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Letter to the Editor

Response to 'A systematic review of neurobiological and clinical features of mindfulness meditations'

I was pleased to read the perspicacious review of the neurobiological and clinical features of mindfulness meditation by Chiesa & Serretti (2010). Despite preliminary evidence of clinical utility, their suggestion that an unambiguous operationalization of mindfulness is needed to 'provide a systematic and coherent framework' is well taken.

Some of the ambiguities in the construct have arisen from the precarious process by which a pre-scientific construct has been imported into the empirical realm. While mindfulness does not imply adherence to any belief system, its clearest articulation is found in Buddhism. The translation of those insights into an empirical context has been complex. As religious traditions are generally built on the foundation of unfalsifiable claims, scientific suspicions have quite understandably endured. In the efforts to make mindfulness a respectable object of empirical investigation and denude it of its religious baggage, researchers have alternatively added different meanings under the umbrella of 'mindfulness' while simultaneously removing mindfulness from its context, thus presenting a reductionistic vision of how benefits may accrue.

On the first count, mindfulness has been defined traditionally as a steady awareness that knows what is arising within the phenomenal field. Through the process of translation into the empirical domain, the construct has gathered additional connotations. Several self-report measures of mindfulness including the Kentucky Inventory of Mindfulness Skills (Baer *et al.* 2004), the Toronto Mindfulness Scale (Lau *et al.* 2006), the Five Facet Mindfulness Questionnaire (Baer *et al.* 2006) and the Philadelphia Mindfulness Scale (Cardaciotto *et al.* 2008) conceptualize mindfulness as a multi-dimensional construct – although the Mindful Attention Awareness Scale is an exception to this rule (Brown & Ryan, 2003). Typically, a dimension of non-judgemental acceptance, curiosity or openness has been incorporated. While this may be justified based on psychometric considerations, these efforts represent an attempt to import related, though distinct, constructs from Buddhism into the secularized

domain of mindfulness. In this sense, mindfulness is coming to mean more than it did in its traditional context. On the other hand, in an attempt to isolate the signal of mindfulness, practices that are taught in conjunction with mindfulness have been minimized in scientific conceptualizations. Specifically, mindfulness has been contrasted with the cognitive reappraisal strategies (Gross, 2002) that comprise a core element of cognitive-behavioural therapies. While mindfulness is not itself a reappraisal strategy, it is typically taught in a context where various reappraisal strategies are deployed. For example, in one popular modality, mindfulness-based stress reduction, pain and emotional difficulties are reframed as being opportunities for meeting challenges skillfully, learning compassion or as a reflection of universal characteristics of existence that highlight what is shared by all people (Kabat-Zinn, 1990). These and other reappraisal strategies are probably important in understanding the efficacy of mindfulness-based interventions.

The foregoing comments should not be interpreted as a preference for the original Buddhist vision over the empirical operationalization. Practices emerging from Buddhism are only valuable insofar as they represent a collection of trainings that decrease psychopathology and increase flourishing. These claims are manifestly falsifiable and should not be protected from empirical interrogation. Rather, I am suggesting that 'mindfulness' has become the scientifically respectable construct into which much of Buddhist psychology has been smuggled. This is partially a consequence of the well-deserved suspicion with which religious traditions are viewed by science – but it has led to some difficulties with construct validation.

Declaration of Interest

None.

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The authors reply

We are pleased to read the interesting letter written by Dr Brensilver and to have the possibility to more deeply explain our view on the issues he addresses. The main issue raised by Brensilver concerns the difficulties inherent to any attempt to provide an unambiguous operationalization of mindfulness.

As many authors have recently pointed out (e.g. Gilpin, 2009; Rappay & Bystrisky, 2009; Chiesa & Malinowski, in press), the original concept of ‘mindfulness’ deriving from Buddhism has been widely incorporated into several interventions which include elements of the original definition of ‘mindfulness’ while introducing significant differences as well. The original word which is commonly translated as mindfulness is *Sati*. *Sati* has frequently been described as a state of ‘presence of mind’ which allows the practitioner to see internal and external phenomena as they really are (i.e. impermanent, lacking a self and ultimately leading to suffering) and to distinguish them from his/her own projections and misunderstandings (e.g. Nyanaponika, 1973; Uchiyama, 2004).

Unfortunately, as the construct of ‘mindfulness’ arose in a pre-scientific context, ancient definitions of mindfulness do not easily lend themselves to an operationalization that could be used in current research. Modern psychologically oriented definitions of mindfulness try to overcome this problem (e.g. Brown & Ryan, 2003; Baer *et al.* 2006). However

the emphasis recently given to non-judgemental acceptance, openness and curiosity has led to the development of interventions that could significantly differ from ‘classical’ mindfulness meditation (MM) practice.

According to Rappay & Bystrisky (2009), in the traditional literature, the cultivation of mindfulness is seen as a means to acquire levels of perceptual skills that enables the practitioner to carry out progressive mental processes to achieve both short- and long-term objectives (including as an example a higher ability to focus on certain phenomena for prolonged periods of time and a higher emotional balance). On the other hand, modern mindfulness-based interventions (MBIs) reject the idea of mindfulness having goals that the practitioner strives toward, and consequently non-judgemental awareness, along with the development of an attitude of curiosity and acceptance, is frequently seen as the essence of the practice.

Gilpin (2009) also points to the important differences existing, as an example, between ‘classical’ Theravada Buddhism and mindfulness-based cognitive therapy, one popular modern MBI, in terms of the aims for which one practises. In the first case, the main aim is usually to achieve freedom from a type of suffering common to all human beings, which results from the incorrect understanding of reality. On the other hand, more recent MBIs are more clinically oriented and their main aim is to provide relief from unwanted physical and psychological symptoms such as chronic pain or depressive symptoms. To do this, as Brensilver notes, practitioners are taught different cognitive strategies, some of which are consistent with reappraisal strategies, whereas other practices that are traditionally taught in conjunction with mindfulness have been minimized.

Chiesa & Malinowski (in press) summarize such issues recognizing that, although at first glance it appears as if a large body of research converges on understanding the effects of mindfulness practice as a unitary phenomenon, the closer inspection of the philosophical background, aims and practices of classical MM and modern MBI reveals a large diversity that may question the usefulness of using mindfulness as umbrella term for this rich diversity.

Accordingly, our view is that further empirical and psychometric research is needed to explore the original concept of mindfulness and to understand whether and to what extent it could be useful to decrease psychopathology. Additionally, further research is needed to investigate how differences introduced in modern MBI may still allow for the use of the umbrella term mindfulness to refer to the wide diversity of interventions currently included under such definition.

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Research Letter

Copycat effect after celebrity suicides: results from the French national death register

Introduction

Media coverage following the suicide of an anonymous person or a celebrity has been described to entail a significant increase in the number of suicides (Phillips, 1974). Recent reviews (Pirkis *et al.* 2001; Gould *et al.* 2005) and a meta-analysis (Stack, 2000, 2005) showed that contagion is likely to occur after heavy media coverage with a content rich in positive definitions of suicide. This phenomenon has been reported in several countries after the suicide of a single personality (Jonas, 1992; Sonneck *et al.* 1994; Hassan, 1995; Tousignant *et al.* 2005; Cheng *et al.* 2007; Fu & Yip, 2009; Chen *et al.* 2010) but has never been systematically assessed and described. The identification of early potential trigger events, however, could be useful to improve existing recommendations to the media.

Our objective was to study the suicide copycat effect following the most famous celebrity suicides in France between 1979 and 2006.

Method

Data

We obtained daily data on suicide deaths from 1 January 1979 to 31 December 2006, with sex, age group and lethal means from the French exhaustive death register (CépiDc – Inserm; France). Suicide means were recorded according to the International Classification of Diseases (ICD)-9 (from 1979 to 1999) and ICD-10 (from 2000 onwards).

Celebrity suicides

A list of celebrity suicides was built from Wikipedia (2010a). It included 80 celebrities. Those whose name appeared at least 100 000 times in pages indexed in French of a web search engine (Google) were selected. Six celebrities were selected: Soeur Sourire (singer), Dalida (singer), Pierre Bérégovoy (politician), Kurt Cobain (singer), Gilles Deleuze (philosopher) and Nino Ferrer (singer).

Control group

We selected celebrities who died from other violent deaths (transport accident or murder). The list was also built using Wikipedia (2010b,c). As previously, celebrities whose name appeared at least 100 000 times in Google pages indexed in French were selected. Seven celebrities were selected: Aaliyah, Notorious B.I.G., Tupac Shakur, Coluche, Marvin Gaye, Grace Kelly and John Lennon.

Statistical analysis

Daily counts of suicide deaths were aggregated into periods of 30 days (or 31 days, depending on the current months involved in the period) in order to capture any delayed effect due to media stimuli (Martin & Koo, 1997; Maris, 2002). Each period was defined from the day after the announcement of the celebrity death. Each of the resulting time series was analysed separately, using seasonal autoregressive integrated moving average (SARIMA) models (Box & Jenkins, 1994; Goh & Law, 2002). The resulting estimates can be interpreted as the estimated number of suicide deaths due to the celebrity death in the period following the announcement. Further analyses were stratified by sex, age groups, and suicide methods. Analyses were conducted using SAS PROC ARIMA 9.1 (SAS Institute, USA).