Theoretical Foundations to Guide Mindfulness Meditation: A Path to Wisdom

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Abstract

Mindfulness interventions are becoming increasingly popular across a wide variety of clinical and non-clinical settings where they are often employed to promote psychological wellbeing. Mindfulness in its original context presented in Buddhist practice is used to systematically understand one's moment-to-moment experience, and to gradually develop selfknowledge and wisdom. Buddhist teachings describe wisdom as seeing things just as they are - a requisite for the complete freedom from suffering. In psychological writings, although the construct of wisdom lacks a commonly accepted definition, direct experiential self-knowledge is considered to be an essential element of wisdom. The purpose of this article is to examine the three major trainings of the Buddhist path, as well as some of the key Buddhist theoretical constructs, in order to explore their contribution to the gradual development of experiential selfknowledge and wisdom. In Buddhist traditions, mindfulness is practised in the context of a moral and philosophical system, and the mind is described as a sequence of momentary mental states, each distinct and discrete, their connections with one another being causal. We explain how a clear understanding of mindfulness within the context of this broader theoretical framework can be helpful to individuals engaging in different levels of the mindfulness meditation practice, and how this understanding can result in more sustained outcomes for mindfulness interventions. Further explorations are made into how various barriers and motivators to mindfulness meditation can be better understood by linking the theoretical aspects with current research literature on mindfulness.

Keywords: mindfulness; meditation; self-knowledge; wisdom; attachment; subjective experience; Buddhist psychology.

Introduction

Mindfulness is a popular mode of therapeutic intervention currently applied in a variety of settings where the evidence for its effectiveness is growing (Creswell 2017; Gotink et al. 2015; Paulus 2016). Numerous researchers, clinicians and scholars have suggested however that mindfulness is a richer concept than thus far understood and applied in psychology, and that the current interpretation of mindfulness merely as a clinically-useful psychological trait risks distorting and significantly limiting the potential contribution of mindfulness to mainstream psychology (Grossman 2011; Harrington and Dunne 2015; Hyland 2017; Kang and Whittingham 2010). Furthermore, suggestions have been made to incorporate theoretical concepts derived from the 2,600-year-old Buddhist tradition, which might provide a better understanding along with more sustained outcomes for mindfulness interventions (Amaro 2015; Buttle 2015; de Zoysa 2016; Kudesia and Nyima 2015; Purser and Milillo 2015).

The ultimate aim of Buddhist¹ trainings is to cultivate self-knowledge and wisdom, where wisdom is defined as "seeing things just as they are" or as the penetrative understanding of phenomena in their fundamental mode of being (Anālayo 2006, p. 60; Bodhi 2006, p. 55; Ñanamoli and Bodhi 1995, p.37). Considering the psychological literature, self-knowledge can be defined as an understanding of oneself in terms of one's views, emotions, motives, thoughts and memories (Markus 1983; Walsh 2015; Wilson 2009). In Buddhist teachings, self-knowledge also includes understanding the attributes, interconnections, and conditioned origination of these psychological constructs, as well as questioning some implicit assumptions that are often made in relation to subjective experience (as explained later in this article). With respect to the

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¹ All traditions of Buddhism (Theravada, Mahayana and Vajrayana) have the common goal of ethical awareness, practising meditation, and developing wisdom as the path to gaining a penetrative understanding of phenomena (Kang and Wittingham 2010; Van Gordon et al. 2015; Wallace and Shapiro 2006).

construct of wisdom, psychological writings currently lack a commonly accepted definition (Walsh 2015), although several varieties and subtypes of wisdom have been described (Baltes and Staudinger 2000; Trowbridge 2011; Walsh 2015). For example, *phronesis* and *sophia* aspects of wisdom are described as practical knowledge (concerned with living in the social world) and transcendent wisdom (referred to as the "ultimate nature of reality"), respectively (Trowbridge 2011; Walsh 2015). There is also widespread agreement that the construct of wisdom is associated with compassion, self-knowledge, self-regulation, nonattachment and a deeper understanding of life (Baltes and Staudinger 2000; Trowbridge 2011; Walsh 2015). A recent cross-cultural and cross-disciplinary synthesis of wisdom that was conducted by drawing on contemporary research as well as the philosophical and contemplative disciplines of both the East and the West concluded that self-knowledge – especially direct, experiential self-knowledge – is essential for wisdom, and that the construct of wisdom is closely linked to virtues such as ethics and benevolence (Walsh 2015).

The key elements of Buddhist practice involve developing ethics and benevolence, training to calm the mind and reduce mind wandering, as well as cultivating wisdom (Ñanamoli and Bodhi 1994). A calm mind is described as being important for developing a penetrative understanding of phenomena (Bodhi 2006; Gunaratana 2011; Nyanaponika 2014). Buddhist teachings also describe wisdom as being gradually uncovered through sustained, diligent practice and persevering effort (Gunaratana 2011; Anālayo 2006, p. 252; Dhamma 2005). In other words, gradual training and gradual progression are described as essential for the untrained mind, with penetrative understanding arising only after a long stretch of sustained practice involving many stages of progress (Dhamma 2005; Ñanamoli and Bodhi 1995, p. 34).

The construct of mindfulness is often defined in the current psychological literature as the

process of directing "attention" or "awareness" to present moment experiences (Creswell 2017; Kabat-Zinn 2013; Nilsson and Kazemi 2016). In Buddhist teachings however, mindfulness involves not only the act of paying attention to experiences occurring in the present moment, but also the process of cultivating wisdom, and therefore, is often referred to as "wise-attention" (Anālayo 2006, p. 59; Ñanamoli and Bodhi 1995, discourse 2, p. 91). This article discusses how the major components of Buddhist training contribute toward developing wisdom. We will also examine how the moment-to-moment experience of an individual can be understood in a systematic manner using theoretical constructs from Buddhist teachings. Various factors that can change the flow of experience, and how the training culminates in enlightenment or the complete freedom from suffering, will also be described. Further explorations will be made into how an understanding of the theoretical aspects can be helpful to individuals engaging in different levels of mindfulness meditation, as well as how various barriers and motivators to mindfulness meditation can be better understood by linking the theoretical aspects with current research literature on mindfulness meditation.

The Threefold Training

In Buddhist teachings, an ordinary mind is described as having an innate disposition to constantly engage in what are known as the eight worldly preoccupations, namely: seeking gain, honour, happiness and praise, while escaping loss, dishonour, sadness and blame (Bodhi 2012, p. 32). This is comparable to the classic motivational principle in psychology known as the hedonic principle, in which people tend to approach pleasure and avoid pain (Higgins 1997). A mind inclined this way is described as constantly craving for the continuation of pleasant experiences (i.e., greed) and for the elimination of unpleasant experiences (i.e., aversion) (Bodhi 2012;

Rāhula 1974, p. 30; Wallace and Shapiro 2006). Such a mind that habitually reacts, and often gets entangled in worries and concerns, is described as a confused, ignorant² mind that is unable to see the true nature of existence (Gunaratana 2011; Ñanamoli and Bodhi 1995).

Therefore, one of the goals of the Buddhist path is to attenuate (and eventually completely eliminate) greed and aversion – two major factors that conceal wisdom. The other goal is to calm the mind through meditation, and use this calmness to conduct an experiential inquiry into the nature of one's mind and related phenomena (Anālayo 2006). These goals are addressed by three major trainings known collectively as the threefold training of the Buddhist path [see Figure 1, section (a)]: ethical conduct, focusing or concentration of the mind, and the development of wisdom (Nanamoli and Bodhi 1994; Rāhula 1974, p. 46). Ethical conduct restrains those actions that can propagate greed and aversion. Focusing the mind helps the mind to be peaceful and calm, while attenuating greed and aversion, as well as allowing the mind to be receptive to wisdom. Cultivating wisdom through mindfulness and insightful contemplation enables one to "see things just as they are" and has the potential to completely eradicate greed, hate and ignorance at more advanced stages of the practice (Nanamoli and Bodhi 1995; Nyanaponika 2014). First we will briefly discuss each of the three trainings and examine how they contribute to the development of wisdom, and then explore the systematic cultivation of experiential self-knowledge and wisdom in greater detail.

Ethical Conduct

Ethical conduct constitutes abstinence from bodily and verbal actions motivated by greed, aversion and ignorance, while engaging in bodily and verbal actions that are motivated by

² Ignorance (or delusion), in Buddhist teachings refers to individuals' deeply rooted mistaken views or lack of wisdom into the true nature of human experience (Bodhi and Nārada 2012, p. 83; Ñanamoli and Bodhi 1995).

generosity, loving kindness and wisdom (Bodhi 2006; Nārada 2006; Walshe 1995). As explained earlier, the habitual disposition of an individual is to engage in actions motivated by greed, aversion and ignorance. Actions motivated this way are referred to as unwholesome actions (Ñanamoli and Bodhi 1994; Rāhula 1974). Many individuals also engage in actions motivated by generosity, loving kindness and wisdom however, especially considering that ethical values are the foundation of a cohesive social order. Such conduct is referred to as wholesome actions (Ñanamoli and Bodhi 1994; Rāhula 1974).

In Buddhist teachings, ethical and moral principles constitute five trainings (or precepts) at the most basic level, which involve refraining from five unwholesome acts: killing, stealing, sexual misconduct, lying, and the use of intoxicants. It should be noted that these moral principles are virtues that have been often recognized across cultures as well as various religious traditions (Baer 2015; Dahlsgaard et al. 2005; Trowbridge 2011). Further, these moral principles are ultimately related to compassion and non-harming of other beings (Amaro 2015; Baer 2015; Bodhi 2006). Engaging in ethical practises is described as reducing mental proliferations relating to guilt and remorse, and leading to a calmer mind (Bodhi 2006), thereby directly benefiting an individual's meditation practice.

Focusing or Concentration of the Mind

A mind that is calm, composed and collected is considered necessary to investigate and understand the true nature of human experience/existence (Nyanaponika 2014; Sayadaw 2002). The Buddha compared an ordinary untrained mind to the flapping about of a fish taken from water and thrown onto dry land where the mind often becomes a helpless prey to one's own associations and thoughts (Index of Similes 2013). Focusing the mind is described as collecting

together the ordinarily dispersed and dissipated stream of mental states to induce an inner unification (Bodhi 2006, p. 49; Ñanamoli and Bodhi 1995).

The two salient features of a concentrated mind are described as unbroken attentiveness to a meditation object and the consequent tranquility of the mental functions (Bodhi 2006, p. 49; Rāhula 1974). When the mind develops unbroken attentiveness for long periods of time, it achieves states of mind that are referred to as meditative absorptions (Nyanaponika 2014, p. 108; Walshe 1995). The experience of absorption is described as one of intense pleasure and happiness, which surpasses pleasures that arise from the dependence on material objects (Anālayo 2006, p. 166; Brahm 2006). It has been stated, however, that a considerable amount of meditative development and proficiency are required to attain these absorptions (Anālayo 2006, p. 76). These peaceful calm mind-states are also described in other religious traditions and are recorded throughout history in different cultures (Benson 1976, p. 82; Deikman 2000; Teasdale 1999).

Developing Wisdom

Developing ethical conduct and focusing the mind have the effect of attenuating greed and aversion, thereby reducing mind-wandering and calming the mind. A calm mind developed this way is described as being capable of cultivating wisdom or insights that gradually unveil the ultimate truth of phenomena (Ñanamoli and Bodhi 1995; Rāhula 1974). A calm mind has been compared to a lake unruffled by breeze, and a faithful mirror that reflects anything placed before it exactly as it is (Bodhi 2006, p. 49).

The development of wisdom is described to manifest as three types or stages in Buddhist teachings [see Figure 1, section (b)]. First, one carefully studies the teachings to cultivate

intellectual knowledge based on learning. Second, one reflects on this knowledge and conceptually evaluates the teachings to critically examine whether the teachings are analytically acceptable. In the last stage, one moves beyond intellectual or conceptual knowledge to directly cultivate wisdom through the practice of meditation – a process that gradually leads one to a penetrative understanding of phenomena (Kudesia and Nyima 2015; Sayadaw 1995).

Here we will specifically focus on the first stage of developing wisdom or the cultivation of knowledge based on learning. As explained earlier, the practice of mindfulness in the context of Buddhist teachings involves paying attention to experiences occurring in the present moment as a means of cultivating wisdom. Therefore, we will first examine how an individual's present moment experience that changes from moment to moment can be systematically understood using theoretical constructs described in Buddhist teachings. The three characteristics (or marks) of existence presented in the teachings will also be examined in relation to the further development of wisdom.

The second and the third stages of developing wisdom necessitate carefully considering the first stage, although all three stages could enhance, support and mutually reinforce each other to flourish (Anālayo 2006; Dhamma 2005). For example, calming the mind and conceptually evaluating the knowledge that was accumulated based on learning can help one to further clarify what was learned, in order to gradually promote the development of wisdom.

The Stream of Mental and Material Events

In order to systematically understand the moment-by-moment experience of an individual, it is useful to first gain a clear understanding of what is meant by the "present moment." Referring to the past, present and the future is commonplace in daily living, and these

concepts are often taken for granted. Everyone will agree that last year was in the past, the next year is in the future and the current year is the present year. We can narrow this analysis gradually and talk in terms of past, present or future months, weeks, days, hours, seconds, milliseconds, and can even continue this division infinitely to smaller units (Shonin and Van Gordon 2013). We often refer to the experience of past, present and the future simply as changes that happen with "time." However, clocks are merely man-made devices that are used to employ structure to our world (Shonin and Van Gordon 2013). This leads us to the question: what then is changing?

The outside world and the universe are constantly changing. At a macro level, this consists of movement of the planets, stars and galaxies, as well as the changes that happen in our surroundings. At a micro level, atoms and subatomic particles are continuously changing (Ghatak et al. 2004). Internally, our physical bodies are also continuously changing with the constant occurring of thousands of metabolic reactions (Insel et al. 2013, p. 284). In terms of the material body, Buddhist teachings describe that the elementary components that make up the physical body (described as solidity, fluidity, heat, and motion; Bodhi and Nārada 2012) are similar to the elementary components that make up the external environment, and these elementary components continuously move between the physical body and the environment (Karunamuni 2015; Mendis 1985; Ñanamoli and Bodhi 1995, discourse 140, p. 1089).

The consciousness element or the mind is what is aware of the existence of all parts of the material body, the material world outside, our experiences, as well as the consciousness element itself (Karunamuni 2015). The consciousness element is described as breaking up and perishing almost as soon as it arises, and sensory experiences (such as the visual experience of seeing) are described as strings of momentary formations (Bodhi and Nārada 2012, p. 29;

Mendis 1985; Nyanaponika 2008). Mind-moments are described as following one another in extremely rapid succession (Bodhi and Nārada 2012; Mendis 1985). The smallest possible unit of experience or an "instance of consciousness" is described as being millions of times smaller than the flicker of an eyelid (Bodhi and Nārada 2012, p. 156). These small units are described as originating, remaining and passing away, while even during the 'remaining' period, experience is described as continuously changing (Bodhi and Nārada 2012, p. 156). Indeed, research in neuroscience and psychology have elucidated that we only experience one thought moment at a time (Shapiro et al. 1997; Slagter et al. 2007; Potter et al. 2014), and that a thought can happen within milliseconds (Potter et al. 2014).

Buddhist teachings describe an individual as a psycho-physical complex where the material body and the mind are compared to two sheaves of reeds leaning against one another, each depending on the other (Index of Similes 2013). A person is also described as a continuous flow of mental and physical phenomena or a current consisting of two intertwining streams: a stream of material events and a stream of mental events (Bodhi 2006, p. 58; Bodhi and Nārada 2012; Karunamuni 2015).

The Flow of Experience

To understand the unfolding of an individual's moment-to-moment experience in a systematic manner, the five-aggregate model of the mind (Karunamuni 2015) is a useful theoretical resource. This model describes that all experiences involve the five-aggregates (material form, feelings, perception, volition, and sensory consciousness), which arise and pass away continuously.

Sensory consciousness arises when a sense organ, the corresponding sense object and

conscious engagement come together (Ñanamoli and Bodhi 1995, discourse 28, p. 283) (see Figure 2). As an example, the coming together of the organ ear, the sense object (e.g., what is heard), and conscious engagement results in auditory consciousness. It should be noted that even if the organ ear and sound come together, if one's conscious engagement is preoccupied with thoughts or if one has fallen asleep, one may not hear a sound such as a dog barking outside.

According to the five-aggregate model, sensory consciousness can arise in six different ways. The first five of these are the input from the five senses (visual, auditory, olfactory, taste and tactile sensations), and the sixth is a thought relating to the past, present, or the future (Karunamuni 2015). Following any of these six sensory consciousness triggers, various mental events are generated. These are grouped as feelings, perceptions and volition (see Figure 3). Feelings represent subjective affective repercussions of an experience, and can be pleasant, unpleasant, or neutral. Perceptions refer to being aware of attributes of an object or an event (Anālayo 2006; Karunamuni 2015). Volition is the reactive or purposive aspect of the mind, and represents 50 different mental factors (therefore, the volition aggregate is sometimes translated as "mental formations"; Bodhi and Nārada 2012; Nyanaponika 2014). The major element of the volition aggregate however is expressed in bodily, verbal, or psychological behavior (Bodhi and Nārada 2012; Karunamuni 2015).

Sensory consciousness can also trigger a series of mental events or mental proliferations (which are classified under the aggregate of volition; Karunamuni 2015). The teachings describe that mental proliferations involve concoctions of proliferations and perceptions, which lead from the originally perceived sensory data to various associations concerning the past, present, and the future (Anālayo 2006; Ñanamoli and Bodhi 1995, discourse 18, p. 203). Mental proliferations are described as making one a victim to one's own associations and thoughts, where the thought

process proliferates and weaves a net built from various conceptualizations, projections, and associations, of which the "thinker" becomes almost a helpless prey (Anālayo 2006, p. 222). The teachings also describe that frequently thinking or dwelling on a particular issue produces a corresponding mental inclination, and thus a tendency to get caught up in ever more thoughts and associations along the same lines (Anālayo 2006, p. 193; Ñanamoli and Bodhi 1995, discourse 19, p. 208).

Let us consider some examples of various sensory consciousness triggers and resulting mental phenomena in an individual who watches television, goes for a walk, has a meal and goes to sleep. Watching television involves mostly visual and auditory triggers followed by various perceptions and feelings. Intentions may also arise (viz., intention to buy a product advertised). Going for a walk can involve various visual, auditory, tactile and olfactory triggers. For example, seeing flowers by the roadside may result in a pleasant feeling. Seeing many clouds in the sky may result in a thought (perception) that it might rain soon, and this may result in mental proliferations. Hearing a car approaching from behind can result in the volition (intention/behaviour) of moving to the side of the road. A thought from the past may arise, which in turn may generate various feelings. When having a meal, although this activity can involve all six sensory consciousness triggers, most of the sensations may relate to olfactory and taste experiences. Various thoughts, feelings and perceptions can also arise while eating. For instance, something the person saw during the walk can emerge as a thought-moment. While what the person saw was a visual sensory trigger during the walk, it now surfaces as a thought-moment that may even lead to mental proliferations relating to the future. When considering sleep, activity of the mind based on the senses is temporarily halted during deep sleep, although thoughts and mental events can occur in the form of dreams (Bodhi and Nārada 2012). Considering the fiveaggregate model, the present moment is experienced either through the five senses or as thoughts and mental events, whereas the past and the future are experienced only as thoughts in the present moment.

Factors Affecting the Flow of Experience

In order to further understand the reactivity of the mind, it is helpful to consider another important construct presented in Buddhist teachings. This is the attachment individuals have towards the five aggregates (Anālayo 2006, p. 203; Ñanamoli and Bodhi 1995, discourse 109, p. 887; Thanissaro 2010). Phenomenologically, the construct of attachment can be perceived as having the subjective quality of being fixated on sensory objects, ideas, feelings or images, with an internal pressure to acquire, hold, avoid or change (Desbordes et al. 2015; Sahdra and Shaver 2013; Sahdra et al. 2016). The teachings describe that the presence of these attachments influences how the aggregates are generated (Anālayo 2006; Bodhi and Nārada 2012) (see Table 1).

If we consider an example where one attaches to the taste of a specific food item (i.e., attaching to the aggregate of sensory consciousness which may involve mental proliferations, intentions, verbal and physical behavior), seeing a similar food item in the future can result in the generation of a pleasant feeling. However, if the person was unable to obtain the food after seeing the food, this can result in an unpleasant feeling. As another example, attaching to a particular view or opinion (i.e. attaching to the aggregate of perception) can result in a pleasant feeling about another person who holds the same view. Further, upon hearing an opposing view, the intentions to argue, to politely talk to the other person, or to simply walk away can result.

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³ Attachment manifests as craving, and in Buddhist texts, the word "craving" is also often used to denote attachment (Bodhi and Nārada 2012).

Here the intentions/behavior generated would depend on this individual's previously conditioned views, to which he or she has attached (i.e., on how to behave; as explained below in terms of conditioning influences). Additional examples of attachments to the five aggregates, how these attachments influence the manifestation of the aggregates (following sensory consciousness) as well as examples of wholesome and unwholesome volition that can result are displayed in Table 1. It should be noted that wholesome and unwholesome volitional responses not only include ethical conduct (i.e., bodily and verbal actions) but also psychological behaviour that is either motivated by greed, aversion and ignorance (unwholesome volition) or generosity, loving kindness and wisdom (wholesome volition). For example, proliferating thoughts leading to resentment and worry represent unwholesome volition, whereas reflecting on impermanence, seeing the conditioned origination of the five aggregates, generating thoughts of loving-kindness and practising mindfulness, represent wholesome volition (Ñanamoli and Bodhi 1995).

In examples presented in Table 1, we have specifically focused on the arising of pleasant and unpleasant feelings, and volitional responses. It should be noted that following sensory consciousness, neutral feelings could also arise. For example, seeing a leaf falling from a tree can generate a neutral feeling. Further, in the examples presented in Table 1, sensory consciousness may also generate the aggregate of perception: one may perceive the person who accidentally dropped the cherished object (first example) as a "clumsy individual," and someone who disagrees with one's conditioned view (third example) as being "unwise."

Various conditioning factors constantly shape an individual's attachments. These can be social influences from friends, teachers, parents, and spiritual leaders, or factors such as one's educational upbringing, books, or media presentations. The psychological literature abounds with examples of how various conditioning influences can affect and shape people's likes, dislikes,

views and behaviour (e.g., Bargh 2014; Biegler and Vargas 2016; Blair and Shimp 1992; Galdi et al. 2008; Hofmann et al. 2010). It should be noted that attachments that are shaped by conditioning influences apply to both wholesome and unwholesome volition. For example, research has shown that cultural norms and culturally-shaped emotions have a substantial impact in the domain of morality (Haidt 2007).

The aggregate of volition is the only aggregate that can be "wilfully" changed in the present moment, although as explained above, these changes happen as a result of various social and other influences. According to the five-aggregate model, volition exerts a conditioning influence (see Figure 3) on the future manifestation of the aggregates (Karunamuni 2015). Relating to this, Buddhist teachings explain that ultimately unwholesome volitions result in unbeneficial outcomes, and wholesome volitions result in beneficial outcomes (Nanamoli and Bodhi 1995; The Dhammapada 1996). The way in which this happens is described as being complex (Bodhi and Nārada 2012; Ñanamoli 2013). However, a few examples can be considered to illustrate this principle. Unwholesome volitional activities such as engaging in mental proliferation and rumination (which, for instance, involves excessively attaching to an angry thought and repeatedly dwelling on it), has been shown to increase its intensity, and significantly intensify its power, resulting in physical and verbal aggression (Anestis et al. 2009; Bushman, et al. 2005; Peled and Moretti 2007; Vasquez et al. 2013). Further, depressive rumination has been shown to worsen depressed mood (Gilbert et al. 2005; McLaughlin and Nolen-Hoeksema 2011; Peled and Moretti 2007). Rumination has also been shown to cause adverse effects on physiology and physical health (Ayduk and Kross 2008; Brosschot et al. 2006; Thomsen et al. 2004; Querstret and Cropley 2013).

In terms of wholesome volition, studies indicate that developing traits such as

forgiveness, gratitude, loving-kindness, compassion and acceptance have many benefits (Fredrickson et al 2008; Kok et al. 2013; Rosenzweig 2013). Research in positive psychology has shown that altruistic behaviour has a positive influence on various psychological outcomes (Nelson et al. 2015; Ouweneel et al. 2014; Weinstein and Ryan 2010). Furthermore mindfulness has been shown to reduce rumination, significantly reducing aggressive behaviour, and depressive symptoms (Borders et al. 2010; Eisenlohr-Moul et al. 2016; Heeren and Philippot 2011; Heppner et al. 2008; Hwang and Kearney 2013; Labelle et al. 2010; Peters et al. 2015; Rodriguez et al. 2014; Yusainy and Lawrence 2015), in addition to many of its other well-known benefits (Creswell 2017; Gotink et al. 2015; Paulus 2016).

Different individuals may display different amounts of wholesome and unwholesome volition towards various stimuli, and this could also change with changing circumstances and new conditioning influences. In the Buddhist path, engaging in wholesome volition is described as being essential for the cultivation of wisdom (Ñanamoli and Bodhi 1995; Nārada 2006; Sayadaw 2002).

Thought processes have been analyzed in comprehensive detail in the branch of Buddhist teachings known as the Abhidhamma (Abhidhamma Pitaka 2005; Bodhi and Nārada 2012). Here, mind-moments involving the five aggregates are schematically classified into categories and sub-categories, and these elementary components are described at the mechanistic level in terms of their modes of arising, associations, motivational roots and interrelationships (Bodhi and Nārada 2012).

Three Characteristics of Existence

According to Buddhist teachings, developing a penetrative understanding of phenomena

involves direct experiential understanding of what are known as the three characteristics (or marks) of existence (Bodhi 2012; Ñanamoli and Bodhi 1995, p. 40; Nyanaponika 2008). The first characteristic of existence is the universal law of impermanence. Impermanence applies to all five aggregates, and this includes mental phenomena as well as all material phenomena both animate and inanimate (Nyanaponika 2008; Shonin et al. 2014a).

While Buddhism does not deny the existence of various pleasures in the world, the teachings describe the limits of happiness that can be obtained through worldly preoccupations (Ñanamoli and Bodhi 1995, discourse 13; Wallace and Shapiro 2006). This situation is generally described as the unsatisfactory nature of existence, which is the second characteristic of existence. This unsatisfactory nature of existence includes bodily or mental pain, old age and death, the conditioned and impermanent nature of happiness, and the limited control individuals have in regards to changing circumstances (Ñanamoli and Bodhi 1995). If one attaches to the continuation or intensification of a joyful experience, then when this experience inevitably changes, one experiences dissatisfaction in proportion to the strength of the attachment (Bodhi 2006). Further, psychological studies have indicated that losses result in a larger physiological arousal than gains (Hochman and Yechiam 2011; Yechiam and Hochman 2013).

The third characteristic of existence, which is the non-self nature, is generally considered an important epistemological consideration presented in Buddhism, and refers to the realization that at an ultimate level of analysis (note that two levels of analyses represent conventional and ultimate levels; Karunamuni 2015), a self or an "I" is absent from intrinsic existence (Anālayo 2006, p. 207; Ñanamoli and Bodhi 1995, p. 28; Nyanaponika 2008; Shonin et al. 2014a). Rather, it is due to ignorance (i.e., "not seeing things as they are") that there is an attachment to the constantly arising and ceasing (impermanent) aggregates, and regard them to be as "me" or as

"mine." The patterns of attachment to the aggregates with a sense of self are described as occurring in twenty ways (where each of the five aggregates can be viewed in four different ways): considering any of the five aggregates to be self, the aggregate to be inside self, self to be inside the aggregate, or self to be in possession of the aggregate (Anālayo 2006, p. 210; Ñanamoli and Bodhi 1995, discourse 131, p. 1040). A meditator is encouraged to use a calm mind developed through the practice to investigate if a particular aggregate can be considered as oneself. For example, with the aggregate of feeling, one can question if the feeling is self, if feeling is inside self, if self is inside feeling, or if a self is in possession of feeling. When analyzing this way, one may realize that an aggregate such as feeling cannot be one's self because feeling arises dependent on conditions and then ceases. This type of inquiry gradually leads to direct experiential understanding that there is no unchanging entity that can be regarded as a self or an ego to be found anywhere in this psychophysical complex. Even if one considers all the aggregates as a whole to be a self, this too is merely a perception aggregate (self-perception) that arises and ceases.

In various discourses, the Buddha describes and analyzes the six sensory consciousness experiences (visual, tactile, olfactory, auditory, taste or thought) to explain the workings of the mind. For example, in one discourse (known as Chachakka Sutta; Ñanamoli and Bodhi 1995, discourse 148, p. 1129), six experiences that can be attributed to each of the senses (referred to as the 'six sets of six'), are described along with a moment-by-moment analysis in terms of reactivity. If we consider the visual experience, the first item considered is the organ eye, which cannot be taken as one's self, as it is made up of the same elementary components as the external

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⁴ In terms of the aggregate of material form, the teachings present the similarity between material elements that make up the physical body and elements in the external environment, where materials in the external environment are continuously moving to and from the physical body (Anālayo 2006; Karunamuni 2015; Ñanamoli and Bodhi 1995, discourse 140, p. 1089). Contemplating this process gradually results in the understanding that there is no unchanging entity to be found in the aggregate of material form that can be pinned down and labeled as a "self."

environment and is constantly changing. The second item considered is the object (the thing that is seen) that is also constantly changing and impermanent. Third is the conscious engagement of the corresponding consciousness, which can be influenced by various factors, and is arising and ceasing. The forth is contact, where the organ eye, the visual object, and conscious engagement come together, which is also constantly changing. The fifth is feeling which is arising and ceasing (i.e., is impermanent), and finally, the sixth is craving for the visual object, which is also described as an arising and ceasing mental condition.

To understand the non-self nature at a deeper level, the teachings further explain that it is not possible to conceive an object (referring to a visual experience, auditory experience, etc.) separate from the experience itself (Ñanananda 2007, p. 10). For example, when we experience the visual sense, the "seeing" is the pure visual experience. Any additional analysis relating to the organ eye being here and the object being out there, contact between the two have taken place, etc., are additional thoughts that happen within the thought stream, and they manifest from moment to moment. Therefore, ultimately there is nothing outside of the pure experiences of seeing, hearing, smelling, tasting, touch sensations and thoughts. In this regard, the Buddha's instructions, that led to awakening of an ascetic known as Bāhiya, were to direct bare awareness to whatever that is seen, heard, smelled, tasted, touched, or cognized. This is sometimes expressed as the subject-object non-duality of experience, or as the non-existence of a boundary between the observer and the observed (Nanananda 2007; Pasanno and Amaro 2009, p. 116; Shonin and Van Gordon 2013).

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⁵ The instructions given to Bāhiya were: "In reference to the seen, there will be only the seen. In reference to the heard, only the heard. In reference to the sensed, only the sensed. In reference to the cognized, only the cognized. That is how you should train yourself. When for you there will be only the seen in reference to the seen, only the heard in reference to the heard, only the sensed in reference to the sensed, only the cognized in reference to the cognized, then, Bāhiya, there is no you in connection with that. When there is no you in connection with that, there is no you there. When there is no you there, you are neither here nor yonder nor between the two. This, just this, is the end of stress" (Bāhiya Sutta Ud1.10 1994).

Enlightenment: the Complete Freedom from Suffering

Ignorance has been described in Buddhist teachings as a powerful element that distorts cognition, dominates volition, and determines the entire tone of our existence (Bodhi 2006, p. 56; Ñanamoli and Bodhi 1994). Removing ignorance by eliminating its root causes of greed and aversion, cultivating wisdom and achieving enlightenment (i.e., gaining a penetrative understanding of all phenomena) are the goals of the Buddhist practice (Bodhi 2006; Ñanamoli and Bodhi 1995; Nyanaponika 2014). These goals are also equated to fully comprehending what are known as the "Four Noble Truths" (Bodhi 2006; Nyanaponika 2014), accomplished through the three trainings described above (i.e., ethical conduct, focusing the mind, and developing wisdom). The "Noble Eightfold Path" (a path consisting of eight items of which mindfulness is one component) is an expansion of the three trainings, and encompasses the essential practical components that are described as leading one to the complete freedom from suffering (Bodhi 2006; Nyanaponika 2014).

Enlightenment has also been presented as seeing beyond the "conditioned" to realize the "unconditioned" (Bodhi and Nārada 2012, p. 5; Pasanno and Amaro 2009, p. 66; Sumedho 2011, p. 110). The conditioned world represents the various lenses through which we view, judge and analyze phenomena. The unconditioned refers to perceiving bare phenomena, that are unadulterated by our habitual reactions and projections (Anālayo 2006, p. 60; Bodhi and Nārada 2012; Sumedho 2011, p. 110).

As explained earlier, the stream of experience consisting of feelings, perception, volition and sensory consciousness is continuously changing, in response to various causes and conditions that are also constantly changing. The commentaries of Buddhist teachings list five

causal laws or factors that can influence the flow of the aggregates, namely: physical laws, biological laws, psychological laws, volitional laws and universal laws (Karunamuni 2015; Mahathera 1933). According to the teachings, the life process, consisting of the stream of aggregates arises once again after death (Bodhi and Nārada 2012; Jayatilleke 1968; Ñanamoli and Bodhi 1995, discourse 38). (Note: Depending on the reader's previously conditioned attitudes and views, the continuation of life after death may be considered as implausible – we address this matter later in this article.)

When life with one physical body ends in one place, the mental stream of aggregates is described as arising again elsewhere with a new body as its physical support, where past tendencies, preferences, abilities and other characteristics can emerge in a new life (Bodhi 2006; Jayatilleke 1968; Kudesia and Nyima 2015). According to the teachings, there are thirty-one planes of existence, and only two (the animal and human planes) are commonly visible to us (Mendis 1985, p. 29; The Thirty-one Planes of Existence 2005). Among the various realms where rebirth can take place, the teachings describe realms of torment, as well as realms of celestial bliss with long lifespans. None of these realms are said to offer final refuge however, because life in all planes come to an end; beings in all planes are described as being composed of aggregates and are subject to the three characteristics of existence (Mendis 1985; Soni and Khantipalo 2006; The Thirty-one Planes of Existence 2005).

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⁶ According to the teachings, the last thought one has at the time of death influences the life form into which one is born next (Bodhi and Nārada 2012, p. 206). A wholesome last thought is described as resulting in a favorable rebirth and an unwholesome last thought, in an unfavorable rebirth. Someone who has engaged in mainly wholesome volitions during their lives is said to have a higher likelihood of having a wholesome or peaceful thought at the time of death, although this cannot be guaranteed (Ñanamoli 2013). Working towards enlightenment by engaging in ethical practices, as well as meditation and mindfulness practices, is described as increasing the likelihood of a wholesome rebirth, which would facilitate the ultimate freedom or release from the continuous rebirth process (Bodhi 2006; Ñanamoli 2013).

The Buddha explained that the cycle of birth and death, called "the wandering," has been turning through beginningless time, traveling from one state of existence to another (Bodhi 2006, p. 8; Soni and Khantipalo 2006). Being born a human, and encountering the teachings that lead to enlightenment, are described as rare and extremely fortunate (Ñanamoli and Bodhi 1995, discourse 129; Samsara 2005; The Thirty-one Planes of Existence 2005), while working towards enlightenment is declared as the highest ideal for any being to achieve (The Thirty-one Planes of Existence 2005).

The teachings of the Buddha are described as subtle, deep, going "against the flow of the world," and difficult to comprehend for most beings who are often intoxicated by greed, aversion and ignorance, as well as the deep-rooted conditioning that they have accumulated through beginningless time (Bodhi 2006; Ñanamoli and Bodhi 1995, discourse 26; Bodhi and Nārada 2012). Thus familiarity with the ultimate goal/aim of the Buddhist practice is considered to be important for individuals who wish to carry out the practice at an advanced level.

Degrees of Training in a Path Towards Wisdom

Some individuals who choose to practice meditation and mindfulness may be motivated to carry out the practice aiming for the spiritual goal of enlightenment. It is understood that a high level of commitment, perseverance, and patience are required to complete this goal, which represents the highest level of the training (Anālayo 2006, p. 36; Ñanamoli and Bodhi 1995). In addition, it is also the case that different individuals may be able to utilize different elements of the practice to enhance their well-being.

For instance, engaging in focusing or concentration meditation, or practices that calm the mind, can be beneficial for individuals as these practises can counteract the adverse effects of

stress (Benson 1976). By taking into consideration the subjective accounts of practitioners of different religious backgrounds, Benson (1976) led to the creation of a widespread meditation technique to elicit what he termed the "relaxation response." His research showed that meditation was associated with patterns of physiological change, such as reductions in blood pressure, resting heart rate, and oxygen consumption, which play a role in opposing reactions to stress (Benson 1976).

Mindfulness-based stress reduction (MBSR) is another level of training, and is a popular application of mindfulness at present. MBSR techniques enable one to be aware of one's thoughts, in addition to engaging in practices that calm the mind. These programs emphasize training of attention, where mindfulness is often defined as "a means of paying attention in a particular way; on purpose, in the present moment, and non-judgmentally" (Kabat-Zinn 2013). MBSR is also known to decrease rumination, thereby contributing to well-being (Gu et al. 2015; Querstret and Cropley 2013), while hundreds of research studies have validated the many benefits of MBSR practices (American Mindfulness Research Association 2015).

Engaging in ethical training or wholesome behaviour promotes harmony of the mind while reducing guilt and remorse. Living up to values has been found to be beneficial in numerous ways including goal attainment, higher overall well-being and in dealing with stress (Baer 2015). Some mindfulness-based interventions have successfully incorporated the cultivation of skilful habits based on ethical values of Buddhist teachings, either directly or through the use of compassion cultivation training (Avants and Margolin 2004; Cayoun 2011; Jazaieri et al. 2016; Ruchelli et al. 2014; Shonin et al. 2015; Singh et al. 2014a; Van Gordon et al. 2014). Studies have also shown that engaging in mindfulness and meditation may positively influence ethical behaviour (Gu et al. 2013; Ruedy and Schweitzer 2010; Shapiro et al. 2012)

and may also increase compassion and empathy towards oneself and others (Birnie et al. 2010; Condon et al. 2013; Keng et al. 2012; Kuyken et al. 2010; Shapiro et al. 1998; Williams et al. 2011). This is consistent with Buddhist teachings where the three major trainings are described as enhancing, supporting and mutually reinforcing each other to flourish (Bodhi 2006, p. 10).

Theoretical Foundations for Mindfulness Practices

Several psychological studies have shown that a variety of factors such as trauma, abuse, early childhood adversities and other stressors can influence an individual's mental well-being (Bisson 2007; Campbell et al. 2009; Kessler et al. 2010; Wittenborn et al. 2016). However, these factors can distress or agitate an individual only if they arise as mental phenomena. As described, these mental phenomena originate in six different ways (i.e., six sensory consciousness triggers), and these triggers can result in associated thoughts that lead to prolonged worrying, grieving, judging and anticipating future problems, etc. As one becomes proficient in mindfulness practice, one can see that even the most seemingly powerful anxiety-provoking thought has the characteristic of arising and ceasing, although during the time one experiences the thought, it can be somewhat unsettling and even seem overpowering. With practice, one can become more proficient at noticing a thought as soon as it arises, without getting carried away by it. Studies have shown that meditation and mindfulness training enhance the ability to attend to moment-tomoment changes occurring in the mind (Atchley et al. 2016; Ellamil et al. 2016; MacLean et al. 2010; Slagter et al. 2007). As stated earlier, several investigations have shown that proliferating thoughts related to anger and depression can make these thoughts more intense and powerful, whereas mindfully observing these mental phenomena makes them less intense the next time they arise. Approaching feelings this way diminishes the power a feeling can have over the

individual, and enables one to live life without being a victim of one's own thoughts (Anālayo 2006, p. 222). Related to this, psychological studies have shown that the ability to decenter from one's thoughts, feelings, etc., is linked to better mental health and wellbeing (Bernstein et al. 2015). Such mindful observations also gradually cultivate a person's ability to withstand varied experiences. This is sometimes described as "being a master of the pathways of thought," where one is no longer the subject of the mind but its master (Bodhi 2006, p. 38). Notably, neuroscientific investigations have shown that traumatic stresses can lead to adverse structural changes in the brain (Bremner et al. 2008; Popoli et al. 2011), whereas meditation and mindfulness practices lead to healthy structural changes in the brain (Hölzel et al. 2011; Simon and Engström 2015; Tang and Posner 2013).

When considering that sensory consciousness results from the coming together of the sense organ, the sense object, and conscious engagement, as one develops sharper mindful awareness, one can observe an unpleasant sensation and notice that one's conscious engagement is not always on the unpleasant feeling, but often wanders to other thoughts and sensations. With mindfulness training, it is also possible to perceive physical pain as a series of changing and passing sensations (Jayatunga 2014, p. 149). These pain sensations are only felt intermittently, and with practice, the burdensome and overwhelming thoughts such as "this is a terrible pain" can be seen as just another thought moment (aggregate of perception) that arises and ceases. Through such training, one becomes able to acknowledge the pain as it is (without adding burdensome thoughts such as grieving the pain, worrying, and anticipating future pain), as well realize the transitory nature of the pain. A recent randomized study where subjects were trained in mindfulness and to perceive sensory and affective events as "momentary" revealed that mindfulness meditation reduces physical pain and this change is associated with unique neural

mechanisms (Zeidan et al. 2016).

The concept of impermanence is also useful for impulse control when a craving arises. Individuals who have practised mindfulness are able to watch their cravings objectively without having to act on them, leading to the application of mindfulness in emotionally-charged behaviors including addictions (Singh et al. 2011, 2013a, b, 2014b; Vallejo and Amaro 2009). Understanding the theoretical basis of meditation and mindfulness practices enables one to see that practice-related unpleasant feelings, such as struggles in developing the meditation, or any other unpleasant mental phenomena that may emerge during training (sometimes referred to as "dark night" phenomena), are all transient and conditioned.

Individuals who aim for the spiritual goal of enlightenment would see that all thoughts as well as other mental phenomena are transient and constantly changing, and observe anything and everything that is encountered in experience, including aggregates that one may take for granted and consider to be unimportant, as part of this process (Jayatunga 2014, p. 170). This can include the understanding that aggregates employed to contemplate impermanence (such as attention and perception) are themselves impermanent and non-self. Each aggregate arises and ceases.

Therefore, any analytical thoughts about the teachings, wisdom that arises based on correct perceptions (i.e., seeing the impermanent, unsatisfactory and non-self nature of all aggregates), and even doubts about the practice, are seen as arising and ceasing causally-conditioned aggregates. One may also realize that at an ultimate level of analysis, time and space happen as perceptions (i.e., they have meaning only in the conventional world), and that at this level of analysis, thoughts do not have an owner. Even thoughts that used to have a socially-conditioned negative valance (such as jealousy), can be acknowledged at this point of the training as conditioned momentary mental phenomena that no longer have the strength and intensity that

they used to have prior to the practice. Therefore they no longer qualify to be assigned a negative label. One can observe such thoughts without identifying with them, and also see that observing as well as understanding the process (i.e., perceptions of impermanence and non-self) as part of the arising and ceasing conditioned process itself, with no agent to be called a "meditator" behind this mechanism (Jayatunga 2014, p. 124).

Progress in the Path: Barriers and Motivators

Mindfulness is a skill that can be gradually cultivated with effort. Individuals in the general population appear to have different degrees of mindfulness, attachment, greed and aversion (Baer et al. 2008; Sahdra et al. 2010, 2015; Van Dam et al. 2015). Therefore, it can be assumed that some individuals may find it relatively easier to train in mindfulness, and it is also possible that a threshold level of mindfulness may be necessary for an individual to begin the practice more formally.⁷

In Buddhist teachings, attention directed in order to carry out an experiential inquiry into the nature of the mind and other related phenomena is often referred to as "wise-attention," or attention that results in insight or wisdom (Anālayo 2006, p. 59; Ñanamoli and Bodhi 1995, discourse 2, p. 91). "Wise attention" is employed to monitor the mind and become aware of various mind states including the presence of greed and aversion that can motivate one's intentions and behaviour. Wise attention also enables one to cultivate wisdom, such as to see the arising and ceasing (impermanent) nature of the aggregates, as well as their conditioned and non-self nature (Anālayo 2006, p. 59; Bodhi and Nārada 2012, p. 90). Mindful attention has been

⁷ In one mindfulness intervention, individuals who discontinued the study had significantly lower baseline levels of dispositional mindfulness (Van Gordon et al. 2014). In another study, an individual had to undergo a preparatory treatment phase of CBT that addressed life coping skills, before being successfully treated using a meditation intervention (Shonin et al. 2014b).

described as following an inverted U-shaped curve, demonstrating that as meditators gain experience in the practice, there is an increase in activation in terms of attention, but in expert meditators no such increase is seen, as mindfulness becomes an effortless process (Buttle 2015). Expert meditators no longer identify with attention, but realize attention is also an arising and ceasing conditioned aggregate.

The non-self nature of experience is sometimes expressed as "emptiness" and this concept often leads to the erroneous perception of nihilism (Morgan 2015; Shonin et al. 2014a). However, when taking into account the experiences of individuals who come to deep states of peace and calm through the practice of mindfulness, "emptiness," is presented as purity, freedom and contentment (Amaro 2003; Chah 2007; Ekman et al. 2005; Hagen 2013; Ricard 2008; Rinpoche et al. 1998). Further, two studies which conducted phenomenological analyses of participant experiences following interventions that included the concepts of impermanence and non-self, reported participants experiencing emptiness as a positive and inviting prospect (Shonin and Van Gordon 2015; Shonin et al. 2014c).

As a result of engaging in wholesome volition, one begins to see the true nature of phenomena (such as the impermanent nature of the five aggregates and their conditioned origination), which gradually leads to non-attachment with respect to the five aggregates (Bodhi 2006; Bodhi and Nārada 2012; Thanissaro 2010). Several studies have indicated that nonattachment is a positive construct⁸ associated with qualities such as greater levels of prosocial behavior, cognitive flexibility, acceptance, non-reactivity, self-compassion, subjective well-being and mindfulness (Ju and Lee 2015; Lamis and Dvorak 2014; Sahdra and Shaver

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⁸ Rather than being aloof, indifferent, uncaring or unengaged (which can be common misconceptions about nonattachment), the nonattached individual is genuinely caring, engaged and responsive to the present situation without falling into self-aggrandizement or self-degradation (Sahdra et al. 2010, 2016).

2013; Sahdra et al. 2010, 2015, 2016; Shonin and Van Gordon 2015). It should also be noted that in Buddhist training, attachment itself is not something one tries to reject or annihilate, but something that is reflected upon and understood as a condition in nature (Sumedho 2011). In other words, one is not compelling oneself to give up things still inwardly cherished, but is instead changing one's perspective on them. It is also interesting to note that in Western psychology, "attachment security" or "secure attachment" is considered ideal or optimal, whereas in Buddhist teachings, the inclination to find security in the eight worldly preoccupations, (which can involve the acquisition of material goods, financial security, relationships, power, fame, etc.), are seen as "illusions of security" (Sahdra and Shaver 2013) because these conditions are constantly changing. Instead, wisdom into the nature of phenomena is identified as a more reliable source of security.

Understanding mindfulness within a broader theoretical framework can also be useful in addressing various barriers to the meditation practice. One of the identified barriers in the research literature is having unresolved issues relating to the phenomenological concepts of meditation (Gleig 2012; Mensah and Anderson 2015; Sears et al. 2011; Williams et al. 2012). Also there have been some reports of adverse effects related to meditation (Shonin et al. 2014d). Although such experiences are rare, a poor understanding by some academics and clinicians as to what exactly constitutes an effective mindfulness practice has been reported as a possible contributing factor (Shonin et al. 2013, 2014d). Mindfulness may also be perceived by some non-Buddhists as a religious practice that violates their own religious beliefs, although this does not appear to be a major barrier in the population groups that have been studied thus far (Bowen et al. 2015; Mensah and Anderson 2015; Williams et al. 2012).

Practitioners of mindfulness have been found to report significantly higher levels of

eudaimonic well-being than non-practitioners (Brown and Ryan 2003; Garland et al. 2015; Hanley et al. 2015). Eudaimonic well-being or happiness is described as a durable form of happiness that is not dependent on circumstances, and involves peace, wisdom and contentment (Brown and Ryan 2003; Dambrun and Ricard 2011; Hanley et al. 2015; Ryan and Deci 2001). This is in contrast to hedonic happiness, which is dependent on stimuli either from the environment, interactions with other people, or various kinds of physical and mental activity such as being praised, acknowledged, respected, and loved (Dambrun and Ricard 2011; Ryan and Deci 2001; Wallace and Shapiro 2006). In Buddhist teachings, hedonic happiness is considered as merely providing fluctuating and transitory satisfaction, and is described as an unstable, limited form of happiness (Bodhi 2012, p. 32; Wallace and Shapiro 2006). Further, hedonic happiness is described as insatiable; it is often the case that soon after obtaining something one wants, one becomes discontent, and longs for more and more (Dambrun and Ricard 2011; Wallace and Shapiro 2006). This is in line with the hedonic adaptation principle in psychology, where it has been described that the experience of pleasure is by nature fleeting and dependent upon circumstances (Brickman et al. 1978).

Hedonic and eudaimonic well-being also appear to be linked to how one conceives oneself. Exaggerated importance given to the self or self-centered psychological functioning (i.e., perception of a self that is a permanent, independent and solid entity) has been found to be associated with pursuing hedonic pleasures or fluctuating happiness (Dambrun and Ricard 2011; Dambrun et al. 2012). In contrast, selfless psychological functioning that is less dependent upon circumstances but is related to a person's inner resources and abilities to deal with any experience that is faced in life, predicts eudaimonic happiness (Dambrun and Ricard 2011; Dambrun et al. 2012). Additionally, hedonic and eudaimonic well-being appear to differentially affect genetic

expression. Hedonic well-being is significantly associated with up-regulated expression of stress-related proinflammatory genes, whereas eudaimonic well-being is associated with decreased expression of these genes (Fredrickson et al. 2013). Further, inner-peace associated with eudaimonic happiness has been found to be a robust predictor of mental health (Dambrun et al. 2012; Fredrickson et al. 2013).

Understanding a conscious being as a conditioned series of events that are continuously influenced by preceding causes and contributing conditions, can free one from having static, rigid views of oneself and others. Such understandings can also facilitate the use of compassion, non-violence, and wisdom to address various confrontations and social issues, and to comprehend such situations without being clouded by biases, assumptions and social conditioning. Studies have shown that mindfulness is linked to cognitive flexibility, or one's ability for open inquiry into self-deceptive cognitive processes, preconceived ideas, and stigmatization of others (Brenner 2009; Garland et al. 2015; Moore and Malinowski 2009).

Buddhist teachings are described as "going beyond all views," because views represent thoughts that are based on an individual's conditioning (Anālayo 2006, p. 161; Ñanamoli and Bodhi 1995, discourse 22; Walshe 1995, p. 67-90). Attaching and clinging to one's own view often lead to arguments and disputation (Anālayo 2006, p. 163). The Buddha advised not to cling even to his teachings merely as a view to argue about, but to see his teachings as being useful to cross the river (i.e., to reach enlightenment), just like one would not cling to a raft after using it to cross a river (Index of Similes 2013). The Buddha also encouraged one not to accept any teaching just because it was handed to them by tradition, from any other means or even out of respect for the Buddha himself, but to examine everything very critically the way a goldsmith

carefully analyzes gold by scraping, rubbing and melting (Bodhi 2012; Nimitta Sutta AN3.100 1998).

Some readers can feel uncomfortable with ideas such as rebirth. However, this discomfort springs as a result of one's deeply conditioned attitudes and views. This is related to the psychological phenomenon known as cognitive dissonance (where people feel reluctant to accept evidence that run contrary to their established predispositions; Festinger 1962), as well as the phenomenon of confirmation bias (which is the tendency to search for and favour information in a way that confirms one's pre-existing beliefs or hypotheses; Nickerson 1998). Relating to the issue of rebirth, thousands of young children who report memories of previous lives have been extensively researched. In these investigations, it has been possible to trace the previous-life individual, as well as verify details provided by the child using autopsy records, identity cards, medical records and other attainable printed documents such as birth and death certificates (Barker and Pasricha 1979; Cook et al. 1983; Haraldsson and Samararatne 1999; Mills et al. 1994; Shroder 1999; Stevenson 2000a, 2006; Tucker 2005, 2008, 2013). Interestingly, additional analyses have shown that various phobias, food preferences and unusual play habits etc., which the children display, nearly always correspond to activities, habits and experiences (i.e., representing different types of attachments) of the previously deceased person (Cook et al. 1983; Stevenson 1990, 2000a, b; Stevenson and Keil 2005; Tucker 2005, 2008, 2013, p. 209). It should be noted that over 2,500 cases of rebirth have been investigated (Tucker 2008), and these cases are reported from all over the world, including American families, most of whom say they had no belief in past lives before the children started reporting their memories (Tucker 2013, p. 164).

Suggestions have been made that transmission of life may happen in the way information is transmitted over long distances via radio waves (Dhammika 1991). Others have indicated

complex mechanisms (Lanza 2009; Penrose and Mermin 1990). Detailed explanations relating to numerous causal laws governing the transmission of life are provided in Buddhist Abhidhamma teachings. These descriptions include rebirth-linking, life-continuum and death consciousness (Bodhi and Nārada 2012).

While different individuals can utilize various components of the practice to different degrees to enhance their well-being, individuals who become interested in pursuing a spiritual goal may be able to benefit from numerous meditation practices (as well as strategies of dealing with various barriers or hindrances to meditation) that are presented in Buddhist spiritual texts, many of which are practices currently not utilized in standard mindfulness programs.

Additionally, individuals with different dispositions and inclinations may benefit from different types of meditation practices (de Zoysa 2016; Punnaji 2016; Van Dam et al. 2015).

The culmination of wisdom in Buddhist teachings (i.e., the end of the spiritual practice or enlightenment) is described as clearly seeing the three characteristics of existence (Bodhi 2006, p.58; Ñanamoli and Bodhi 1995, p. 40). These three characteristics apply for all possible instances of each aggregate category whether past, present, or future, internal or external, gross or subtle, inferior or superior, near or far (Anālayo 2006, p. 203; Ñanamoli and Bodhi 1995, discourse 35, p. 329). It should be noted that developing wisdom is not about "becoming a wise person," and attaching to wisdom. It is about the experiential understanding that even the construct of wisdom is merely an arising and ceasing causally-conditioned aggregate. In other words, wisdom is not an end in itself but merely the means to end suffering. With the cultivation of wisdom, one gradually develops equanimity towards all experience, and as a result, one is not shaken by the vicissitudes of life that relate to the eight worldly preoccupations (Desbordes et al. 2015; Walshe 1995, p. 511-521). Further, in expert meditators, all the "boundless qualities" (love,

compassion, sympathetic joy and equanimity) are described as manifesting effortlessly (Anālayo 2006, p. 276; Desbordes et al. 2015).

The progress in a path to wisdom is a gradual one, and various supportive practices that are conducive for this progress are listed in the teachings (Dhamma 2005). These include frequently contemplating and attempting to understand the teachings through one's experiences in daily living, discussing the teachings, putting forth effort to practise meditation, as well as cultivating qualities such as gratitude, patience, forgiveness, compassion, self-control and generosity (Dhamma 2005; Soni and Khantipalo 2006; The Dhammapada 1996). It has been stated that it is impossible to measure exactly the progress one makes in the practise during a day of training, just as a carpenter cannot measure the extent to which the handle of a tool has worn out during a day of use (Index of Similes 2013). Nevertheless, just as after repeated use a carpenter will realize that the handle has worn out, so will a meditator, after repeated practice, notice a difference. It is said that once mindfulness is well-established, every moment is filled with the potential for awakening (Anālayo 2006, p. 252).

Summary and Conclusion

Many of the major problems in our modern world point to the need for wisdom (Walsh 2015). This need is reflected in the words of a former president of the American Psychological Association: "if there is anything the world needs, it is wisdom. Without it, I exaggerate not at all in saying that very soon there may be no world" (Sternberg 2003, p. xviii).

This article explained that mindfulness in Buddhist teachings is practised in the context of a moral and philosophical system with the goal of lessening and ultimately eliminating greed and aversion that conceal wisdom. Wisdom is of major importance in Buddhist psychological

teachings where comprehensive guidance for carrying out an experiential inquiry into the nature of the mind and other related phenomena is provided. Wisdom represents a penetrative understanding of all phenomena or "seeing things as they are," and the teachings describe wisdom as ultimately leading to the "complete freedom from suffering." The theoretical background required for the development of wisdom is presented as the Four Noble Truths in Buddhist teachings. The Noble Eightfold Path, which is also the fourth Noble Truth, includes mindfulness as one of eight essential components for developing wisdom and achieving the complete freedom from suffering.

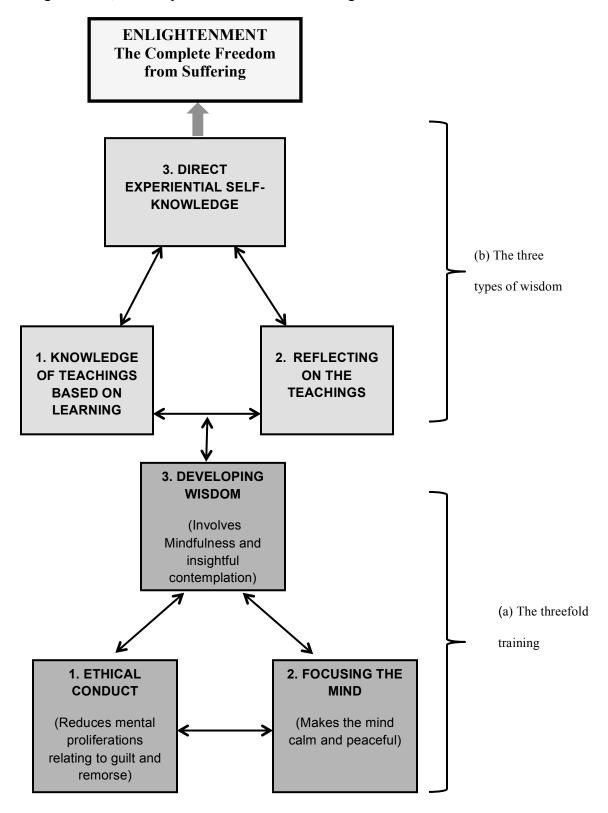
According to the research literature, having unresolved issues relating to the phenomenological concepts of meditation is one of the barriers that prevent individuals from engaging in meditation practices. Incorporating theoretical concepts as presented in this article has the potential to effectively address this barrier. Having a clear understanding of mindfulness within the context of a broader theoretical framework can enable one to better understand what is meant by the "present moment," how various mental phenomena originate following input from the six sensory consciousness triggers, and the conditioned nature of experience, among other insights. This article also explained that individuals can utilize different components of the practice to different degrees, and that having a clear understanding of mindfulness within its original context can be helpful for meditation practice at any level of the training. Indeed, the incorporation of such a theoretical approach will be an important step in mindfulness interventions given that research findings have shown theory-based health promotion interventions to be more effective than aetheoretical approaches (Dishman and Buckworth 1996; Glanz and Bishop 2010). Learning the theoretical underpinnings of meditation can also be helpful for those who instruct/teach meditation.

Taken together, the factors discussed above could enhance individuals' self-efficacy to engage in mindfulness practices, empowering them to manage their mental well-being effectively. A better understanding of mindfulness within the context of its broader theoretical framework can also result in more sustained outcomes for mindfulness interventions.

Ethical approval: This article does not contain any studies with human participants or animals performed by any of the authors.

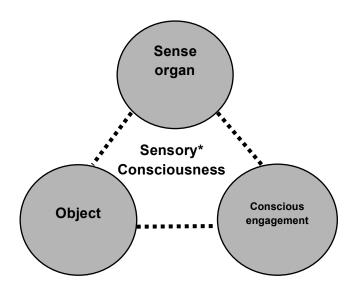
Funding: The authors received no financial support for the research and/or authorship of this article.

Figure 1. The three major trainings in Buddhist teachings and the three classes of wisdom that lead to enlightenment, the complete freedom from suffering.*



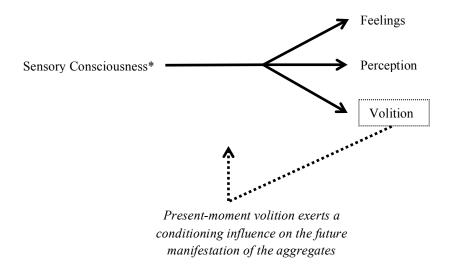
^{*}Note: Each of the three trainings as well as the three classes of wisdom can enhance, support and mutually reinforce each other to flourish.

Figure 2. Sensory consciousness involves the coming together of the sense organ, the sense object and conscious engagement.



^{*} Note: If one of the three factors is missing, sensory consciousness does not happen (Ñanamoli and Bodhi 1995, discourse 28, p. 283).

Figure 3. Sensory consciousness* leads to three groups of mental events: feelings, perceptions and volition.



*Note: Several discourses explain 'contact' as giving rise to feelings, perceptions and volition [described as: dependent on the sense organ and sense objects, the corresponding sense-consciousness arises; the meeting of the three is contact (Nanamoli and Bodhi 1995, p. 30; discourse 148, p. 1130)].

Table 1. Examples of attachments to the five aggregates, how these attachments influence the manifestation of the aggregates (following sensory consciousness), as well as wholesome and unwholesome reactions (volition) that can result.

Examples of attachment ¹ to each aggregate	Examples of how the feeling aggregate arises, following sensory consciousness	Examples of volitional responses	
		Motivated by greed, aversion and ignorance	Motivated by generosity, loving kindness and wisdom
Material form: e.g. Attachment to external material objects or to one's material body.	Seeing (sensory consciousness: visual) someone accidentally drop a cherished object can result in an unpleasant <i>feeling</i> .	Getting angry and shouting at the person.	Politely advising the person, forgiving, letting go and contemplating impermanence.
Feeling: e.g. Attachment to feelings (that can arise in different ways).	If one is no longer able to experience these feelings due to circumstances, the thought (sensory consciousness) can result in dissatisfaction or unpleasant <i>feelings</i> . (If a solution were found, a happy <i>feeling</i> would result.)	Blaming other people and living with resentment, proliferating thoughts.	Accepting and understanding the nature of the situation and contemplating the transient nature of feelings.
Perception: e.g. Attachment to views or opinions. ²	Hearing (sensory consciousness: auditory) someone agreeing to one's conditioned view can result in a pleasant feeling. An unpleasant feeling would result	Starting arguments and confronting behaviour.	Politely talking to the other person, understanding his/her view, and realizing that the different views are a result of different types of conditioning

	when someone disagrees with one's view.		influences.
Volition: e.g. Attachment to a particular manner of doing something (such as attaching to wholesome volition or to rituals ³).	Seeing someone doing an activity in a different manner (such as engaging in unwholesome volition) can result in an unpleasant <i>feeling</i> .	Criticising the person, exhibiting annoyance.	Explaining things politely and understanding the different conditioning influences involved.
Sensory consciousness: e.g. Attachment to a particular type of awareness of sound (such as the hearing of music).	If the person were not allowed to listen to the music, an unpleasant <i>feeling</i> can result.	Getting angry followed by verbal and physical aggression.	Letting go, and practising patience.

¹As explained in the text, attaching to any of the five aggregates can happen in four different ways (i.e., considering the aggregate to be self, the aggregate to be inside self, self to be inside the aggregate, or self to be in possession of the aggregate).

² This could involve various views such as political views. However, a predominant attachment that an ordinary untrained mind has is to the perception (or notion) of a self.

³ In Buddhist teachings, rituals are established ceremonial acts that create community, mutual support and contemplative meaning (such as bowing to indicate gratitude to the teachers, lighting lamps to symbolize 'light of knowledge,' and offering flowers that would soon fade and die to help contemplate the universal law of impermanence; Dhammika 1991). Buddhist teachings do not consider rituals in themselves as harmful, but attaching to them is discouraged (Bodhi 2006, p. 59).

References

Abhidhamma Pitaka. (2005). *The Basket of Abhidhamma*. Access to Insight. Retrieved from http://www.accesstoinsight.org/tipitaka/abhi/index.html

Amaro, A. (2015). A holistic mindfulness. *Mindfulness*, 6 (1), 63-73. http://dx.doi.org/10.1007/s12671-014-0382-3

Amaro, A. (2003). Small boat, great mountain: Theravadan reflections on the natural great perfection. Redwood Valley, CA: Abhayagiri Monastic Foundation.

American Mindfulness Research Association. (2015). Publications. Retrieved from https://goamra.org/publications/

Anālayo, B. (2006). Satipatthana: The direct path to realization. Cambridge, UK: Windhorse.

Anestis, M., Anestis, J., Selby, E., & Joiner, T. (2009). Anger rumination across forms of aggression. *Personality and Individual Differences*, *46*, 192–196. http://dx.doi.org/10.1016/j.paid.2008.09.026

Atchley, R., Klee, D., Memmott, T., Goodrich, E., Wahbeh, H., & Oken, B. (2016). Event-related potential correlates of mindfulness meditation competence. *Neuroscience*, 320, 83-92. http://dx.doi.org/10.1016/j.neuroscience.2016.01.051 Avants, S. K., & Margolin, A. (2004). Development of spiritual selfschema (3-S) therapy for the treatment of addictive and HIV risk behavior: a convergence of cognitive and Buddhist psychology. *Journal of Psychotherapy Integration*, *14*, 253–289. http://dx.doi.org/10.1037/1053-0479.14.3.253

Ayduk, Ö., & Kross, E. (2008). Enhancing the pace of recovery: self distanced analysis of negative experiences reduces blood pressure reactivity. *Psychological Science*, *19* (3), 2292–2231. http://dx.doi.org/10.1111/j.1467-9280.2008.02073.x

Baer, R. (2015). Ethics, values, virtues, and character strengths in mindfulness-based interventions: a psychological science perspective. *Mindfulness*, *6*(4), 956-969. http://dx.doi.org/10.1007/s12671-015-0419-2

Baer, R. A., Smith, G.T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., et al. (2008). Construct validity of the Five Facet Mindfulness Questionnaire in meditating and non meditating samples. *Assessment*, *15*(3), 329–342. http://dx.doi.org/10.1177/1073191107313003

Bāhiya Sutta Ud1.10. (1994). *Bāhiya*. Translated from the Pali by Thanissaro Bhikkhu. Access to Insight. Retrieved from http://www.accesstoinsight.org/tipitaka/kn/ud/ud.1.10.than.html

Baltes, P. B., & Staudinger, U. M. (2000). Wisdom. A metaheuristic (pragmatic) to orchestrate mind and virtue toward excellence. *American Psychologist*, *55*, 122–136. http://dx.doi.org/10.1037/0003-066X.55.1.122 Bargh, J. H. (2014). Our Unconscious Mind. *Scientific American*, *310* (1), 30-37. http://dx.doi.org/10.1038/scientificamerican0114-30

Barker, D. R., & Pasricha, S. K. (1979). Reincarnation cases in Fatehabad: A systematic survey in North India. *Journal of Asian and African Studies*, *14*, 231–241.

Benson, H. (1976). The relaxation response. Avon Books: New York.

Bernstein, A., Hadash, Y., Lichtash, Y., Tanay, G., Shepherd, K., & Fresco, D. M. (2015). Decentering and related constructs: a critical review and metacognitive processes model. *Perspectives on Psychological Science*, 10(5), 599-617.

Biegler, P., & Vargas, P. (2016). Feeling Is Believing: Evaluative Conditioning and the Ethics of Pharmaceutical Advertising. *Journal of bioethical inquiry*, 13(2), 271-279. http://dx.doi.org/10.1007/s11673-016-9702-8

Birnie, K., Speca, M., & Carlson, L. D. (2010). Exploring selfcompassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, *26*, 359–371. http://dx.doi.org/10.1002/smi.1305

Bisson, J. I. (2007). Post-traumatic stress disorder. *Occupational medicine*, *57*(6), 399-403. http://dx.doi.org/10.1136/bmj.39162.538553.80 Blair, M. E., & Shimp, T. A. (1992). Consequences of an unpleasant experience with music: A second-order negative conditioning perspective. *Journal of Advertising*, 21, 35–43. http://dx.doi.org/10.1080/00913367.1992.10673358

Bodhi, B. (2012). *The Numerical Discourses of the Buddha: A Translation of the Anguttara Nikaya*. Boston: Wisdom Publications.

Bodhi, B. (2006). *The Noble Eightfold Path: The way to the end of suffering*. Kandy, Sri Lanka: Buddhist Publication Society. Retrieved from http://www.bps.lk/olib/wh/wh308.pdf

Bodhi, B., & Nārada, M. (2012). *A Comprehensive Manual of Abhidhamma*. Onalaska, WA. Pariyatti Publishing.

Borders, A., Earleywine, M., & Jajodia, A. (2010). Could mindfulness decrease anger, hostility, and aggression by decreasing rumination? *Aggressive Behavior*, 36(1), 28–44. http://dx.doi.org/10.1002/ab.20327

Bowen, S., Bergman, A. L., & Witkiewitz, K. (2015). Engagement in Buddhist Meditation Practices Among Non-Buddhists: Associations with Religious Identity and Practice. *Mindfulness*, 6 (6), 1456-1461. http://dx.doi.org/10.1007/s12671-015-0420-9

Brahm, A. (2006). Mindfulness, bliss, and beyond: a meditator's handbook. Boston: Wisdom

Publications.

Bremner, J. D., Elzinga, B., Schmahl, C., & Vermetten, E. (2008). Structural and functional plasticity of the human brain in posttraumatic stress disorder. *Progress in Brain Research*, 167, 171-186. http://dx.doi.org/10.1016/S0079-6123(07)67012-5

Brenner, M.J. (2009). Zen practice: A training method to enhance the skills of clinical social workers. *Social Work in Health Care*, 48(4), 462-470.

http://dx.doi.org/10.1080/00981380802589860

Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of personality and social psychology*, *36*(8), 917.

http://dx.doi.org/10.1037/0022-3514.36.8.917

Brosschot, J.F., Gerin, W., & Thayer, J.F. (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. *Journal of Psychosomatic Research*, 60, 113–124. http://dx.doi.org/10.1016/j.jpsychores.2005.06.074

Brown, K., & Ryan, R. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848. DOI: http://dx.doi.org/10.1037/0022-3514.84.4.822

Bushman, B. J., Bonacci, A. M., Pedersen, W. C., Vasquez, E. A., & Miller, N. (2005). Chewing

on it can chew you up: Effects of rumination on triggered displaced aggression. *Journal of Personality and Social Psychology*, 88(6), 969–983. http://dx.doi.org/10.1037/0022-3514.88.6.969

Buttle, H. (2015). Measuring a Journey without Goal: Meditation, Spirituality, and Physiology. *BioMed Research International*. ID 891671. http://dx.doi.org/10.1155/2015/891671

Campbell, R., Dworkin, E., & Cabral, G. (2009). An ecological model of the impact of sexual assault on women's mental health. *Trauma, Violence, & Abuse, 10*(3): 225-46. http://dx.doi.org/10.1177/1524838009334456.

Cayoun, B. A. (2011). *Mindfulness-integrated CBT: principles and practice*. Chichester, UK: John Wiley & Sons.

Chah, A. (2007). *Meditation: A Collection of Talks on Cultivating the Mind*. Kandy, Sri Lanka: Buddhist Publication Society.

Condon, P., Desbordes, G., Miller, W., & DeSteno, D. (2013). Meditation increases compassionate responses to suffering. *Psychological Science*, *24*, 2125–2127. http://dx.doi.org/10.1177/0956797613485603

Cook, E. W., Pasricha, S., Samararatne, G., Maung, U., & Stevenson, I. (1983). Review and analysis of "unsolved" cases of the reincarnation type: II. Comparison of features of solved and

unsolved cases. Journal of the American Society for Psychical Research, 77(1), 45-62.

Creswell, J. D. (2017). Mindfulness Interventions. *Annual Review of Psychology*, 68, 491-516. http://dx.doi.org/10.1037/1053-0479.14.3.25310.1146/annurev-psych-042716-051139

Dahlsgaard, K., Peterson, C., & Seligman, M. E. P. (2005). Shared virtue: The convergence of valued human strengths across culture and history. *Review of General Psychology*, 9, 203–213. http://dx.doi.org/10.1037/1089-2680.9.3.203

Dambrun, M., & Ricard, M. (2011). Self-centeredness and selflessness: A theory of self-based psychological functioning and its consequences for happiness. *Review of General Psychology*, *15*(2), 138. http://dx.doi.org/10.1037/a0023059

Dambrun, M., Ricard, M., Després, G., Drelon, E., Gibelin, E., Gibelin, M., et al. (2012). Measuring happiness: from fluctuating happiness to authentic–durable happiness. *Frontiers in psychology*, 3:16. http://dx.doi.org/10.3389/fpsyg.2012.00016

Deikman A. (2000). A functional approach to mysticism. *Journal of Consciousness Studies*, 7 (11-12), 75-92.

Desbordes, G., Gard, T., Hoge, E. A., Hölzel, B. K., Kerr, C., Lazar, S. W., et al. (2015). Moving beyond mindfulness: defining equanimity as an outcome measure in meditation and contemplative research. *Mindfulness*, *6*(2), 356-372. http://dx.doi.org/10.1007/s12671-013-0269-

de Zoysa, P. (2016). When east meets west: reflections on the use of Buddhist mindfulness practice in mindfulness-based interventions. *Mental Health, Religion & Culture*, 19(4), 362-370.

Dhamma. (2005). Access to Insight. Retrieved from http://www.accesstoinsight.org/ptf/dhamma/index.html

Dhammika, S. (1991). *Good Question, Good Answer*. Singapore: Buddha Dhamma Mandala Society. Retrieved from http://www.goodquestiongoodanswer.net

Dishman, R. K., & Buckworth, J. (1996). Increasing physical activity: A quantitative synthesis. *Medical Science in Sports and Exercise*, 28, 706–719.

Eisenlohr-Moul, T. A., Peters, J. R., Pond Jr, R. S., & DeWall, C. N. (2016). Both Trait and State Mindfulness Predict Lower Aggressiveness via Anger Rumination: a Multilevel Mediation Analysis. *Mindfulness*, 7(3), 713-726. http://dx.doi.org/10.1007/s12671-016-0508-x

Ekman, P., Davidson, R. J., Ricard, M., & Wallace, B. A. (2005). Buddhist and psychological perspectives on emotions and well-being. *Current Directions in Psychological Science*, *14*, 59–63. http://dx.doi.org/10.1111/j.0963-7214.2005.00335.x

Ellamil, M., Fox, K. C., Dixon, M. L., Pritchard, S., Todd, R. M., Thompson, E., & Christoff, K.

(2016). Dynamics of neural recruitment surrounding the spontaneous arising of thoughts in experienced mindfulness practitioners. *Neuroimage*, 136, 186-196.

http://dx.doi.org/10.1016/j.neuroimage.2016.04.034

Festinger, L. (1962). Cognitive dissonance. Scientific American, 207(4), 93–107.

Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology*, *95*(5), 1045.

Fredrickson, B. L., Grewen, K. M., Coffey, K. A., Algoe, S. B., Firestine, A. M., Arevalo, J. M., et al. (2013). A functional genomic perspective on human well-being. *Proceedings of the National Academy of Sciences*, *110*(33), 13684-13689.

http://dx.doi.org/10.1073/pnas.1305419110

Galdi, S., Arcuri, L., & Gawronski, B. (2008). Automatic mental associations predict future Choices of undecided decision makers. *Science*, *321*, 1100-1102.

http://dx.doi.org/10.1126/science.1160769

Garland, E. L., Farb, N. A., R. Goldin, P., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaimonic meaning: a process model of mindful positive emotion regulation. *Psychological Inquiry*, *26*(4), 293-314.

http://dx.doi.org/10.1080/1047840X.2015.1064294

Ghatak, A. K., & Lokanathan, S. (2004). *Quantum mechanics: theory and applications*. The Netherlands: Kluwer Academic Publishers.

Gilbert, P., Cheung, M., Irons, C., & McEwan, K. (2005). An exploration into depression-focused and anger-focused rumination in relation to depression in a student population. *Behavioural and Cognitive Psychotherapy*, 33, 273–283.

http://dx.doi.org/10.1017/S1352465804002048

Glanz, K., & Bishop, D. B. (2010). The role of behavioral science theory in development and implementation of public health interventions. *Annual Review of Public Health*, 31, 399 – 418.

Gleig, A. (2012). Wedding the personal and impersonal in West Coast Vipassana: A dialogical encounter between Buddhism and psychotherapy. *Journal of Global Buddhism*, *13*, 129-146.

Gotink, R. A., Chu, P., Busschbach, J. J., Benson, H., Fricchione, G. L., & Hunink, M. M. (2015). Standardised mindfulness-based interventions in healthcare: an overview of systematic reviews and meta-analyses of RCTs. *PloS one*, *10*(4), e0124344.

http://dx.doi.org/10.1371/journal.pone.0124344

Grossman, P. (2011). Defining mindfulness by how poorly I think I pay attention during everyday awareness and other intractable problems for psychology's (re)invention of mindfulness: Comment on Brown et al. (2011). *Psychological Assessment*, 23 (4), 1034 -1040.

Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clinical Psychology Review*, *37*, 1-12. http://dx.doi.org/10.1016/j.cpr.2015.01.006

Gu, J., Zhong, C. B., & Page-Gould, E. (2013). Listen to your heart: When false somatic feedback shapes moral behavior. *Journal of Experimental Psychology: General*, 142(2), 307.

Gunaratana, H. (2011). Mindfulness in Plain English. Boston: Wisdom Publications.

Hagen, S. (2013). Buddhism Plain and Simple: The Practice of Being Aware, Right Now, Every Day. New York: Broadway Books.

Haidt, J. (2007). The New Synthesis in Moral Psychology. *Science*, *316*(5827), 998-1002. http://dx.doi.org/10.1126/science.1137651

Hanley, A. W., Warner, A., & Garland, E. L. (2015). Associations between mindfulness, psychological well-being, and subjective well-being with respect to contemplative practice. *Journal of Happiness Studies*, 16(6), 1423-1436. http://dx.doi.org/10.1007/s10902-014-9569-5

Haraldsson, E., & Samararatne, G. (1999). Children who speak of memories of a previous life as a Buddhist monk: Three new cases. *Journal of the Society for Psychical Research*, 63, 268-291.

Harrington, A., & Dunne, J. D. (2015). When mindfulness is therapy: Ethical qualms, historical perspectives. *American Psychologist*, 70(7), 621. http://dx.doi.org/10.1037/a0039460

Heeren, A., & Philippot, P. (2011). Changes in Ruminative Thinking Mediate the Clinical Benefits of Mindfulness: Preliminary Findings. *Mindfulness*, *2* (1), 8-13. http://dx.doi.org/10.1007/s12671-010-0037-y

Heppner, W. L., Kernis, M. H., Lakey, C. E., Campbell, W. K., Goldman, B. M., Davis, P. J., & Cascio, E. V. (2008). Mindfulness as a means of reducing aggressive behavior: Dispositional and situational evidence. *Aggressive Behavior*, *34*(5), 486–496. http://dx.doi.org/10.1002/ab.20258

Higgins, E. T. (1997). Beyond pleasure and pain. American Psychologist, 52, 1280–1300.

Hochman, G., & Yechiam, E. (2011). Loss aversion in the eye and in the heart: The autonomic nervous system's responses to losses. *Journal of Behavioral Decision Making*, *24*, 140–156. http://dx.doi.org/10.1002/bdm.692

Hofmann, W., De Houwer, J., Perugini, M., Baeyens, F., & Crombez, G. (2010). Evaluative conditioning in humans: a meta-analysis. *Psychological Bulletin*, *136*(3), 390. http://dx.doi.org/10.1037/a0018916

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How

does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on Psychological Science*, 6, 537-559.

http://dx.doi.org/10.1177/1745691611419671

Hwang, Y. S., & Kearney, P. (2013). A systematic review of mindfulness intervention for individuals with developmental disabilities: Long-term practice and long lasting effects. *Research in Developmental Disabilities*, *34*(1), 314-326. http://dx.doi.org/10.1016/j.ridd.2012.08.008

Hyland, T. (2017). McDonaldizing Spirituality: Mindfulness, Education, and Consumerism. *Journal of Transformative Education*, http://dx.doi.org/10.1177/1541344617696972

Index of Similes. (2013). Access to Insight. Retrieved from http://www.accesstoinsight.org/index-similes.html

Insel, P., Ross, D., & McMahon, K. (2013). *Nutrition*. Burlington, MA: Jones & Bartlett Publishers.

Jayatilleke, K. N. (1968). *Survival and Karma In Buddhist Perspective*. Kandy, Sri Lanka: Buddhist Publication Society. Retrieved from: http://www.bps.lk/olib/wh/wh141.pdf

Jayatunga, R. (2014). Let's be Mindful. Ganemulla, Sri Lanka: Printwell Printers.

Jazaieri, H., Lee, I. A., McGonigal, K., Jinpa, T., Doty, J. R., Gross, J. J., & Goldin, P. (2016). A wandering mind is a less caring mind: daily experience sampling during compassion meditation training. *Journal of Positive Psychology*, 11(1).

http://dx.doi.org/10.1080/17439760.2015.1025418

Ju, S. J., & Lee, W. K. (2015). Mindfulness, non-attachment, and emotional well-being in Korean adults. *Advanced Science and Technology Letters*, 87, 68-72.

http://dx.doi.org/10.14257/astl.2015.87.15

Kabat-Zinn, J. (2013). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness. New York: Bantam Dell.

Kang, C., & Whittingham, K. (2010). Mindfulness: A dialogue between Buddhism and clinical psychology. *Mindfulness*, *1*(3), 161-173. http://dx.doi.org/10.1007/s12671-010-0018-1

Karunamuni, N.D. (2015). The Five-Aggregate Model of the Mind. *SAGE Open*, 5 (2), http://dx.doi.org/10.1177/2158244015583860

Keng, S., Smoski, M. J., Robins, C. J., Ekblad, A. G., & Brantley, J. G. (2012). Mechanisms of change in mindfulness-based stress reduction: self-compassion and mindfulness as mediators of intervention outcomes. *Journal of Cognitive Psychotherapy*, 26, 270–280.

http://dx.doi.org/10.1891/0889-8391.26.3.270

Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., et al. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *The British Journal of Psychiatry*, *197*(5), 378-385. http://dx.doi.org/10.1192/bjp.bp.110.080499

Kok, B. E., Coffey, K. A., Cohn, M. A., Catalino, L. I., Vacharkulksemsuk, T., Algoe, S. B., et al. (2013). How positive emotions build physical health perceived positive social connections account for the upward spiral between positive emotions and vagal tone. *Psychological Science*, 24(7), 1123-1132. http://dx.doi.org/10.1177/0956797612470827

Kudesia, R. S., & Nyima, V. T. (2015). Mindfulness contextualized: An integration of Buddhist and neuropsychological approaches to cognition. *Mindfulness*, 6(4), 910-925.

Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R., Byford, S., et al. (2010). How does mindfulness-based cognitive therapy work? *Behaviour Research and Therapy, 48*, 1105–1112. http://dx.doi.org/10.1016/j.brat.2010.08.003

Labelle, L. E., Campbell, T. S. & Carlson, L. E. (2010). Mindfulness-Based Stress Reduction in Oncology: Evaluating Mindfulness and Rumination as Mediators of Change in Depressive Symptoms. *Mindfulness*, *1*(1), 28-40. http://dx.doi.org/10.1007/s12671-010-0005-6

Lamis, D. A., & Dvorak, R. D. (2014). Mindfulness, nonattachment, and suicide rumination in college students: The mediating role of depressive symptoms. *Mindfulness*, *5*(5), 487-496.

http://dx.doi.org/10.1007/s12671-013-0203-0

Lanza, R. (2009). Biocentrism: How life and consciousness are the keys to understanding the true nature of the universe. Dallas, TX: BenBella Books.

MacLean, K. A., Ferrer, E., Aichele, S. R., Bridwell, D. A., Zanesco, A. P., Jacobs, T. L., et al. (2010). Intensive meditation training improves perceptual discrimination and sustained attention. *Psychological science*, 21(6), 829-839. http://dx.doi.org/10.1177/0956797610371339

Mahathera, N. (1933). Buddhism in a nutshell. Access to Insight.

Retrieved from http://www.accesstoinsight.org/lib/authors/narada/nutshell.html

Markus, H. (1983). Self-knowledge: An expanded view. *Journal of Personality*, 51, 543-565. http://dx.doi.org/10.1111/j.1467-6494.1983.tb00344.x

McLaughlin, K. A., & Nolen-Hoeksema, S. (2011). Rumination as a transdiagnostic factor in depression and anxiety. *Behavior Research and Therapy*, 49, 186-193.

http://dx.doi.org/10.1037/a0035358

Mendis, N.K.G. (1985). *The Abhidhamma in Practice*. Kandy, Sri Lanka: Buddhist Publication Society. Retrieved from http://www.bps.lk/olib/wh/wh322.pdf

Mensah, S. B., & Anderson, J. G. (2015). Barriers and facilitators of the use of mind-body therapies by healthcare providers and clinicians to care for themselves. *Complementary*

Therapies in Clinical Practice, 21(2), 124-130. http://dx.doi.org/10.1016/j.ctcp.2015.01.004

Mills, A., Haraldsson, E., & Keil, H. H. J. (1994). Replication studies of cases suggestive of reincarnation by three independent investigators. *Journal of the American Society for Psychical Research*, 88, 207–219.

Moore, A., & Malinowski, P. (2009). Meditation, mindfulness and cognitive flexibility. *Consciousness and Cognition*, 18, 176–186. http://dx.doi.org/10.1016/j.concog.2008.12.008

Morgan, J. (2015). Emptiness and the Education of the Emotions. *Educational Philosophy and Theory*, 47(3), 291-304. http://dx.doi.org/10.1080/00131857.2013.860873

Nanamoli, B. & Bodhi, B. (1994). *The Discourse on Right View: The Sammaditthi Sutta and its Commentary*. Access to Insight. Retrieved from http://www.accesstoinsight.org/lib/authors/nanamoli/wheel377.html

Ñanamoli, B. & Bodhi, B. (1995). *The Middle Length Discourses of the Buddha: A Translation of the Majjhima Nikaya*, Boston: Wisdom Publications.

Nanamoli, T. (2013). *The Buddha's Words on Kamma: Four Discourses of the Buddha from the Majjhima Nikaya*. Access to Insight. Retrieved from http://www.accesstoinsight.org/lib/authors/nanamoli/wheel248.html

Ñanananda, B. (2007). *The Magic of the Mind: An Exposition of the Kalakarama Sutta*. Kandy, Sri Lanka: Buddhist Publication Society.

Nārada, T. (2006). *Everyman's Ethics: Four Discourses of the Buddha*. Kandy, Sri Lanka: Buddhist Publication Society. Retrieved from http://www.bps.lk/olib/wh/wh014.pdf

Nelson, S. K., Della Porta, M. D., Jacobs Bao, K., Lee, H. C., Choi, I., & Lyubomirsky, S. (2015). 'It's up to you': Experimentally manipulated autonomy support for prosocial behavior improves well-being in two cultures over six weeks. *The Journal of Positive Psychology*, *10*(5), 463-476. http://dx.doi.org/10.1080/17439760.2014.983959

Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, *2*, 175–220. http://dx.doi.org/10.1037/1089-2680.2.2.175

Nilsson, H., & Kazemi, A. (2016). Reconciling and thematizing definitions of mindfulness: The big five of mindfulness. *Review of General Psychology*, 20(2), 183. http://dx.doi.org/10.1037/gpr0000074

Nimitta Sutta AN3.100. (1998). *Themes*. Translated from the Pali by Thanissaro Bhikkhu. Access to Insight. Retrieved from http://www.accesstoinsight.org/tipitaka/an/an03/an03.100.11-15.than.html

Nyanaponika, T. (2008). The three basic facts of existence. Collected essays: Parts I, II and II.

Kandy, Sri Lanka: Buddhist Publication Society. Retrieved from http://www.bps.lk/library_wheels.php

Nyanaponika, T. (2014). The heart of Buddhist meditation. San Francisco: Weiser books.

Ouweneel, E., Le Blanc, P. M., & Schaufeli, W. B. (2014). On being grateful and kind: Results of two randomized controlled trials on study-related emotions and academic engagement. *The Journal of Psychology*, *148*(1), 37-60. http://dx.doi.org/10.1080/00223980.2012.742854

Pasanno, A. & Amaro, A. (2009). *The Island: An anthology of the Buddha's teaching on nibbāna*. Redwood Valley, CA: Abhayagiri Monastic Foundation.

Paulus, M. P. (2016). Neural Basis of Mindfulness Interventions that Moderate the Impact of Stress on the Brain. *Neuropsychopharmacology*, *41*(1), 373-373.

http://dx.doi.org/10.1038/npp.2015.239

Peled, M., & Moretti, M. M. (2007). Rumination on anger and sadness in adolescence: Fueling of fury and deepening of despair. *Journal of Clinical Child and Adolescent Psychology*, 36, 66–75. http://dx.doi.org/10.1207/s15374424jccp3601_7

Penrose, R., & Mermin, N. D. (1990). *The emperor's new mind: Concerning computers, minds, and the laws of physics*. New York: Oxford University Press.

Peters, J. R., Smart, L. M., Eisenlohr-Moul, T. A., Geiger, P. J., Smith, G. T., & Baer, R. A. (2015). Anger rumination as a mediator of the relationship between mindfulness and aggression: The utility of a multidimensional mindfulness model. *Journal of Clinical Psychology*, 71(9), 871-884. http://dx.doi.org/10.1002/jclp.22189

Popoli, M., Yan, Z., McEwen, B.S. & Sanacora, G. (2011). The stressed synapse: the impact of stress and glucocorticoids on glutamate transmission. *Nature Reviews Neuroscience*, 13(1), 22-37. http://dx.doi.org/10.1038/nrn3138

Potter, M. C., Wyble, B., Hagmann, C. E., & McCourt, E. S. (2014). Detecting meaning in RSVP at 13 ms per picture. *Attention, Perception, & Psychophysics*, 76(2), 270-279. http://dx.doi.org/10.3758/s13414-013-0605-z

Punnaji, M. (2016). Ascending the Supernormal Eightfold Way: Ariyamagga Bhavana. Nugegoda, Sri Lanka: Litho Printers.

Purser, R. E., & Milillo, J. (2015). Mindfulness revisited a Buddhist-based conceptualization. *Journal of Management Inquiry*, 24(1), 3-24. http://dx.doi.org/10.1177/1056492614532315

Querstret, D., & Cropley, M. (2013). Assessing treatments used to reduce rumination and/or worry: A systematic review. *Clinical Psychology Review*, *33*, 996-1009. http://dx.doi.org/10.1016/j.cpr.2013.08.004 Rāhula, W. (1974). What the Buddha Taught. New York. Grove Press.

Ricard, M. (2008). *Happiness: A guide to developing life's most important skill*. New York: Little Brown.

Rinpoche, D. T., Kunsang, E. P., & Schmidt, M. B. (1998). *Carefree dignity: Discourses on training in the nature of mind*. Hong Kong: Rangjung Yeshe Publications.

Rodriguez, V. B., Melero-Llorente, J., Bayon, P. C., Cebolla, S., Mira, J., Valverde, C., & Fernandez-Liria, A. (2014). Impact of mindfulness training on attentional control and anger regulation processes for psychotherapists in training. *Psychotherapy Research*, *24*, 202-213. http://dx.doi.org/10.1080/10503307.2013.838651

Rosenzweig, D. (2013). The sisters of mindfulness. *Journal of Clinical Psychology*, 69(8), 793-804. http://dx.doi.org/10.1002/jclp.22015

Ruchelli, G., Chapin, H., Darnall, B., Seppala, E., Doty, J., & Mackey, S. (2014). Compassion meditation training for people living with chronic pain and their significant others: a pilot study and mixed methods analysis. *The Journal of Pain*, 15(4), S117.

Ruedy, N. E., & Schweitzer, M. E. (2010). In the moment: The effect of mindfulness on ethical decision making. *Journal of Business Ethics*, *95*, 73-87.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, *52*(1), 141-166.

Sahdra, B. K., & Shaver, P. R. (2013). Comparing attachment theory and Buddhist psychology. *International Journal for the Psychology of Religion*, *23*(4), 282-293. http://dx.doi.org/10.1080/10508619.2013.795821

Sahdra, B. K., Shaver, P. R., & Brown, K. W. (2010). A scale to measure nonattachment: A Buddhist complement to Western research on attachment and adaptive functioning. *Journal of Personality Assessment*, 92(2), 116-127. http://dx.doi.org/10.1080/00223890903425960

Sahdra, B., Ciarrochi, J., & Parker, P. (2016). Nonattachment and Mindfulness: Related but Distinct Constructs. *Psychological Assessment*, 28(7),819-829. http://dx.doi.org/10.1037/pas0000264

Sahdra, B. K., Ciarrochi, J., Parker, P. D., Marshall, S., & Heaven, P. (2015). Empathy and nonattachment independently predict peer nominations of prosocial behavior of adolescents. *Frontiers in Psychology*, 6: 263. http://dx.doi.org/10.3389/fpsyg.2015.00263

Samsara. (2005). *The Round of Rebirth*. Access to Insight. Retrieved from http://www.accesstoinsight.org/ptf/dhamma/sacca/sacca1/samsara.html

Sayadaw, M. (1995). Satipatthana Vipassana. Access to Insight. Retrieved from

http://www.accesstoinsight.org/lib/authors/mahasi/wheel370.html

Sayadaw, U. P. (2002). *In this Very Life: The Liberation Teachings of the Buddha*. Boston: Wisdom Publications.

Sears, S. R., Kraus, S., Carlough, K., & Treat, E. (2011). Perceived benefits and doubts of participants in a weekly meditation study. *Mindfulness*, *2*(3), 167-174. http://dx.doi.org/10.1007/s12671-011-0055-4

Shapiro, K. L., Arnell, K. A., & Raymond, J. E. (1997). The attentional blink. *Trends in Cognitive Science*, *1*, 291-296. http://dx.doi.org/10.1016/S1364-6613(97)01094-2

Shapiro, S. L., Jazaieri, H., & Goldin, P. R. (2012). Mindfulness based stress reduction effects on moral reasoning and decision making. *Journal of Positive Psychology*, *7*, 504-515. http://dx.doi.org/10.1080/17439760.2012.723732

Shapiro, S., Schwartz, G. E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, *21*, 581–599.

Shonin, E., & Van Gordon, W. (2013). Searching for the present moment. *Mindfulness*, *5*, 105-107. http://dx.doi.org/10.1007/s12671-013-0248-0

Shonin, E., Van Gordon, W., & Griffiths, M. (2013). Mindfulness-based interventions: Towards

mindful clinical integration. *Frontiers in Psychology*, 4, 194. http://dx.doi.org/10.3389/fpsyg.2013.00194

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014a). The emerging role of Buddhism in clinical psychology: Toward effective integration. *Psychology of Religion and Spirituality*, *6*(2), 123. http://dx.doi.org/10.1037/a0035859

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014b). Cognitive behavioral therapy (CBT) and meditation awareness training (MAT) for the treatment of co-occurring schizophrenia and pathological gambling: A case study. *International Journal of Mental Health and Addiction*, 12(2), 181-196. http://dx.doi.org/10.1007/s11469-013-9460-3

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2014c). Meditation awareness training (MAT) for improved psychological well-being: a qualitative examination of participant experiences. *Journal of Religion and Health*, *53*(3), 849-863. http://dx.doi.org/10.1007/s10943-013-9679-0

Shonin, E., Gordon, W. V., & Griffiths, M. D. (2014d). Are there risks associated with using mindfulness in the treatment of psychopathology?. *Clinical Practice*, *11*(4), 389-392. http://dx.doi.org/10.2217/cpr.14.23

Shonin, E., & Van Gordon, W. (2015). Managers' experiences of meditation awareness training. *Mindfulness*, 6(4), 899-909. http://dx.doi.org/10.1007/s12671-014-0334-y

Shonin, E., Van Gordon, W., & Griffiths, M. D. (2015). Teaching Ethics in Mindfulness-based Interventions. *Mindfulness*, 6(6), 1491-1493. http://dx.doi.org/10.1007/s12671-015-0429-0

Simon, R., & Engström, M. (2015). The default mode network as a biomarker for monitoring the therapeutic effects of meditation. *Frontiers in psychology*, 6:776 http://dx.doi.org/10.3389/fpsyg.2015.00776

Singh, N. N., Lancioni, G. E., Winton, A. S. W., Singh, A. N., Adkins, A. D., & Singh, J. (2011). Can adult offenders with intellectual disabilities use mindfulness-based procedures to control their deviant sexual arousal? *Psychology, Crime and Law, 17*, 165–179. http://dx.doi.org/10.1080/10683160903392731

Singh, N. N., Lancioni, G. E., Karazsia, B. T., Winton, A. S.W., Myers, R. E., Singh, A. N. A., Singh, A. D. A., & Singh, J. (2013a). Mindfulness-based treatment of aggression in individuals with intellectual disabilities: a waiting-list control study. *Mindfulness*, *4*, 158–167.

Singh, N. N., Lancioni, G. E., Winton, A. S.W., Karazia, B. T., Singh, A. D. A., Singh, A. N. A., & Singh, J. (2013b). A mindfulness-based smoking cessation program for individuals with mild intellectual disability. *Mindfulness*, *4*, 148–157. http://dx.doi.org/10.1007/s12671-012-0148-8

Singh, N. N., Lancioni, G. E., Karazsia, B. T., Winton, A. S.W., Singh, J., & Wahler, R. G. (2014a). Shenpa and compassionate abiding: Mindfulness-based practices for anger and

aggression by individuals with schizophrenia. *International Journal of Mental Health and Addiction*, 12, 138–152. http://dx.doi.org/10.1007/s11469-013-9469-7

Singh, N. N., Lancioni, G. E., Myers, R. E., Karazsia, B. T., Winton, A. S., & Singh, J. (2014b). A randomized controlled trial of a mindfulness-based smoking cessation program for individuals with mild intellectual disability. *International Journal of Mental Health and Addiction*, *12*(2), 153-168. http://dx.doi.org/10.1007/s11469-013-9471-0

Shroder, T. (1999). *Old souls: the scientific evidence for past lives*. New York: Simon & Schuster.

Slagter, H. A., Lutz, A., Greischar, L. L., Francis, A. D., Nieuwenhuis, S., Davis, J. M., et al (2007). Mental training affects distribution of limited brain resources. *PLoS Biology*, *5*(6), e138. http://dx.doi.org/10.1371/journal.pbio.0050138

Soni, R. L. & Khantipalo, B. (2006). *Life's Highest Blessings: The Maha Mangala Sutta*. Access to Insight. Retrieved from http://www.accesstoinsight.org/lib/authors/soni/wheel254.html

Sternberg, R. (2003). *Wisdom, intelligence and creativity synthesized*. New York, NY: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511509612

Stevenson, I. (1990). Phobias in children who claim to remember previous lives. *Journal of Scientific Exploration*, *4*, 243-254.

Stevenson, I. (2000a). The phenomenon of claimed memories of previous lives: Possible interpretations and importance. *Medical Hypotheses*, *54*, 652–659.

Stevenson, I. (2000b). Unusual play in young children who claim to remember previous lives. *Journal of Scientific Exploration*, 14, 557-570.

Stevenson, I., & Keil, J. (2005). Children of Myanmar who behave like Japanese soldiers: A possible third element in personality. *Journal of Scientific Exploration*, 19, 171–183.

Stevenson, I. (2006). Half a career with the Paranormal. *Journal of Scientific Exploration*, 20(1), 13–21.

Sumedho, A. (2011). *The Mind and the Way: Buddhist Reflections on Life*. Wisdom Publications: Boston.

Tang, Y. Y., & Posner, M. I. (2013). Special issue on mindfulness neuroscience. *Social Cognitive and Affective Neuroscience*, 8, 1-3. http://dx.doi.org/10.1093/scan/nss104

Teasdale, W. (1999). *The Mystic Heart: Discovering a Universal Spirituality in the World's Religions*. Novato, California: New World Library.

Thanissaro, B. (2010). The Five Aggregates: A Study Guide. Access to Insight. Retrieved from

http://www.accesstoinsight.org/lib/study/khandha.html

The Dhammapada. (1996). *The Buddha's Path of Wisdom*. Translated from the Pali by Acharya Buddharakkhita. Access to Insight. Retrieved from http://www.accesstoinsight.org/tipitaka/kn/dhp/dhp.intro.budd.html

The Thirty-one Planes of Existence. (2005). Access to Insight. Retrieved from http://www.accesstoinsight.org/ptf/dhamma/sagga/loka.html

Thomsen, D. K., Mehlsen, M. Y., Olesen, F., Hokland, M., Viidik, A., Avlund, K., & Zachariae, R. (2004). Is there an association between rumination and self-reported physical health? A one-year follow-up in a young and an elderly sample. *Journal of Behavioral Medicine*, *27*(3), 215-231. http://dx.doi.org/10.1023/B:JOBM.0000028496.41492.34

Trowbridge, R. (2011). Waiting for Sophia: 30 years of conceptualizing wisdom in empirical psychology. *Research in Human Development*, 8, 111-117. http://dx.doi.org/10.1080/15427609.2011.568872

Tucker, J. B. (2005). Life before life: a scientific investigation of children's memories of previous lives. Macmillan.

Tucker, J. B. (2008). Children's reports of past-life memories: a review. *Explore: The Journal of Science and Healing*, 4(4), 244-248. http://dx.doi.org/10.1016/j.explore.2008.04.001

Tucker, J. B. (2013). *Return to life: Extraordinary cases of children who remember past lives*. Macmillan.

Vallejo, Z., & Amaro, H. (2009). Adaptation of mindfulness-based stress reduction program for addiction relapse prevention. *Journal of Humanistic Psychology*, *37*, 192-206. http://dx.doi.org/10.1080/08873260902892287

Van Dam, N. T., Brown, A., Mole, T. B., Davis, J. H., Britton, W. B., & Brewer, J. A. (2015). Development and Validation of the Behavioral Tendencies Questionnaire. *PloS one*, 10(11), e0140867. http://dx.doi.org/10.1371/journal.pone.0140867

Van Gordon, W., Shonin, E., Sumich, A., Sundin, E. C., & Griffiths, M. D. (2014). Meditation awareness training (MAT) for psychological well-being in a sub-clinical sample of university students: a controlled pilot study. *Mindfulness*, *5*(4), 381-391. http://dx.doi.org/10.1007/s12671-012-0191-5

Van Gordon, W., Shonin, E., Griffiths, M. D., & Singh, N. N. (2015). There is only one mindfulness: Why science and Buddhism need to work together. *Mindfulness*, *6*(1), 49-56. http://dx.doi.org/10.1007/s12671-014-0379-y

Vasquez, E.A., Pedersen, W.C., Bushman, B. J., Kelley, N. J., Demeestere, P., & Miller, N. (2013). Lashing out after stewing over public insults: The effects of public provocation,

provocation intensity, and rumination on triggered displaced aggression. *Aggressive Behavior*, 39(1), 13–29. http://dx.doi.org/10.1002/ab.21453

Wallace, B. A., & Shapiro, S. L. (2006). Mental balance and well-being: building bridges between Buddhism and Western psychology. *American Psychologist*, *61*(7), 690. http://dx.doi.org/10.1037/0003-066X.61.7.690

Walsh, R. (2015). What is wisdom? Cross-cultural and cross-disciplinary syntheses. *Review of General Psychology*, *19*(3), 278. http://dx.doi.org/10.1037/gpr0000045

Walshe, M. (1995). *The Long Discourses of the Buddha: A Translation of the Digha Nikaya*. Boston: Wisdom Publications.

Weinstein, N., & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, *98*, 222–244. http://dx.doi.org/10.1037/a0016984

Williams, A. L., Van Ness, P., Dixon, J., & McCorkle, R. (2012). Barriers to meditation by gender and age among cancer family caregivers. *Nursing Research*, *61*(1), 22. http://dx.doi.org/10.1097/NNR.0b013e3182337f4d

Williams, M. J., McManus, F., Muse, K., & Williams, J. M. (2011). Mindfulness-based cognitive therapy for severe health anxiety (hypochondriasis): an interpretative phenomenological analysis

of patients' experiences. *The British Journal of Clinical Psychology, 50*, 379–397. http://dx.doi.org/10.1111/j.2044-8260.2010.02000.x

Wilson, T. D. (2009). Know thyself [Special issue: Next big questions in psychology]. *Perspectives on Psychological Science*, *4*(4), 384-389. http://dx.doi.org/10.1111/j.1745-6924.2009.01143.x

Wittenborn, A. K., Rahmandad, H., Rick, J., & Hosseinichimeh, N. (2016). Depression as a systemic syndrome: mapping the feedback loops of major depressive disorder. *Psychological Medicine*, *46*(03), 551-562. http://dx.doi.org/10.1017/S0033291715002044

Yechiam, E., & Hochman, G. (2013). Losses as modulators of attention: review and analysis of the unique effects of losses over gains. *Psychological Bulletin*, *139*(2), 497. http://dx.doi.org/10.1037/a0029383

Yusainy, C., & Lawrence, C. (2015). Brief mindfulness induction could reduce aggression after depletion. *Consciousness and Cognition*, 33C, 125-134. http://dx.doi.org/10.1016/j.concog.2014.12.008

Zeidan, F., Adler-Neal, A. L., Wells, R. E., Stagnaro, E., May, L. M., Eisenach, J. C., et al. (2016). Mindfulness-Meditation-Based Pain Relief Is Not Mediated by Endogenous Opioids. *The Journal of Neuroscience*, *36*(11), 3391-3397.