There has been increasing interest in introducing secular mindfulness and compassion training programs in schools and community settings to prevent social–emotional difficulties and to enhance positive youth development. This chapter explores this emerging trend in both practical and scientific terms.

1 Mindfulness and compassion training in adolescence: A developmental contemplative science perspective

Robert W. Roeser, Cristi Pinela

All of us, at some moment, have had a vision of our existence as something unique, untransferable, and very precious. This revelation almost always takes place during adolescence.

The Labyrinth of Solitude: Life and Thought in Mexico (1985)

Adolescence is a developmental period characterized by both opportunity and risk. The simultaneous changes in body and brain, social experiences, and social roles in the family, peer group, school, and community that define this decade of life are associated with profound opportunities for cultivating flourishing among youth. At the same time, adolescence is a period when emotional-behavioral problems (for example, depression), interpersonal difficulties (for example, bullying), and risk-taking behaviors rise.

Decades of research show that by affording adolescents the kinds of social environments that “fit” with their developmental
needs, adults, communities, and institutions can reduce risks and promote positive development.\textsuperscript{3} In essence, ensuring that young people realize the unique, nontransferable, and very precious nature of their existences and futures during adolescence is an intergenerational project.\textsuperscript{4} The practical and scientific questions we take up here in relation to this project include the following: What role (if any) might secular forms of mindfulness and compassion training for adolescents play in an overall strategy of risk reduction and investments in positive youth development by parents, teachers, and community leaders? How might such trainings address adolescent developmental needs, and build skills and dispositions that may not be taught in school and community settings? 

\textit{Adolescence as window of opportunity}

To explore the potential role of mindfulness and compassion training during adolescence, we adopt the assumptive framework of positive youth development and emphasize the notion that adolescence represents a kind of “greenhouse” for the cultivation of positive identities and purposes, skillsets and mindsets, and a compassionate understanding of self and others.\textsuperscript{5} We argue that adolescence is a window of opportunity because young people are intrinsically motivated in the years following puberty to become contributing adult members of an “ongoing cultural concern.”\textsuperscript{6} Also beginning around puberty, there is considerable developmental plasticity in adolescents’ brains and in associated psychological and social-cognitive systems underlying adolescents’ development of a psychosocial identity.\textsuperscript{7} For example, powers of self-reflection and social-perspective taking (SPT) increase, as do interest in and concerns with evaluations and understanding of self and others during these years.\textsuperscript{8} Such developmental plasticity means that the factors underlying co-construction of a healthy psychosocial identity are rather malleable during adolescence—meaning subject to modification by personal habits, choices, and myriad sociocultural influences.\textsuperscript{9}
question becomes, what forms of cultural socialization and educational enrichment come to meet youth during this “window of opportunity” to help them fulfill developmental needs, emerging capacities, and passions constructively? How might secular mindfulness and compassion training programs harness such plasticity and channel it in positive directions? Can such trainings help young people to develop psychological and social skills and dispositions associated with a healthy identity, one that includes and transcends self to also include caring for others? To begin our discussion, we introduce Developmental Contemplative Science (DCS).

Introducing developmental contemplative science

DCS is a nascent, interdisciplinary effort to derive a new understanding of the mind/body system and its prospects for transformation across the lifespan through various forms of physical and mental training. DCS holds three core assumptions. First, the brain is viewed as inherently adaptive, evolved to change in response to experience and intentional training and education (for example, mindfulness training) through various forms of neuroplasticity. Second, practices such as mindfulness or compassion training represent specialized forms of mental training, which (when engaged in for an extended period of time with guidance) are thought to significantly modify cognitive, emotional, and motor processes and correlated neural substrates, in ways akin to skill acquisition and development of expertise. Third, there may be windows of opportunity in the lifespan (for example, early childhood, early adolescence) when (a) specific brain regions and networks are particularly modifiable (based upon experience-expectant and experience-dependent forms of neuroplasticity); (b) the introduction of specialized forms of enrichment and training may support young people in navigating developmental life tasks.
and building life-long skills and dispositions associated with health, well-being, academic success, and social participation.\textsuperscript{14} Such windows of opportunity are not isolated to early development, however. They open to some degree whenever an individual wishes to embark on behavioral change through intentional efforts.

From a DCS perspective, the introduction of mindfulness and compassion training may hold promise as an enrichment strategy that \textit{capitalizes} on developmental plasticity in neural and psychological systems during adolescence; \textit{supports} youth in navigating the development of a psychosocial identity; and \textit{cultivates} specific skills and dispositions for doing so, and for leading a happy, healthy, and productive life. Why?

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\textbf{Stage-environment fit approach to identity development}

From a lifespan developmental perspective, successful identity development involves a “fit” between adolescents’ developmental needs and the opportunities they are afforded in families, schools, and communities.\textsuperscript{15} Three basic needs have been hypothesized to shape adolescents’ self/identity development: the needs for competence, belonging, and autonomy.\textsuperscript{16} We posit three additional needs that mindfulness and compassion training may assist adolescents in fulfilling in healthy ways.

First, in addition to a \textit{need for competence} concerning what one is good at, we propose that adolescents have a \textit{need for wisdom} concerning how to be fully human. Through provisions of wise mentors with embodied life experience; use of wisdom texts, myths, poems, and stories; and philosophical debate and discussion, adults can help youth address this need in healthy, life-affirming ways.\textsuperscript{17}

Second, in addition to a \textit{need for belonging} and gaining social acceptance, we propose that adolescents have a \textit{need for mattering} to one’s groups, community, and society in terms of making significant contributions to them.\textsuperscript{18} Creating real opportunities for youth to resolve conflicts constructively; to make authentic and positive contributions in their families, schools, and communities; and to
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Figure 1.1. Proposed stage-environment fit theory of adolescent development

<table>
<thead>
<tr>
<th>Adolescents’ Developmental Needs</th>
<th>Social Affordances in Family, School, and Community Contexts</th>
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<tbody>
<tr>
<td>Need for Competence</td>
<td>Mindful Parenting</td>
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<tr>
<td>Need for Belonging</td>
<td>Mindful Teaching and Schools</td>
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<td>Need for Autonomy</td>
<td>Mindful Coaching and Communities</td>
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<td>Need for Wisdom</td>
<td>Wise Mentors</td>
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<td>Need for Mattering</td>
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<tr>
<td>Need for Self-Transcendence</td>
<td>Youth-led Conflict Resolution</td>
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<td>Community Kindness Projects</td>
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<td>Mindfulness and Compassion Practices</td>
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<td></td>
<td>Physical Practices (for example, tai-chi, yoga) Mindful Arts, Music, Dance</td>
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<td></td>
<td>Being in Nature/Quietude</td>
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<td></td>
<td>Silent Retreats</td>
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reflect on these processes, all represent activities that may assist adolescents in fulfilling these needs in healthy ways.

Third, in addition to a need for autonomy concerning who one chooses to be as a person, we propose a need for self-transcendence during adolescence, for losing oneself in something beyond self. There are a multitude of secular avenues available to cultivate healthy forms of self-transcendent awareness and prosocial motivation during adolescence. These include the arts; music and dance; martial arts and tai-chi; games, stories, and films; being in nature; collective acts of kindness; and so on. We believe secular mindfulness and compassion training may provide adolescents with a healthy means of fulfilling their needs for wisdom, mattering, and self-transcendence. In so doing, such trainings may also support healthy identity development.

In the next section, we define mindfulness and compassion as used here, describe some basic mindfulness and compassion practices used with adolescents, and describe some of the kinds of skills
and dispositions associated with doing such practices that support adolescents’ healthy identity development.

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**Defining mindfulness and compassion**

Substantive, consensual definitions of mindfulness and compassion remain elusive. Young defines mindfulness as an attentional skillset comprised of *concentration* (the ability to focus on what you consider to be relevant at a given time), *sensory clarity* (the ability to keep track of what you’re actually experiencing in the moment), and *equanimity* (the ability to allow sensory experiences to come and go without suppression or avoidance; or over-identifying with experience as in personalization or attachment). Compassion may be defined as the capacity to feel, and wish to relieve, the suffering of others.

Functional definitions of mindfulness and compassion focus on specific practices used in trainings and how they function to cultivate specific skills, dispositions, and related outcomes. For instance, in adults, mindfulness practices have been linked to changes in attention and emotion regulation skills, clarity of somatic and emotional awareness, and perspective on self. Such practices, in part through these processes, have also been associated with reduced stress, improved well-being and health, enhanced academic performance, and prosocial behavior. Similarly, in adults, loving-kindness (LK) and compassion practices that involve the mindful cultivation and extension of feelings of kindness, love, and forgiveness to self and to others have been linked to changes in emotional awareness, emotion regulation, empathy, and feelings of self-kindness and social-connectedness. In turn, such practices are linked with reduced stress and improved health and well-being.

Previous research findings indicate that mindfulness and compassion trainings can cultivate a specific set of expert skills and dispositions in adults. These include self-regulatory (focused attention) and social-cognitive skills (perspective taking), habits of
self-awareness and self-evaluation (self-compassion), and motivational dispositions (generosity). For the developmental period of adolescence, this subset of skills and dispositions is critical for four reasons: (1) they are centrally related to the core life-task of adolescence-psychosocial identity development; (2) they have known neural correlates that evidence plasticity during adolescence; (3) they are known to be malleable in adults through even relatively short-term (four hours to eight weeks) secular mindfulness and compassion trainings; and (4) these skills and dispositions appear to mediate between training (practice) and outcomes (for example, stress, well-being, and learning).²⁹

Secular mindfulness and compassion practices with adolescents

Next, we describe four basic mindfulness and compassion practices that are commonly used and researched with adults and have been adapted for use with adolescents, and how these practices may cultivate expert skills and dispositions.³⁰ Each practice should be delivered in the context of broader curricula and a competent instructor, as both the practices and such broader contexts theoretically affect their outcomes.³¹

Focused attention meditation

Focused attention (FA) meditation is a foundational mindfulness and compassion practice characterized by a one-pointed focus on a chosen object (for example, the breath, external sound, an image) for a sustained period of time, and a nonelaborative, nonjudgmental, gentle observing and redirecting of attention upon noticing that it has drifted from the chosen object.³² The emphasis upon one-pointedness and monitoring increasingly enhances focused attention and mindfulness of mental and physical states (in contrast to mind-wandering and mindlessness). In addition, repeated returning of attention to the chosen object and not reacting emotionally or becoming self-critical increasingly cultivate emotion regulation.
and self-compassion (in contrast to emotional reactivity and self-criticism).\textsuperscript{33}

\textbf{Open monitoring meditation}
Open monitoring (OM) meditation, often introduced after an individual has some experience with FA meditation, is characterized by the absence of attentional focus on any particular object in favor of a momentary attentional focus on whatever arises in one’s present experience (for example, sensations, feelings, thoughts). In OM meditation, one attends in a choiceless and non-attached way to their moment-to-moment flux of experience. One may momentarily direct attention toward any sensation, feeling, or thought that arises, note it, then release it and attend gently and receptively to the next moment.\textsuperscript{34} Attending to present experience is thought to cultivate emotional equanimity and regulation (rather than emotional reactivity), mindful awareness (rather than mindlessness of bodily and mental states), and a mode of experiential self-reference based on one’s body/mind-here-and-now (rather than a mode of narrative self-reference based on one’s concepts of self-then-and-there). By gently returning the mind to an open and receptive stance in the present when it wanders, emotion regulation and self-compassion (rather than emotional reactivity and self-criticism) are cultivated.\textsuperscript{35} Several studies of FA and OM meditation practices with adolescents have shown the acceptability of these approaches, and their preliminary efficacy with regard to reducing emotional reactivity and distress, and enhancing well-being.\textsuperscript{36}

\textbf{Loving-kindness meditation}
The practice of LK meditation is characterized by visualization (of self and others) and then the cultivation and extension of feelings of love, kindness, and forgiveness—first toward oneself, and then progressively “outward” toward a good friend, a neutral person, a difficult person, all four equally, and eventually everyone everywhere.
LK meditation may cultivate or augment a number of skills and dispositions, including: (1) focused attention (developed by focusing on specific images of self and others); (2) self-compassion (developed by cultivating positive feelings toward self); (3) other-oriented dispositions (kindness, empathy, compassion, altruism, forgiveness, generosity); (4) inclusivity (rather than in-group favoritism); (5) emotional regulation, equanimity, and perspective-taking (through emphasis upon love and kindness for self, and those loved, liked, and neutral, and through focusing on those perhaps disliked who have transgressed the self in ways that transcend self-interest). There are almost no published studies of examining the effects of this meditation practice with adolescents.\(^{37}\)

**Mindful movement**

Practices involving mindful movement (MM; for example, yoga or tai-chi) train attention through a focus on the breath and the whole body. Similar to the other practices, mindful movement practices cultivate focused attention, mindful awareness, and a mode of experiential self-awareness based on one’s body here-and-now (rather than a mode of narrative self-awareness based on one’s memories of self there-and-then). By gently returning the mind to the pose when one notices it wanders, these practices also cultivate emotion regulation and self-compassion.\(^{38}\) Because the focal object of attention in mindful movement practices is the body and breath, the “transfer” of insights from the practice to action in the world is concrete and may be particularly beneficial for youth (for example, awareness of states of tension and relaxation in the body and breath, attention to posture). Mindful movement is a strong predictor of stress reduction in adults, and several studies with adolescents have shown the acceptability of these practices, as well as their preliminary efficacy with regard to reducing emotional reactivity and distress, and cultivating well-being.\(^{39}\)

In sum, these practices cultivate skills and dispositions that foster regulation and tranquility of body and mind, awareness of self (body/mind) and others, kindness and empathy, and well-being.
Because the research on the use of mindfulness and compassion training practices with adolescents is still in its infancy, the final part of this chapter is devoted to outlining a future research agenda.  

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**Research agenda**

In this section, we discuss five areas for future research that link the above-discussed expert skills and dispositions to the developmental risks and opportunities of adolescence: (1) enhancing self-regulation, (2) enhancing somatic and emotional awareness, (3) promoting compassionate evaluations of self and others, (4) promoting empathy and social-perspective taking, and (5) promoting prosocial motivation and behavior.

**Enhancing self-regulation**

Becoming an autonomous, self-regulating person is a key aspect of adolescent identity development. Self-regulation is defined by Moilanen as “the ability to flexibly activate, monitor, inhibit, persevere and/or adapt one’s behavior, attention, emotions and cognitive strategies in response to direction from internal cues, environmental stimuli and feedback from others, in an attempt to attain personally-relevant goals” (p. 835). Self-regulation is critically dependent on the ability to focus and sustain attention, and to a suite of interrelated higher-order mental processes (for example, cognitive flexibility, working memory, inhibitory control or “cool executive function (EF)”) necessary for the conscious maintenance, reflection upon, and integration of information in the mind. Attention regulation and executive function are critical to every aspect of adolescent behavior, including higher-order learning in secondary school, and the processes of self-understanding and self-reflection in identity development. One key question yet to be investigated is whether or not various forms of meditation might enhance adolescents’ attention regulation and cool executive function.
Self-regulation is also related to “hot” EF or emotion regulation, defined as conscious and intentional regulation of thought, emotion, and action in the context of motivationally salient, emotionally arousing stimuli, and as the modulation of the time course of emotional responding and recovery.⁴⁴ A prototypic example of emotion regulation is delay of gratification, in which an individual, in the presence of a motivationally salient and immediate reward, must regulate the prepotent desire for that reward in order to fulfill some longer-term valued goal or outcome. Emotion regulation is critical to every aspect of adolescent behavior, including decision making and risk taking, mental health, school learning, and quality of peer and parent relationships.⁴⁵

Research has shown that (a) EF-related self-regulatory and self-reflective abilities continue to develop in important ways during adolescence, (b) such developments are associated with the substantial structural and functional plasticity in neural systems involving prefrontal and parietal cortices that occurs during adolescence, and (c) both the self-regulation of emotion (“hot EF”) and of thought (“cool EF”) develop over the entire course of adolescence.⁴⁶ Strengthening adolescents’ self-regulatory competence to regulate stress and emotional reactivity to perceived rewards (for example, risk taking, peer approval) and threats (for example, physical attack, social rejection), as well as reducing social hazards (for example, handgun access), are important directions in positive youth development work.⁴⁷

Mindfulness and compassion training programs may prove helpful in these regards.⁴⁸ The refined present-moment awareness and nonjudgmental acceptance that is cultivated by mindfulness training may enhance individuals’ sensitivity to affective cues in their bodies and minds that signal the need for emotion regulation.⁴⁹ Additionally, refined awareness may also enhance sensitivity to environmental cues likely to trigger affective reactions and thus enhance positive forms of behavioral avoidance. Research with adults documents that mindfulness training improves both the awareness and regulation of emotion.⁵⁰ A question for future research is this: Can mindfulness training improve
adolescents’ emotion regulation in contexts of challenge and emotional arousal (rewards, threats) ranging from the classroom, to the peer group, to the home with parents and siblings?

**Enhancing somatic and emotional awareness**

Another important dimension of identity development in adolescence closely related to self-regulation is *experiential self-awareness*, or their awareness of their body and emotional experiences. Research has documented at least two forms of self-awareness—an “experiential” awareness, anchored in the body, sensations, and feelings “here-and-now”; and a more “conceptual/narrative” awareness, based in memories of “me-there-then.” The conceptual self is most familiar (for example, our beliefs about ourselves). The experiential self is “before language” and arises from *exteroception* (the processing of information from the senses of the body, for example, sight or touch), *interoception* (the processing of information from internal senses associated with pain, body temperature, digestion), and feelings that the two streams of information accompany (positive, neutral, negative).  

Mindfulness and compassion training may promote optimal development by shifting adolescents’ habitual mode of self-awareness from the narrative mode to the experiential, which may have relevance for a number of desirable outcomes. The ability to stay present in one’s body may facilitate (a) an understanding of the effect of our emotions on behavior, and therefore when regulation of emotion is needed; (b) an awareness of whether or not aroused emotion is likely challenge or hinder the pursuit of personally relevant, long-term goals; (c) an ability to be resilient during setbacks that are stressful or demoralizing by helping one stay grounded in the present moment and the task at hand, rather than allowing oneself to ruminate and get trapped in limiting self-beliefs; and (d) a capacity for awareness of and empathic listening to others in the present moment, rather than reliance on social stereotypes.

Farb and colleagues found that through FA and OM meditation, a decoupling of these two distinct forms of self-awareness...
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(experiential and conceptual) is possible. In essence, one can be “here and now” and not “in one’s heads” through training. The question of whether mindfulness training can shift adolescents’ habitual mode of self-reference toward the experiential, especially in high-stress situations where narrative beliefs that affect behavior are automatically activated (for example, school tests, peer interactions), is worthy of future investigation.

Promoting compassionate evaluations of self and others

The development of a disposition to evaluate oneself and others with kindness and compassion is another dimension of healthy adolescent identity development. Following puberty, research shows that feelings of sexual and social interest, self-consciousness regarding one’s body and behavior, and anxieties concerning one’s peer and parents, self-worth, and “authentic” self all increase. With increased self-reflective and social-perspective taking capacities, the period after puberty is also a time when making complex evaluations of the attributes of self and others (positive–neutral–negative) become important aspects of self/identity and social development. For instance, the self-evaluation of personal attributes (for example, “my positive social competence”) is a key underpinning of self-worth; and the self-evaluation of others’ attributes is a key aspect of peer selection and subsequent peer influence during this period.

Thus, the conjunction of puberty, the beginning of the self-reflective quest for identity, and a strong social orientation underlie adolescents’ increased tendency to think about and evaluate themselves and others. By holding an image of self or other in mind (for example, working memory), comparing and evaluating (for example, mental flexibility), and reflecting (for example, monitor) on such images, adolescents gradually integrate collections of perceptual attributes regarding self and others into increasingly abstract, cultural/linguistic labels, categories, and attributes—for instance “smart/dumb,” “kind/mean,” or “friend/foe.” The result is the development of abstract conceptual belief systems regarding the
(relatively fixed) positive and negative attributes of oneself and other people.57

The process of constructing abstract conceptions of self and others is powerful. Over time, self-attributes are increasingly organized by social roles (friends, sibling), domains (school, sports), and by temporal, thematic, and causal coherence in the form of a life-story.58 At the same time, this process also leads to new vulnerabilities. In early adolescence, for instance, contradictions in newly ascribed, abstract self-attributes (for example, “I’m nice to friends, but mean to my sister”) and in self- versus other-ascribed self-attributes (for example, “I think I’m nice but my sister says I’m mean”) give rise to reflections and anxieties concerning one’s “authentic and false selves.”59 The process of developing more abstract beliefs about self and others can also lead to reductive distortions and reifications regarding self (for example, “I will never be any good”) and others (for example, “He will never be a good person”). Increases in depressive symptoms, among early adolescent girls, for instance, are associated with negative self-evaluative beliefs (for example, poor body image or sense of self as unworthy) that are viewed as stable or fixed (“ugly” or “unlovable”).60

Given these opportunities and vulnerabilities, and developmental plasticity in the psychological and correlated neural systems associated with self-reflection and social perspective taking on the one hand, and self-evaluation and social evaluation on the other, enrichment activities that target such processes with the aim of cultivating kind and compassionate, rather than critical and fearful styles of evaluating self and others, seem important during adolescence.61

Mindfulness and compassion practices may assist in this regard by cultivated focused attention, emotion regulation, and present-centered experiential self-awareness (for example, FA and OM meditation), and by enhancing the construct accessibility of images of oneself and others that are infused with feelings of love, kindness, and compassion (LK and SC meditations).62 By cultivating familiarity with loving images over time through meditation,
such images hypothetically become highly accessible in memory and are therefore more likely to be activated and be applied automatically in everyday life. In one randomized control trial, for instance, just a few minutes of LK meditation was found to increase feelings of implicit and explicit social connection toward novel other people.\(^63\) Research on whether or not such practices can induce lasting changes in adolescents’ self/other evaluations has yet to be conducted.

**Promoting empathy and social-perspective taking**

Learning to attend to others with empathic curiosity and to take others perspectives is a key part of adolescents’ development of identity and intimacy.\(^64\) Blakemore and Mills propose that changes during adolescence in areas of the brain associated with social cognition lead to heightened sensitivity to sociocultural signals in the environment, particularly acceptance by peers; fear of social rejection; and the intentions, beliefs, and desires of other people.\(^65\) Social cognition—defined as the human ability to perceive, comprehend, and use social information in our interactions with others—encompasses both an emotion-centered empathy system and a cognition-centered social-perspective taking system.\(^66\) Research shows that the SPT system, as well as its interrelationship with temperament and the empathy system, undergoes significant developmental transformation during adolescence.\(^67\) Specifically, adolescents are learning to integrate “bottom-up” somatic and emotional information from the empathy system with “top-down” acquired knowledge and contextual information from the SPT system to frame appropriate social interactions with other people. Thus, strengthening the interconnection between these systems through systematic training might increase adolescents’ social-cognitive skills.

Compassion training in adults, for instance, has been linked to changes in prosocial behavior and the neural correlates of emotional awareness, empathy, and SPT.\(^68\) Condon and colleagues found that emerging adults who received eight weeks of mindfulness training were more likely to behaviorally respond to
relieve the suffering of another person compared to controls.\textsuperscript{69} This work suggests that training-induced plasticity in social cognition, and the behavioral consequences of such changes, is possible with relatively short-term training in adults. Studies of these same issues with youth have yet to be done.

**Promoting prosocial motivation and behavior**
Prosocial motivation and behavior are key “self-transcending” components of a healthy identity.\textsuperscript{70} Prosocial motivation has been defined as the expressed wish to help others in need, whereas prosocial behavior can be defined as “behavior that benefits other people” (p. 2).\textsuperscript{71} Research shows that prosocial behavior requires empathy, emotion regulation, and an intention to go beyond the self to contribute to others.\textsuperscript{72} Frankl described the value of self-transcendent motivations for being fully human in this way:\textsuperscript{73}

...being human always points, and is directed, to something, or someone, other than oneself—be it a meaning to fulfill or another human being to encounter. The more one forgets himself [sic]—by giving himself to a cause to serve or another person to love—the more human he is and the more he actualizes himself...self-actualization is possible only as a side effect of self-transcendence. (p. 115)

Cultivating self-transcendent, prosocial motivation and behavior as a valued road to happiness among adolescents is another hypothesized outcome of mindfulness and compassion training.\textsuperscript{74} Whether or not mindfulness and compassion training for adolescents can cultivate motivational dispositions like kindness, generosity and altruism, and behaviors that follow remain open questions at this time.

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**Summary**
In this chapter, we proposed that adolescence brings with it unique needs for wisdom, mattering, and self-transcendence. Furthermore, we proposed that mindfulness and compassion training are
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among the many healthy ways that family, school, and community settings can support adolescents in fulfilling these needs during a time when identity and existence become “a problem and a question.” We briefly introduced Contemplative Developmental Science as a new, interdisciplinary study devoted to such topics. We then (a) described mindfulness and compassion substantively and in terms of specific practices and outcomes like health, well-being, and learning; (b) explained some of the psychological skills and dispositions that are developed by mindfulness and compassion training, and through which, such trainings are thought to have their salutary effects on outcomes; and (c) created a future research agenda on how adolescents’ identity development might be optimized through the introduction of mindfulness and compassion training. We did not have time to discuss the importance of offering such trainings to the parents, teachers, and other caregivers who help raise adolescents, something we believe is important as well.75 We look forward to the results of future research on the kinds of questions we laid out. This work will bear on the broader issue of whether or not mindfulness and compassion trainings can contribute to the formation of adolescent identities that transcend but include self-interests alongside the interests of others, eschew pseudo-speciation in favor of love of humanity as a whole, and lead in the directions of being fully human in a global age.

Notes


32. Lutz et al. (2007).

34. Lutz et al. (2007).


63. Hutcherson et al. (2008).


70. Lerner et al. (2003).


75. MLERN. (2012).

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