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Start Early: Promoting Mindfulness in Primary Schools to Delay the Onset of Stress [The last paper of this journal explains how promoting 'mindfulness' in primary school education could provide a means of enhancing student wellbeing at school. It was written by a 4th year pre-service primary school teacher]

Cagla Dincsoy
University of Wollongong

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Abstract

Primary schools are the foundational stages in the education system – an extensive seven-year period that offers both growth and development to students. During this time, an individual's wellbeing, that is, the way an individual feels, interacts, moves, mentally functions and personally devotes themselves, is in constant evolution (DEC NSW, 2015). Healthy wellbeing is dependent on constant interaction with positive change, however, environmental factors may potentially pose negative distress, causing personal wellbeing to enter a state of imbalance (DEC NSW, 2015). This paper explains how promoting 'mindfulness' in primary school education, could provide a means of reducing the prevalence of psychosocial stress and enhancing overall performance at school. The practicality of this article is supported with age-related developmental and ethical considerations associated with implementing mindfulness interventions, along with a discussion of research findings.

Start Early: Promoting Mindfulness in Primary Schools to Delay the Onset of Stress

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Abstract

Primary schools are the foundational stages in the education system – an extensive seven-year period that offers both growth and development to students. During this time, an individual’s wellbeing, that is, the way an individual feels, interacts, moves, mentally functions and personally devotes themselves, is in constant evolution (DEC NSW, 2015). Healthy wellbeing is dependent on constant interaction with positive change, however, environmental factors may potentially pose negative distress, causing personal wellbeing to enter a state of imbalance (DEC NSW, 2015). This paper explains how promoting ‘mindfulness’ in primary school education, could provide a means of reducing the prevalence of psychosocial stress and enhancing overall performance at school. The practicality of this article is supported with age-related developmental and ethical considerations associated with implementing mindfulness interventions, along with a discussion of research findings.

Key Terms: Mindfulness, Mindfulness-Based Interventions, Primary School, Students, Psychosocial Stress, Psychosocial Stressors & Wellbeing.

Introduction

‘Mindfulness’ encompasses an individual’s mental state or “inner experience” (Costello & Lawler, 2014, p. 23), whereby mechanics of the brain work together to foster a sense of awareness to the present moment of existence (Siegel, 2007 cited in Costello & Lawler, 2014). Within this state of consciousness, an individual’s focal attention is directed toward the co-existence of oncoming “sounds, words, or outside noise” (Brantley, 2007 cited in Costello & Lawler, 2014, p. 23) along with the internal “sensations of ... breath ... [and associative] thoughts in the mind” (Brantley, 2007 cited in Costello & Lawler, 2014, p. 23). With habitual practice mindful behaviours can seamlessly become part of an individual’s mental activity and offer an individual control over the power to produce a response to the presented stimuli, ideally a response that is indicative of a “non-judgmental, objective, non-elaborative stance” (Burke, 2010, p. 134). Essentially, living in a state of mindfulness produces consciously aware inhabitants who do not “simply exist ... [but instead] decide on what ... [their] existence will be, and what ... [they] will become in the next moment” (Frankl, 2006, p. 154). This state exists in the space between encountering the stimulus and producing a response, where “in that space is our power to choose our response” (p. 154).

Scientific classification of stress as a physiological state

The manifestation of stress within the human body persists in accordance with the presentation of psychosocial stimuli, also known as stressors, which originate from “real or imagined environmental events” (Everly & Lating, 2013, p. 27) and have the potential to provoke incidental or deliberate stress. The initial

manifestation process of stress resides primarily in the brain, with 'cognitive appraisal' (cognitive interpretation) and 'affective integration' (emotional reaction) working together to perceive the stressor and ultimately elicit a stress response (Everly & Lating, 2013). As part of this partnership, cognition is seen to have a superior role in the process of constructing an individual's behavioural stress response, primarily for the reason that cognitive appraisal of the stimulus determines the emotions to be expressed, thus, if it is one of "threat, challenge, or aversion" (Everly & Lating, 2013, p. 30), the limbic system (midbrain) is more likely to produce intensified emotional arousal. In such situations of adversity and distress, the amygdala in the midbrain, which is primarily responsible for the emotional control centre, becomes activated, driving the body into a state termed by physiologist Walter Cannon (1953) as 'fight-or-flight'. Here, the pituitary gland regulates the hormonal release of epinephrine (adrenaline) and norepinephrine (noradrenaline) from the endocrine gland, which spreads throughout bodily tissue and prepares the body for muscular-related activity, on whether it should approach or flee the perceived threat (Everly & Lating, 2013).

With relevance to the school context, the consequential impact of stress upon students' academic performance is partly attributed to the activation of the midbrain section, as it solitarily fixates students' attention and control on the exertion of "sensory processes" (Napoli, Krech, & Holley, 2005, p. 104) when under great stress, for instance auditory (hearing), visual (sight) and motor activity related functions, which ultimately reduce ones engagement with "higher-ordered cognitive processes" (Badre & Wagner, 2002 cited in Napoli, Krech, & Holley, 2005, p. 104). Apart from these immediate consequences, stress that is periodically persistent can place the body "in a physical state of overdrive ... a depleted immune system ... [and] a cycle of exacerbated stress" (Napoli, Krech, & Holley, 2005, p. 104) due to the continual release of stress hormones, thus posing detrimental effects upon students' long term academic performance. However, research shows that a correlation between stress and academic performance is uniquely dependent on an individual's "biological predispositions" (Millon & Everly, 1985 cited in Everly & Lating, 2013, p. 28), including personality patterns (Millon, Grossman, Millon, Meagher, & Ramnath, 2004 cited in Everly & Lating, 2013, p. 28), learning history (Lachman, 1972 cited in Everly & Lating, 2013, p. 28), but also available resources for coping (Lazarus, 2006; Lazarus & Folkman, 1984 cited in Everly & Lating, 2013, p. 28), which can become particularly enhanced through the implementation of mindfulness based interventions.

Outlining psychosocial stressors subject to exacerbating stress

The education system is characterised by a diverse range of students, who inevitably bring with them to school unique backgrounds and experiences, some of which are extensively adverse in nature due to the causation of stress provoked by the active threatening agents apparent within the presented psychosocial stressors. In simple terms, psychosocial stressors identify as a multitudinous range of "environmental events" (Everly & Lating, 2013, p. 27) mediated in the form of "real, imagined, anticipated, or recalled..." (p. 27) instances. Interestingly, a pre-requisite criterion concerning the nature of psychosocial stressors is that it initially constitutes its form as a psychosocial stimulus, meaning that the severity of the threat it imposes surpasses cognitive appraisal and affective

interpretational processes within brain in order to classify as a psychosocial stressor (Everly & Lating, 2013).

Commonly, psychosocial stressors include but are not limited to contextual circumstances such as “unsafe or dilapidated housing” (Napoli, Krech, & Holley, 2005, p. 104), or “poverty” (Barnes et al., 2003, cited in Rempel, 2012, p. 204) due to a lack of adequate resources to meet basic survival needs, “classism, racism and religious oppression” (Napoli, Krech, & Holley, 2005, p. 104) are also of concern as students inevitably become subjects to such societal attitudes as well as unstable socio-emotional structures, including “parental divorce, death of a loved one” (Parker & Roy, 2001 cited in Rempel, 2012, p. 204) or the “breakdown of relationships with friends and/or family” (p. 204). Moreover, compilations of research findings have linked certain groups of disadvantaged student backgrounds to certain types of psychosocial stressors in order to provide a more specific insight, they include ‘vulnerable’ children who are susceptible to the “deleterious effects of abuse, neglect, loss, trauma, and family dysfunction” (Fisher et al., 1997, cited in Coholic & Eys, 2016, p. 2), ‘low-socioeconomic’ children who may face “greater risk of poverty ... an increased prevalence of stress and mental health problems” (Dore, 2005 cited in Costello & Lawler, 2014, p. 22), whilst ‘minority ethnic groups’ are those sufferable of “physical abuse and family violence” (Costello & Lawler, 2014, p. 22).

As a result of these prevalently existing psychosocial stressors, students as young as those in primary school have closely become a focus for mindfulness-based-interventions (MBIs) in educational settings over the years (Coholic & Eys 2016). This is further represented from the findings of an Irish national longitudinal study, where “just over three-quarters of nine-year-olds” (Minister for Health and Children, 2009, p. 85) within the scope of one year have experienced confrontational encounters with “some form of stressful life event” (p. 85).

Rationalising the appropriateness of Mindfulness in Primary Schools

A substantive point reiterated within literature, which supports the implementation of mindfulness-based interventions as early as within the primary school setting is attributed to the finding that childhood, as a developmental stage is most open to “positive psychological growth” (Coholic & Eys 2016, p. 2). Associatively, given that primary schools encapsulate a large component of the childhood phase, it can be supported that the use of mindfulness-based techniques offer credential value, as it serves as a remediation strategy in combat of negative psychological problems thereby weakening the correlation between “childhood stress” (Napoli, Krech, & Holley, 2005, p. 104) and the persistence of such stress, as a “precursor” (p. 104) into adulthood. Moreover, research findings also suggest that alongside other strategies, promoting mindfulness is important for it partially contributes to the pedagogical goal of improving students’ academic performance, especially in primary schools as it is a phase characterised by high responsiveness to the “refinement and consolidation of academic behaviours regarding “cognitive thinking and conceptual skills” (Lawlor, Schonert-Reichl, Gadermann & Zumbo, 2014, p. 731). Furthermore, mindfulness is a state in need of “ongoing practice” (Saltzman & Goldin, 2008, p. 151) and so the primary school setting is an ideal environment to

build foundational behaviours that contribute to positive psychological growth and improved academic performance, whilst persisting “into adolescence and on into adulthood” (Schonert- Reichl & Lawlor, 2010 cited in Coholic & Eys 2016, p. 2).

Age-related developmental considerations regarding the implementation of Mindfulness interventions

An extensive variety of mindfulness-based interventions exist to eradicate the consequential impacts of psychosocial stress amongst mature-aged populations, however as means of ethically and reliably remediating stress-related problems with younger audiences interventions need modifications with due consideration given to the age-related developmental needs of primary school students.

In Mindfulness-Based Cognitive Therapy for Children (MBCT-C) Lee, Semple, Rosa and Miller (2008) as the researchers have made considerable adjustments for the functionality of the intervention to suit an audience of primary school students. In order to do so, the self-regulating feature from their previous intervention with depressed adults became substituted with “active parental involvement” (p. 20) in the current program. Amongst a population of young students, self-regulation signifies ones potential to independently engage in mindfulness practice alone, which commonly exceeds beyond the adepts and capabilities of the young students concerned. Therefore, students’ dependence on external sources of family support due to predominant amounts of their time immersed within their family-homes is a need that is catered for with such modification, as parents in the intervention provided encouragement to their child during “home practice exercises” (p. 20) as well as with “mindful speech, intentions, and behaviours at home” (p. 20).

As part of their research, Lee et al. (2008) have also considered the cognitive capabilities of primary school students to be an affiliate component in the modification process, as there are significant variants that exist between the cognitive functioning of children and adults, for example students’ cognition is more characteristic of a “less developed memory and attentional capability” (Posner & Petersen, 1990; Siegler, 1991 cited in Lee et al., 2008, p. 2). In response to younger students’ lack of fluency with retrieving information more repetitious sessions were employed in the 12-week program, which involved an initial “brief sitting meditation, then a review of the prior week’s session, followed by a group discussion of the home practice exercises” (Lee et al., 2008, p. 20) as well as the inclusion of brief therapy sessions to compensate for students’ shorter attention span where 30-minute reductions were applied to the original time session conducted with adults. Similarly in another exploratory study adaptations regarding students’ shorter attention span were also considered by reducing the interventions time length, whereby Costello and Lawler (2014) presented three-minute intervention sessions increasingly reaching a maximum of 12-minutes during the final week.

Mendelson et al. (2010), alongside Lee et al. (2008), have congruently proclaimed that the type of modality in which the mindfulness activities are performed directly influences the degree to which participants fully commit themselves to

engage in the intervention. With adult populations, interventions predominantly encourage the stimulation of mindfulness to occur through activating ones “abstract thinking and logical analysis” (Lee et al., 2008, p. 20) for the purpose of “identify[ing] and verbalize[ing] affective experiences” (p. 20), however the applicability of such task to “latency age children” (p. 20) presents difficulties due to their “limited capabilities with... abstract reasoning, and conceptualization” (p. 20). In order to compensate for this age-related developmental need, these researchers have employed mindful activities that are “participatory and interactive, offering a wide variety of multisensory experiences” (Lee et al., 2008, p. 20), such as Mendelson et al.’s (2010) selection of yoga, body scan, meditation, breathing exercises, and Tai Chi. As a result, students’ capacity for attention and awareness during the intervention were effectively sustained as traditionalised forms of mindfulness utilised invigorating approaches with movement, serving as an appealing outlet for children to exert youthful energy.

Coholic and Eys (2016) as the researchers of a mindfulness Holistic-Arts Based Program (HAP) affirm that in their research interventional activities, which involve students in multi-sensory experiences offer promising results particularly with difficult children such as those typified to be categorically vulnerable as they experience “problems [with] listening, paying attention, and discussing their experiences, feelings and thoughts” (p. 2). The intervention found that they were engaged in a “creative and meaningful manner” (p. 10) as they responded well to the visually aesthetic task of transcribing ones feelings onto paper and the kinesthetically rich task of sculpting what they are thinking and feeling. This is partly attributed to the fact that students are supported with many outlets, not just a sole limitation to remaining ‘still’, which is a common characteristic amongst traditional mediation methods (Coholic & Eys, 2016).

How Mindfulness interventions contribute to students’ overall wellbeing

According to the Wellbeing Framework for NSW public schools (DEC NSW, 2015), ‘wellbeing’ is a term given to the holistic quality of a person’s life. The Wellbeing Framework is referred to below to demonstrate how the findings from existing mindfulness-based interventions specifically relate to some of the five core aspects - physical, emotional, cognitive, social and spiritual (DEC NSW, 2015). The Wellbeing Framework encapsulates more than just the physicality of one’s flourishing bodily performance or the psychological subjectivity to feeling positive emotions, but also other facets that consider the individual from the perspective of a whole, such as cognitive, social and spiritual functioning (DEC NSW, 2015). It is important to mention that such phenomena will be demonstrated using the correlation between mindfulness and wellbeing, as the Wellbeing Framework professes a selection of experiences – “curiosity, courage, resilience, ethics and leadership” (DEC NSW, 2015, p. 4) – that “promoting mindfulness (self-regulation and behaviour)” (p. 4) is influentially impactful for the development of a student’s character as well as their engagement and academic success.

Saltzman and Goldin (2008), as the researchers of a Mindfulness-Based Stress Reduction (MBSR) intervention reveal that according to self-reported measures from grade 4-6 students, improvements were noticeably experienced in areas relating to ones “attention (alertness, switching, cognitive control)” (p. 151),

“emotional reactivity” (p. 151) and “meta-cognition (self-compassion, self-criticism, mindfulness skills)” (p. 151). These findings which are representative of reduced stress contribute to the **emotional** dimension of students’ wellbeing, as improved emotional reactivity represents students’ ability to better cope with the presentation of psychosocial stimuli and the management of their stress response to be less aggravating (Saltzman & Goldin, 2008; DEC NSW, 2015). Improvements with meta-cognition were evidently recognised post intervention from students’ ability to be less judgmental and more compassionate towards themselves, which also presents emotional benefits as students can use self-awareness to let go of any personal ruminative thoughts (Saltzman & Goldin, 2008; DEC NSW, 2015). Furthermore, improved attention as a positive interventional outcome presents **cognitive** benefits to students’ overall wellbeing because the exertion of energy can be used to focus efforts more effectively on the processing and judgment of information (Saltzman & Goldin, 2008; DEC NSW, 2015).

Costello and Lawler (2014) who conducted a mindfulness-based study with 63 primary school students from lower socioeconomic backgrounds reveal, that in accordance with the thematically assessed student and teacher reports, significant stress reductions were apparent during and after the intervention in areas of “concentration” (p. 29), “present moment awareness and calmness” (p. 28) as well as “regulation of classroom behaviours” (p. 31). Evidenced levels of improved concentration through students efforts with re-focussing their attention to their breath amidst the emergence of ruminative thoughts positively represents an element of enhanced **cognitive** quality, as the storage in the brain is consciously emptied to include meaningful processing of knowledge for ultimate achievement and success (Costello & Lawler, 2014); DEC NSW, 2015).

Advancements with students’ self-regulatory efforts to display positive classroom behaviours contributes valuable input to the **social** aspect of students’ wellbeing, as a pro-social intention is demonstrated by students for the desire to create a classroom that is celebratory of warmth, connectedness and mutual respect (Costello & Lawler, 2014; DEC NSW, 2015). Furthermore, students’ usage of breathing techniques to fixate attention on their breath alongside associate bodily sensations such as the rising and falling of one’s shoulders, contributes to strengthening the **emotional** component of one’s wellbeing, as students display a developed sense of resilience to regulate their feelings in times of distress to reach a point of calmness (Costello & Lawler, 2014; DEC NSW, 2015).

Ethical implications of Mindfulness interventions

In educational settings, cultural sensitivity is an important consideration that is at the heart of ethics when it comes to mindfulness interventions. This is attributed to the “multicultural and increasingly secular society” (Hyland, 2013 cited in Hyland, 2015, p. 176) prevalent to students and their families in the current day, which means students, their families and communities may be apart of “diverse traditions” (p. 176) with strong personal perceptions and “approaches to spirituality” (p. 176). Therefore, formal consent (Burke, 2010) is an ideal procedure for seeking students’ permissible participation in mindfulness interventions in negotiation with parents and/or caregivers. Idealistically, this involves outlining the intentions of the research and clarifying the promotion of

no Buddhist beliefs, as well as highlighting that the research is “unequivocally secular in all senses of the term ... aims are essentially pragmatic with ... no reference to the *spiritual* traditions in which mindfulness originated” (Hyland, 2014 cited in Ergas, 2015, p. 206). Parents are sensitive when it comes to their students religion and spirituality, therefore failure to rigorously comply with such ethical matter is known to be the primary cause “standing in the way of incorporating contemplative practices in the curriculum” (Ergas, 2015, p. 206). Non-maleficence is another underlying ethical consideration regarding mindfulness interventions. It concerns the usage of “relevant content” (Burke, 2010, p. 143) where questions are worded sensitively to suit young participants, so that no psychological harm is inflicted to create emotional disturbance and confrontation (Graham et al., 2013).

Conclusion

Mindfulness is not an innate state of being nor does one instinctively produce mindful patterns of behaviour, instead it needs to be learnt and repetitively practiced in order to sustain long-term effects. Teachers, as part of the educational setting can fulfill this role as they have a duty of care, which goes beyond a solitary focus of catering to students’ academic needs (DEC NSW, 2015). Whether it is assisting professionals deliver the intervention or integrating it into the curriculum as an extra-curricula activity (Rempel, 2012), the teaching mindfulness is of great value as it equips students with the coping mechanisms to confront psychosocial stressors and overcome distressing circumstances later on in life.

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