

# Chapter 7

## Mindfulness as a Path Towards Sustainable Lifestyle Change, Resilience, and Well-Being: Community, Social, and Environmental Factors



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**Abstract** Recent developments in psychological theory and research offer arguments that help to promote a transition towards sustainable lifestyles. Based on these insights, we outline how the concept of mindfulness could be a key psychological mechanism to understand this process and provide arguments supporting this assumption. To illustrate this line of reasoning, we introduce the dual-process accounts of human decision making, as this theory provides support for a conceptual model linking mindfulness to more sustainable lifestyles, increased well-being, and resilience in daily life settings. Specifically, we argue that the mindfulness-based model of pro-environmental behavior and sustainable lifestyle presented in this article could be particularly well suited to contemporary adolescents and younger generations in general, as they might represent the ideal target of large-scale environmental awareness raising and education programs in today's digital society. In our theoretical proposal, mindfulness could thus be key to promoting adolescents' shift towards more sustainable, less consumption-based, and more nature-connected lifestyles that are also less carbon-intensive. Both the community and the physical settings could offer positive support in this transition.

**Keywords** Ecosystem · Sustainability · Sustainable lifestyle · Well-being · Values

### 7.1 Introduction

Ecosystems are under considerable pressure, as most of humanity is enjoying greater prosperity in more areas than ever before. The Millennium Ecosystem Assessment (<https://www.millenniumassessment.org/en/index.html>), examining the state of global ecosystems and the consequences of ecosystem change for human well-being from 2001 to 2005, found that 60% of these were degraded or being used in an unsustainable way. "Over the past 50 years, humans have changed ecosystems more rapidly and extensively than in any comparable period of time in human history, largely to meet rapidly growing demands for food, fresh water, timber, fiber

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and fuel. This resulted in a substantial and largely irreversible loss in the diversity of life on Earth” (Secretariat of the Convention on Biological Diversity, 2010, p. 94). The impact of climate change is now rapidly increasing in all ecosystems, changing human habitats. Apart from some minority positions of scepticism and denial (e.g. Carrus, Panno, & Leone, 2018), there currently is a wide scientific, political, and public opinion consensus that ecosystems, and human beings therein, must adapt to a global warming on top of their already weakened resilience. The implementation of solutions to address this issue is thus urgently needed. We would have to reduce the impact of our activities on the earth as the overconsumption of resources underlies all human activities, and this consumption will become more intense as middle-class consumers across the developing world now become increasingly numerous. Although the IPCC (2000) claimed that technological changes can significantly help reduce pollution, greater efforts to change human behaviour are needed, which should be aimed at using resources sustainably and reducing overconsumption, among other environmental goals.

Some authors argue that a transition to sustainability requires a “shift from materialist to post-materialist values, from anthropocentric to ecological world-views” (Leiserowitz, Kates, & Parris, 2005, p. 30); i.e. the problem is linked to “how we ought to live, and how humans should relate to each other and to the rest of nature” (Jamieson, 1992, p. 149). Unfortunately, a tradeoff between well-being and the environment has always been shown as a potential conflict, because of a shared common sense notion that the means to achieve well-being are exclusively materialistic rewards; therefore, to date, many assume that huge sacrifices have to be made to encourage change toward less material consumption and to foster a more sustainable way of life.

In this chapter, we argue how recent developments in psychological theory and research could offer arguments that challenge this straightforward assumption, while also helping promote a transition towards sustainable lifestyles. More specifically, we outline how the concept of mindfulness could be a key psychological mechanism to understand this process and provide arguments supporting this assumption. To illustrate this line of reasoning, the dual-process accounts of human decision making will also be shortly introduced, as this theory provides support for our conceptual model linking mindfulness to more sustainable lifestyles, increased well-being and resilience in daily life settings. We argue, in particular, that our mindfulness-based model of pro-environmental behaviour and sustainable lifestyle could be particularly well suited to contemporary adolescents and younger generations in general, as they might represent the ideal target of large-scale environmental awareness raising and education programs in today’s digital society. In our theoretical proposal, mindfulness could thus be key to promoting adolescents’ shift towards more sustainable, less consumption-based, and more nature-connected lifestyles that are also less carbon-intensive. Both the community and the physical settings could offer positive support in this transition.

In this chapter, we review an overarching theoretical framework developed in social cognitive psychology, namely the dual-process accounts of human decision making, which sees people’s behaviour as an interplay between an automatic, impul-

sive, or “hot” mental system and another that is reasoned, reflexive, or “cold”. Then, we discuss how a mindfulness-based psychological model can be useful to improve our understanding of the mechanisms governing the transition towards a sustainable way of life at the level of individuals, groups, and communities. Applied implications for future studies and interventions to promote sustainable lifestyle changes among young people and adolescents will be also envisaged.

## **7.2 Dual-Process Accounts: A Theoretical Framework to Understand Human Behaviour and Foster Environmentally-Relevant Behaviour**

Sigmund Freud and other 20th century psychoanalysts introduced the notion of an unconscious mind motivating our behavior with a combination of innate drives and repressed emotions alongside a conscious mind prone to rationalization and “self-deception” (Freud, 1912). About two decades earlier, James (1890) had already put forward the idea of the automaticity of certain human cognitive processes. Within psychology, these could be regarded as the first explicit attempts to understand human behaviour through the lens of a dual-processes account. In present-day psychological science, dual-processing accounts explaining human behavior have risen sharply in the literature over the last 30 years, especially in cognitive and social psychology (e.g. Bargh & Chartrand, 1999; Fazio & Towles-Schwen, 1999; Kahneman, 2002; Strack & Deutsch, 2004). Given the aims of our study, we will try to explain what a dual-processes account is and what dual-process theories have in common, while also outlining how these accounts can be related to the link between mindfulness and sustainable lifestyles. The idea behind dual-process theories is that there are two different modes of mental processing, for which we use the terms “hot” and “cold” (Keren & Schul, 2009). According to these and other authors, mental characteristics like unconscious (or preconscious), implicit, automatic, effortless, rapid, holistic perceptual, associative, and parallel thinking can be associated with hot processes, while characteristics like conscious, explicit, controlled, effortful, slow, analytic reflective, rule based, and sequential thinking can be associated with cold processes.

Authors in this field agree on a distinction between processes that are unconscious, rapid, automatic, and high capacity (i.e. hot), and those that are conscious, slow, and deliberative (i.e. cold). Some authors ignore emotion altogether, but it should be clear that emotional and motivational factors belong to the hot rather than the cold system (Evans, 2003). Studies linking dual process accounts to decision making, such as Kahneman and Tversky’s (1982) seminal research, are particularly useful for improving our understanding of sustainable lifestyles, since pro-environmental behavior is an outcome of human decision-making capacity.

To understand how dual-processes accounts can influence sustainable lifestyles and their relation to mindfulness, we need to point out some individual differences linked to the hot and cold system, as individual differences related to dual process

accounts may be also linked to environmentally friendly behaviour. There are some person-based factors that could make the hot system prevail over the cold system and vice versa, such as general intelligence and working memory resources. In general, a strong basis for dual-systems theories is the evidence that “controlled” cognitive processing correlates with individual differences in general intelligence and working memory capacity, whereas “automatic” processing does not. Since human behaviour is an outcome of the interaction between cold and hot processes, it then seems that individuals’ behaviour may be controlled both with and without the use of executive working memory resources. This aspect is particularly relevant to our discussion, since later we will see in more detail how present-centred attention and mindfulness could represent a driver of more environmentally aware behaviour, while automaticity, impulsive, and immediate materialistic reward-seeking action could undermine pro-environmental behavior and be less environmentally friendly.

There are also specific situational factors which can make the hot system prevail over the cold system. One of them is time pressure. For example, several circumstances where time pressure occurs (e.g. an impending deadline) might trigger automatic impulses, overriding the cold system. Time pressure has also been found to be a factor capable of triggering specific cognitive motivational states known as “need for cognitive closure” (see Webster & Kruglanski, 1994, for more details). Recent empirical evidence indeed shows that higher levels of need for cognitive closure can be linked to less pro-environmental behavior (Panno, Carrus, et al., 2018). People in their everyday lives strongly show the capacity to self-regulate to overcome the impulses resulting from the hot system, which induce us in well known temptations such as overeating, overconsumption, using illicit drugs and alcohol, and engaging in unprotected sex (e.g. Steel, 2007; Tice & Bratslavsky, 2000). This human capacity to exert control over the hot system through the predominance of the cold system is needed to delay gratification of immediate desires (Metcalf & Mischel, 1999; Mischel, Shoda, & Rodriguez, 1989) and enables people to engage in goal-directed behaviour to bring about long-term desirable outcomes (Baumeister, 2005; Logue, 1988). The mechanism behind this relationship is that the time pressure rapidly uses up cognitive resources, making people less likely to act in an environmentally friendly way. Thus, we suggest that time pressure can be regarded as a factor that drains cognitive resources needed to behave in an environmentally friendly way. We argue that self-regulation mechanisms are crucial in this processes, and we will discuss how mindfulness could represent a positive psychological factor driving more sustainable and environmentally-aware choices in everyday life. For example, we can consider the fact that people often do not use recycled paper to print documents if an impending deadline is coming. Also, an array of activities carried out under time pressure conditions could make people more likely to engage in environmentally damaging behaviors, because some of these behaviors are thought to be restorative (e.g. compulsive shopping, overeating). On the other hand, one may delay immediate gratification by using public transport instead of driving one’s car in order to get less pollution in the future. Indeed, recent studies suggest that both mindfulness and emotion regulation strategies, such as cognitive reappraisal, could help buffer this negative tendency (e.g. Panno, Carrus, Maricchiolo, & Mannetti, 2015; Panno,

Giacomantonio, et al., 2018). We will discuss these arguments in more detail in the next section, where we outline a conceptual model for sustainable mindfulness-based lifestyles.

### 7.3 Mindfulness to Foster Sustainable Lifestyle Change

In the following paragraph, we review empirical research that has shown how the psychological construct of mindfulness can help enhance adolescents' strength in the pursuit of sustainable lifestyles and well-being.

The concept of mindfulness has roots in Buddhist religion and other spiritual and contemplative traditions, where conscious attention and awareness are actively cultivated. It is most commonly defined as the state of being attentive to and aware of what is taking place in the present. For instance, Nyanaponika Thera (1972) called mindfulness "the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception" (p. 5). Empirical research has shown that the enhancement of mindfulness by training facilitates a number of well-being outcomes such as overcoming health-related problems (Kabat-Zinn, 1990). Because mindfulness bears some relation to other constructs that have received empirical attention, such as emotional intelligence, which includes perceptual clarity about one's emotional states (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), one should expect that mindfulness to be related to such clarity as it involves receptive attention to human psychological states and environmental stimuli.

Conversely, in less mindful states, emotions may partly occur outside of individual awareness or drive our behaviour before we clearly acknowledge them (Brown & Ryan, 2003). This process typically occurs when the hot system overrides the cold system. Mindfulness captures a quality of consciousness that is characterized by the clarity and vividness of the current experience and functioning. By contrast, the mindless state represents a less "awake" level of habitual or automatic functioning that can be chronic for many people. By adding clarity and vividness to common human experience, mindfulness may also contribute to well-being and happiness in a direct way. Relevant to environmentally responsible activities, mindfulness may play an important role in disengaging individuals from strong unsustainable habits and unhealthy behavioural patterns, thus fostering people's self-regulation, which has long been associated with well-being enhancement (Ryan & Deci, 2000). In other words, mindfulness might serve an important self-regulatory function which can at the same time foster people's sustainable lifestyles (e.g. Brown & Kasser, 2005) and be associated with children positive social adjustment and resilience (Eisenberg et al., 2003).

Mindfulness-based studies on pro-environmental behaviors and sustainable lifestyles outnumber those that follow other theoretical accounts that we have briefly described in previous sections (e.g. Brown & Kasser, 2005; Ericson, Kjønstad, & Barstad, 2014; Fischer, Stanzus, Geiger, Grossman, & Schrader, 2017; Geiger, Otto, & Schrader, 2018; Geiger, Grossman, & Schrader, 2019; Howell, Dopko, Passmore,

& Buro, 2011; Panno, Giacomantonio, et al., 2018). Recently, Ericson and colleagues showed that encouraging mindfulness practice in schools, workplaces, and elsewhere could contribute to more sustainable ways of life and promote well-being (Ericson et al., 2014). The proposed mechanism behind this link rests on the notion that mindfulness is strongly related to psychological well-being (PWB), which in turn is linked to sustainability through seeking gratification by means other than material rewards. As we have already mentioned, health resources are also under pressure because of our excessive levels of material consumption. Thus, seeking PWB through means different from material consumption could greatly contribute to global sustainability, and mindfulness can play a key role in this relationship. To corroborate these relationships among mindfulness, PWB, and environmentally friendly behaviours, we can also refer to studies showing strong associations among connectedness to nature, well-being, and mindfulness (Howell et al., 2011). Empirical evidence suggests that human health and well-being are associated with the possibility of repeated and systematic experiences of nature (e.g. Mitchell & Popham, 2008; Van den Berg, Hartig, & Staats, 2007; see also Carrus, Passiatore, Pirchio, & Scopelliti, 2015; Carrus et al., 2017). Thus, one could also claim that strong connectedness to nature can foster PWB through mindfulness by enhancing the positive emotions and perceptions that humans feel when experiencing contact with the natural world. In present-day human societies, a more generalized mindful consideration of one's inner states and behaviour should then be likely to bring simultaneous benefits to both individuals and ecosystems.

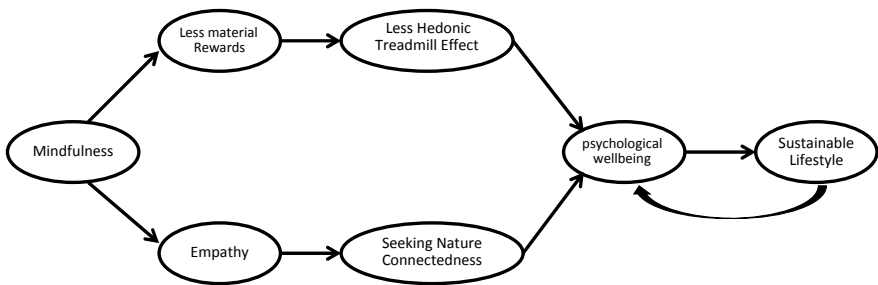
Regarding the idea of mindfulness as a tool to promote more sustainable lifestyles in adolescence, it is important to come back to the issue that we briefly discussed in the beginning of this chapter: the shared common sense assumption that sustainable behaviors do necessarily entail negative outcomes for the individual, such as self-sacrifice, discomfort, fatigue, or economic costs. Recently, several authors have started to question this straightforward assumption, suggesting that sustainable conducts might also represent a form of intrinsic reward for the individual (e.g. Bechtel & Corral, 2010; De Young, 2000; Veenhoven, 2006). For example, Brown and Kasser (2005) found that PWB and pro-environmental behaviours are complementary, as happier people live in more ecologically sustainable ways. The authors identified mindfulness as the core factor that promoted both happiness and ERB: "These results weigh against the oft-stated belief that personal well-being and ecologically supportive behaviour are necessarily in conflict, and instead suggest that a trade-off between the two is not a *fait accompli*" (Brown & Kasser, 2005, pp. 360–361). Thus, even though human happiness and ecological well-being are often portrayed as conflictual pursuits by consumption economics, they may be viewed as complementary by sustainable economics. We argue that promoting a stronger awareness of the compatibility between well-being and pro-environmental behaviours, through mindfulness, could be a crucial message to encourage sustainable lifestyles among adolescents.

The link between income, well-being, and sustainable lifestyles is also a relevant issue to discuss here. A problem associated with increases in material goods and income is that their effects on PWB seem to be rather short-lived, since people soon become accustomed to a given level of material welfare. This phenomenon

of habituation and adaptation to the circumstances of life is called the “*hedonic treadmill effect*” (see Seligman, 2002, for more details). Thus, an interesting aspect of mindfulness is that mindfulness-based training techniques could be useful to undo the hedonic treadmill effect (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008). Mental training techniques aimed at improving mindfulness could have important applied implications, as many people could enhance their awareness of global ecosystems’ resources and pursue PWB without falling prey to the hedonic treadmill effect. This suggests that policy makers should incentive collective programs aimed at fostering mindfulness-based interventions and practice.

To summarize, in our view mindfulness can make people’s lifestyle more sustainable through two paths, as depicted in Fig. 7.1. First, mindfulness dampens the hedonic treadmill effect, which allows people to enhance PWB without focusing on material rewards and adopting a more sustainable lifestyle, in line with their outlook. Second, mindfulness leads to PWB through greater empathy and connectedness with nature, which are known to be relevant predictors of environmentally relevant behaviours (ERB). Indeed, there is empirical evidence showing a link between empathy for natural beings, positive attitudes towards nature, and pro-environmental behaviour (e.g. Berenguer, 2007). In both cases, a more habitual use of more environmentally aware and mindful strategies in daily life decisions can be expected to lead to a more sustainable lifestyle.

With respect to the relationship between mindfulness and sustainability, it is also worth pointing out that a mindfulness-based lifestyle may counteract unsustainable habits triggered by situational factors, such as time pressure. Specifically, the usual daily life experience shared by many citizens in western societies, characterized by increasing feelings of time scarcity (e.g. Wajcman, 2008) and the desire to quickly obtain material rewards, can be regarded as supporting a view of life that has no space or time for environmentally friendly habits. Accordingly, a mindfulness-based lifestyle might slacken impulses and block out the urges related to time pressure. This, in turn, should be reflected in the development of more sustainable habits in the long run. Indeed, recent studies on adolescents suggest that time affluence could



**Fig. 7.1** Conceptual two-path model of the relationship between mindfulness, psychological wellbeing (PWB), and sustainable lifestyle

help in buffering the negative link between materialistic and compulsive consumption and well-being (e.g. Manolis & Roberts, 2012).

Abramovitz (2003) also pointed out that material consumption levels are rising worldwide and that, consequently, human quality of life may be at risk. Consistent with this idea, previous studies (e.g. Brown & Kasser, 2005; Ericson et al., 2014) show that achieving sustainable societies will mean scaling back on our material lives. Yet, convincing people to live in more ecologically sustainable ways will be challenging if they believe that their PWB will suffer. Taken together, the results of these studies are hopeful in pointing to a mutually beneficial relation between personal and planetary well-being, especially given that such supportive factors as mindfulness and intrinsic values can be cultivated among younger generations. In sum, one might claim that, in today's consumerism-prone culture, mindfulness may be necessary to develop more sustainable habits among young people and adolescents. Three billion more middle-class consumers will enter the market during the next 20 years, which will further increase the global consumption of the earth's resources. If billions of people across the world hold materialistic values, making perceived well-being heavily dependent on material consumption, it will be hard to achieve sustainable development goals. Global sustainability will be more easily achieved if well-being is pursued through means that are less dependent on material consumption. Preliminary environmental psychological research indicates that mindfulness is a fruitful path that may help enhance environmentally friendly activities as well as sustainable lifestyles.

There are, however, many things we do not know in this field of inquiry, especially as regards the effects that this change in attitude can have on sustainability. Long-term consequences in terms of environmental behaviour, political activism (or alienation), and lifestyle have seldom been explored in systematic experimental settings. Another question is how easy it is to sustain mindfulness meditation over time, and what role training plays in developing and sustaining the practice, especially among adolescents. To address these issues, longitudinal studies, both quantitative and qualitative, are needed. Last but not least, the practical feasibility of direct mindfulness training programs on large sectors of present-day adolescents should also be explored, as this can represent a barrier to concrete and cost-effective large-scale policy implementations.

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