as a result of thought suppression, can occur during active suppression – the so-called immediate enhancement effect – or, more commonly, following suppression — the post-suppression rebound effect (Wenzlaff & Wegner, 2000). Since the original demonstration that suppressed thoughts can rebound, a meta-analysis suggests the effects are robust (Abramowitz, Tolin, & Street, 2001). Furthermore, studies have demonstrated that suppressed thoughts become hyperaccessible (Wegner & Erber, 1992). This is an important finding as hyperaccessibility of a construct in memory can have several critical downstream effects, chiefly greater subsequent thought, and greater subsequent awareness of content relating to the suppressed item (Bargh, 1989; Bargh & Chartrand, 1999; Klein, 2007).

Beyond making a mental construct more accessible, and construct-relevant stimuli in one's environment more salient, suppression can also cause an increase in behaviour associated with the suppressed thought (Erskine & Georgiou, 2011). For example, suppressing thoughts of food or thirst can lead to a subsequent increase in food or drink consumption (Denzler, Förster, Liberman, & Rozenman, 2010; Erskine, 2008; Erskine & Georgiou, 2010). Furthermore, suppressing thoughts of smoking was shown to lead to increased smoking after a week of smoking related thought suppression, relative to groups actively thinking about smoking or thinking about anything they wished (Erskine, Georgiou, & Kvavilashvili, 2010). These effects are important because people do not only employ thought suppression to control their thoughts, but also as a way of controlling behaviour (Baumeister, Heatherton, & Tice, 1994; Wenzlaff & Wegner, 2000). However this strategy seems to be an ineffective approach to self-regulation.

Wegner and Zanakos (1994) developed a measure of the extent to which individuals suppress thoughts in everyday life called the White Bear Suppression Inventory (WBSI). Their work demonstrated that individuals vary in the tendency to suppress thoughts and that these tendencies are stable over time. Since the creation of the WBSI, research has consistently demonstrated that the frequent suppression of thoughts is positively associated with a range of psychopathologies (Erskine, Kvavilashvili, & Kornbrot, 2007; Purdon, 1999; Wegner & Zanakos, 1994), although it is important to note that a recent review suggests that the use of thought suppression across a range of pathologies does not seem to lead to an increase in intrusive thoughts relative to control populations (Magee, Harden, & Teachman, 2012). As there is an emerging body of research in this area, we will now briefly review the literature on thought suppression in relation to smoking and alcohol consumption.

2.1. Smoking behaviour

The great majority of daily smokers report wanting to quit (Jarvis, McIntyre, & Bates, 2002; Mullins & Borland, 1996). Furthermore, most smokers attempt to quit unaided (West, 1997; West & Zhou, 2007). Despite trying to quit the average unaided success rates (defined by continual abstinence over 12 months) is attained by between 2% and 4% of quitters (Hughes et al., 1992; Hughes, Keely, & Naud, 2004). In terms of cognitive strategies individuals use when they try to quit smoking, studies have indicated that whilst attempting to quit, individuals frequently experience smoking related intrusive thoughts. Furthermore almost all quitters report attempting to suppress thoughts of smoking (Salkovskis & Reynolds, 1994).

Salkovskis and Reynolds (1994) demonstrated that participants attempting to suppress thoughts about smoking showed a subsequent increase in smoking thoughts compared to control groups. A further study investigated the extent to which individuals reported using thought suppression in everyday life (using the WBSI) and the success of quitting smoking. The findings established that the WBSI score was significantly higher in smokers as opposed to ex-smokers (Toll et al., 2001). These studies suggest that intrusive smoking thoughts may serve as cues precipitating relapse (Marlatt & Gordon, 1985).

With these studies in mind and the fact that thought suppression seems to elevate the accessibility of the formerly suppressed concept (Klein, 2007; Palfai, Colby, Monti, & Rohsenow, 1997a; Palfai, Monti, Colby, & Rohsenow, 1997b; Wegner & Erber, 1992) thought suppression should make individuals more likely to increase behaviour associated with the suppressed thought (Erskine & Georgiou, 2011; Wegner, 2009; Wenzlaff & Wegner, 2000). Erskine et al. (2010) demonstrated this effect (Erskine et al., 2010), showing that participants attempting to suppress smoking thoughts for a week increased their smoking the following week whereas participants merely monitoring their smoking thoughts or actively thinking of smoking for a week did not increase behaviour the following week. This demonstrates a phenomenon known as behavioural rebound, whereby formerly suppressed thoughts about a behaviour cause a subsequent increase in that behaviour. It is, however, important to note that not all studies have found an association between thought suppression and increased smoking (Haaga & Allison, 1994).

Erskine and colleagues suggested that suppressing smoking thoughts may also elevate cravings. However a study examining the effects of suppressing smoking thoughts on subsequent cravings found that it did not result in a subsequently greater desire to smoke (Erskine et al., 2012). Nonetheless, the same study did show that a promising intervention for overcoming many of the effects of thought suppression – participant's degree of mindfulness (present moment awareness) – was negatively correlated with thought suppression (see also Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Mindfulness has been defined as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p.4). In line with this, Wegner (2011) has suggested that mindfulness techniques may have some utility as a method of avoiding the effects of thought suppression. Studies have started to compare mindfulness and thought suppression based interventions for individuals attempting to quit smoking. For example, Rogojanski and colleagues assigned participants to use either mindfulness or thought suppression to deal with cravings whilst being exposed to cigarettes. The study tracked craving, negative affect, nicotine dependence, depression and self-efficacy before the interventions and over seven days. Contrary to previous work, both groups reported reduced smoking and being better able to cope with cravings at follow-up. However only the mindful group showed reduced negative affect, depression and nicotine dependence, indicating that mindfulness was more efficacious than thought suppression, which showed no effects (Rogojanski, Vettese, & Antony, 2011). One significant issue with the study of Rogojanski et al. (2011) is that there was no differentiation between suppressing thoughts of smoking specifically and other thoughts. As such, it is possible that participants were suppressing a variety of thoughts. In a related study Litvin, Kovacs, Hayes, and Brandon (2012) observed that both suppression and acceptance strategies were associated with less craving and smoking compared with a control group not using either strategy.

One study took a different approach and investigated the extent to which individuals report suppressing smoking thoughts. Nosen and Woody (2013) revised the WBSI to include a new smoking specific scale (the WBSI smoking version, containing two subscales — thought intrusion and suppression). Results indicated that the intrusion subscale and overall scale were positively related to greater craving, smoking urges and negative affect. The suppression subscale was positively related to greater distraction, reappraisal, punishment and worry, but not to the urge to smoke or negative affect. Quitting smokers scored higher than continuing smokers.

A review of early smoking lapse suggests that it may not be the severity of withdrawal symptoms that create difficulties in quitting but how individuals respond to these (Brown, Lejuez, Kahler, Strong,