

Review

Mindfulness Based Interventions in School Set-ups – A Review

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ABSTRACT

Mindfulness Based Interventions (MBIs) have potential for cultivating optimal educational needs such as learning, teaching and well-being outcomes in schools. MBIs in schools have increasingly demonstrated acceptability among school based well-being programs and have revealed empirical evidence of their efficacy. Given the developmental significance of childhood and early adolescence periods, it is important to understand and promote their mental health and well being aspects in school environment. MBIs in schools have shown their effectiveness in minimizing mental health risk and thereby promoting well being aspects not only in students but teachers also. However, to date researches on MBIs in schools have yielded varying degrees of effects across grades or levels of school education that create confusion in their universal health and well being promotion. The review aims at advancing the current understanding of MBIs for school children and adolescents by focusing on the identified empirical and methodological limitations along with the benefits of MBIs in school set ups. In addition, the article describes the current challenges and directions for future research attempts.

KEYWORDS: Mindfulness, School interventions, Children and Adolescents, Well-being

INTRODUCTION

The cultivation of fundamental healthy academic skills and values in children and adolescents are needed to flourish across developmental stages and mindfulness is one of the potential paradigm shifts that can foster these flourishing needs. Mindfulness is feasible and a learnable skill that is very important from developmental point of view in children and adolescents and its efficacy has met the intended behavioral and academic outcomes in school settings at large level. This skill is generally cultivated through various forms of formal or informal exercises of mindfulness which require repeated practice. Mindfulness is a learnable skill and can be enhanced through appropriate

developmental sensitive interventions. The word mindfulness can be considered as an umbrella term which consists of several conceptualizations such as a practice of meditation, a state of awareness to the moment to moment experiences and a psychological process, attitude or trait¹. Mindfulness concept has its historical roots in Buddhism philosophy and other eastern traditions. The term mindfulness has eastern underpinnings which is a translation Pali word known as 'Sati' which means bringing awareness and paying attention². However with regard to the concept of mindfulness, some differences have been observed between Eastern and Western conceptualizations of mindfulness which varies from the Buddhist concepts

and practice of mindfulness meditation in the alleviation of suffering to the modern conceptualization of a psychological trait or neurocognitive process³. However, the Western conceptualization of mindfulness is known to be a secular and independent of any specific philosophical orientation and system of practices. Overall all the conceptualizations share a common concept of mindfulness as an introspective awareness with regard to one's moment to moment physical and psychological processes and experiences achieved through repeated practice of paying attention in a particular way by assuming non-reactive or nonjudgmental attitude⁴. Mindfulness involves meditation exercises or practice of being curious about bringing one's moment to moment attention or nonjudgmental observation to the ongoing internal and external experiences as they arise⁵. Due to its universal applicability, mindfulness practice has been expanded to several new settings and populations such as the workplace, parenting practices, military and schools. Mindfulness comprises of two elements i.e. intentional self regulation of attention and adoption of a stance particularly towards one's ongoing moment to moment experiences⁶. From students' developmental point of view, self-regulation of attention is the core component of improved academic motivation and performance among students.⁷

Mindfulness and related interventions can be seen as a universal tool for reducing stress, preventing mental health risks and promoting overall health and well being. Given that the widespread social validity of mindfulness, it is being widely executed as preventive measures across different clinical and non clinical population. Mindfulness techniques have been widely applied for stress reduction across a variety of settings. MBIs are being used as preventive measures across different communities or groups. Given its diverse usefulness and widespread social validity, several attempts have been made to design MBIs for school going students and teachers. Furthermore, incorporation of mindfulness practice in fostering personal development and positive variables through various designed programs indicates its potential promoting and preventing benefits in non-clinical populations⁸. Among these interventions, Mindfulness Based Stress Reduction (MBSR) is the first described MBI consists of eight weeks sessions of various practices developed in 1979 by Dr. Jon Kabat-Zinn in patients with chronic pain and related concerns⁹. Subsequently due to its widespread clinical efficacy, its components in various forms have been incorporated in various psychological interventions. Since then, mindfulness practice has become one of the core ingredients in many of the newer forms of psychotherapeutic interventions known as 'third wave psychotherapy'¹⁰. In the 21st century, the third wave is an important arena of modern psychotherapy that comprises a heterogeneous group of treatments targeting various clinical conditions. Some of the interventions that specifically incorporate the mindfulness components are Mindfulness Based Stress Reduction⁹, dialectical behavioural therapy¹¹, Mindfulness based cognitive therapy¹², Acceptance and commitment therapy¹³, Metacognitive therapy¹⁴, and Mindfulness Based Relapse

Prevention¹⁵. MBIs have been applied in variety of settings clinical and non clinical conditions and plenty of studies have demonstrated their efficacy and utility across diverse clinical and non clinical settings¹⁶.

METHODS

A non-systematic electronic database search was performed for the review purpose which was not limited by the year of publication and attempted to include all types of relevant studies. Being a non-systematic descriptive literature review, no particular inclusion and exclusion criteria were made. All the relevant literature searches, screening of the articles and data were extracted from the various electronic databases and subsequent bibliographic searches of retrieved articles. Electronic databases included PubMed, Science-Direct, IndMed, PsychInfo and Google Scholar. All the articles published only in the English language in various journals were included. The key term 'Mindfulness Based Intervention in School' with a combination of three or more related terms along with the application of truncation symbol (*) to the basic search were used to screen the relevant studies. After summarizing the all the relevant data, critical appraisal and conclusion were made.

MINDFULNESS IN SCHOOL SETUPS

School is a universal platform or setting where children and youth can gather at large level and at this place various growth and well-being promotion programs can be implemented (WHO, 2017). Apart from educational benefits, schools are also important for improving health and well being¹⁷. In terms of growth and well-being promotion programs in school set ups, mindfulness practice is considered as the facilitator of the basic foundation and pre-academic condition for formal education in school children¹⁸. Schools have been recognized as an appropriate setting for promoting growth, mental health and well-being across various age levels of children and adolescents¹⁹. With respect to the role of mindfulness in the educational system, the concept of contemplative education has emerged to see the effects of mindfulness on teachers and students in educational settings²⁰. Several mindfulness programs have been designed to address the needs of community or non clinical populations and an infusion of mindfulness practice in school setups is one such emergence that has now become one of the major milestones in achieving optimal flourishing needs, mental health and well beings aspects of school students. A recent surge of interest regarding MBIs in school settings may be attributed to its quality of being secular, versatile and related accumulating publications of some well-designed empirical studies across community settings. Among these population school students and teachers are increasingly becoming aware of the beneficial effects of mindfulness practice. Infusion of mindfulness in school settings and related literature can be described in the following two subsections of mindfulness for school students and teachers.

CULTIVATION OF MINDFULNESS IN SCHOOL STUDENTS

Mindfulness in school education now has become a flourishing movement that offers potential for widespread implication and benefits. Mindfulness training has been widely incorporated in school well-being programs that provide effective support in minimizing mental health problems in school students²¹. Children and adolescents frequently encounter adjustment problems and experience stress related symptoms in school settings²², which is thought to have an impact on the development of their brain²³. Mindfulness helps school children adapt to their developmental needs and it mainly focuses on improving the pro-social behavior and self regulation skills in them²⁴. Furthermore with respect to academic performance, learning progress among students has been noticed overtime with the help of regular practice of mindfulness²⁵.

Childhood and early adolescence period is considered as a critical or developmentally sensitive period which needs attractive early interventions or programs to ensure their optimal growth. In school setups, attention and emotional processing plays a major role in their academic performance and overall development. However in school children, the targeted major intervention outcome in most of the studies has been emotional well-being²⁶. Furthermore, the developmentally appropriate processing of emotion has been identified as one of the positive factors in children and adolescents that help them deal or cope adequately with adverse life situations such as identity crisis, grief reaction, natural disasters and the current ongoing pandemic conditions²⁷. Additionally in the last few years, COVID-19 pandemic condition has changed the overall family patterns and interactions that are leading to increased levels of stress for many children and youths. Especially the school closures following the pandemic have impacted the academic growth and achievement of school students.²⁸

Given that the current pandemic situation, digital or technologically assisted interventions are being increasingly utilized to bring about successful outcomes in academic performance. Furthermore, technologically assisted well being resources for students are needed in today's digitalization world which can be designed and presented in an attractive and easily accessible way for this population. In line with this a study assessed the feasibility and effectiveness of an audio-guided mindful awareness training program on school children, a study revealed improvement in student academic performance following the practice of mindfulness²⁹. Several mindfulness based programs and curriculum have been designed to address the needs of school students such as Mindful Schools³⁰, Learning to BREATHE³¹, Attention Academy Program³², Mindfulness in Schools Program³³, MindUP program³⁴ and MINDFUL YOGA³⁵ are some of the widely known programs.

Recently a study examined the effectiveness of one of the MBIs known as 'Mindkinder programme' in promoting school

success³⁶. The study has shown significant improvement in various school related variables such as school related adjustment, behavioural problems, and related successful outcomes in the children with elementary education. The study further revealed that MBIs can be effective in improving and promoting school adjustment and school outcomes in early childhood education. An another study conducted by Jones & Lee (2022) assessed the effectiveness of 'Let Art Unleash Great Happiness' (L.A.U.G.H.) which is a culturally responsive art based mindfulness intervention on elementary school students that resulted in improved students' moods, curiosity and joy of learning over time. Furthermore, in order to teach mindfulness skills in a developmentally appropriate way, few specific mindfulness curriculum, such as Mindful Schools³⁷ and Learning to BREATHE³⁸ for adolescents in a classroom setting have also been designed to enhance adolescents' attention, emotion regulation skills and academic performance through the practice of mindfulness.^{39,38}

Schools carry a huge responsibility for improving academic related outcomes, mental health and overall wellbeing. For this purpose, school mental health now days have become an important concept worldwide that includes the evidence based psychological interventions or promotion programs to improve mental health and wellbeing of school students^{40,41}. School based mental health programs provide effective support for students in developing resilience and reducing the prevalence of mental health problems^{42,43}. Mindfulness based school interventions (MBSIs) is one such mental health promotion programs which predominantly in western countries have shown their efficacy for addressing children and adolescents mental health issues, particularly in school setups⁴⁴. Several intervention studies have explored the usefulness of school-based mindfulness program among school students that reported many benefits such as stress alleviation, improvement of mood and subsequent academic performance.^{45,46,47}

In the twenty first century, mindfulness practice has been considered as the facilitator of achieving very qualities and goals of education^{48,49}. Mindfulness can be seen as the foundational skills and pre-requisite condition for education and hence it is being increasingly incorporated in school education curriculum. A plenty of studies have been done in this area which constantly demonstrated the beneficial impacts of the implementation MBIs in school educational settings^{50,51,49}. Given that the universal acceptability and feasibility of the mindfulness programs, they can be very adaptive according to the developmental needs of elementary school students⁵⁰. Though, several systematic reviews on MBIs have been conducted to see their effects on children and adolescents, there have been five reviews that seem noteworthy especially on MBIs within the school settings^{50,52,49}. Mindfulness eating and mindful breathing interventions were used most frequently among students⁵³. Recently before an outbreak of the COVID-19 pandemic, a systematic review reported positive improvements in well-being measures in school students that provide support for MBIs as a well-being school preventative program⁵⁰. The study also revealed effect

differences across age groups of these school students, with showing least effect of MBIs on early adolescent students. However with respect to Indian context, the COVID-19 pandemic situation and subsequent lockdown and school closures have given rise to mental health issues especially the anxiety and depressive features among children and youths⁵⁴. Additionally, there is found to be a significant dearth of mental health promotion programs in India especially MBIs and related studies. Nevertheless, MBIs help students achieve and maintain positive mental health that further enhance their academic growth.

MBIS FOR SCHOOL TEACHERS

Teachers' stress, burnout and depression can negatively affect their academic teaching performance in particular and classroom environment and students' well-being at large.^{55,56} Furthermore, these conditions can also contribute to absenteeism, high attrition and stress affected health concerns in teachers⁵⁷. Currently we are still facing uncertainties about the different types of COVID-19 pandemic waves, and teachers have been finding themselves adapting to rapidly changing teacher contextual factors, educational instructions and conditions. These new growing challenges are adding up to the many of the contributing factors to educator's stress and occupational health factors of job satisfaction⁵⁸. Globally, teachers' increasing feeling of burn out, inadequate stress tolerance ability and higher attrition rates have posed significant challenges in quality of education. Furthermore, they have constantly been found to be facing mounting pressures of inculcating the educational related standards and qualities among their students. Hence, various programs have been designed to inculcate the mindfulness skills in teachers. Some of these influential mindfulness based programs may include Mindfulness-based wellness education (MBWE)⁵⁹, Mindfulness-Based Emotional Balance (MBEB)⁶⁰ and Cultivating awareness and resilience in education (CARE) for teachers⁶¹. The concept of contemplative education has given a new understanding to our current educational system that believes in the integration of experiential methods. The concept has emerged to cultivate the mindfulness skills in teachers and students in educational settings⁶².

Apart from school students in school set ups, MBIs have also been applied to improve teachers' protective factor that can safeguard them against stress and have the potential to reduce overall occupational stress. Several studies have been conducted to explore the efficacy of MBIs in teachers concerning emotion regulation skills ways of coping with stress, improving forgiveness and compassionate attitude for people at large and challenging students or colleagues in particular at work. Several studies have explored the benefits of MBIs for teachers especially with respect to promoting stress management and wellbeing. These studies have reported reduced stress, improved emotion-regulation skills and increased awareness of internal experiences, distress tolerance and better classroom management in school teachers

following mindfulness practice^{63,64,65}. Recently investigated the effectiveness of MBIs in school teachers and the findings suggested that MBIs have potential to improve the overall wellbeing of teachers which may in turn lead to increased students' sense of connectedness to their educators⁵⁰. Though mindfulness has demonstrated its potential to reduce stress in school setups, sometimes large dosages of MBIs may lead to paradoxical effects and that may need the development of briefer versions of MBIs. In line with this, an another recently conducted study showed the efficacy of a brief MBI (bMBI) consisting of four sessions with six total hours to reduce self-reported stress, burnout, and depression in teachers and the findings revealed that this kind of brief mindfulness interventions can target the cost effectiveness have the potential to improve the overall functioning⁵⁸.

Recently a study has designed an MBI to support teacher's emotion regulation behaviours that used the application of the Behavior Change Wheel (BCW) and attempted to give the rigorous detail in how MBIs can be designed, delivered, and evaluated in order to map the approach for an MBI to line up the teacher's needs with intervention components⁶⁶. In this way, the study has tried to reexamine the issue of teacher stress and emotional regulation through a behavioral tool and then explored the needs and behaviors. Furthermore, this could be regarded as the first attempt so far that has designed an intervention in such a way which will help the researchers to choose the most beneficial strategies and modes of delivery in future for teacher's amounting stress. Hence MBIs in teachers have potential to reduce amounting stress, improve occupational health and its overall implication on classroom behavior.

CONCLUSION AND SUMMARY

MBIs are effective in reducing stress, improving health related outcomes and promoting positive sense of mental health and well being. They have demonstrated widespread beneficial implications across the clinical and community settings. The current review has attempted to explore the origin and utility of mindfulness based school interventions for students and teachers. With respect to community settings, they are found to have widespread use and benefits in school setups. However, the current review has identified some methodological and empirical limitations in the existing literature on MBIs in school setups and they are found to suffer from similar gaps as research on MBIs for other settings including the variability of contents or format, duration, commercialization, self-report measures, effect sizes, accessibility and cost effectiveness. Hence, despite having tremendous support and utility across variety of settings, several limitations have been identified in our review concerning the implication of MBIs in school setups. Firstly, the limitation arises from the diverse nature of various mindfulness based school programs that varies widely from multiple days to half days programs that may affect its universal applicability and implication of training. Additionally, the duration of practice in the various

mindfulness based school programs reviewed here is found to have significant variability i.e. they considerably vary from the time duration to the frequency of sessions. Secondly, commercialization of well being programs in school setups has mushroomed in the recent years that typically offer curriculum of teaching these skills which may question the genuineness of these programs as they are subject to hidden wrong or harmful intentions of profit or business. Thirdly, a broad range of student ages and respective grade levels makes the study difficult to guide or design the MBIs with a specific age or grade levels in school setups which needs to be addressed properly with the issue of secularity. In some studies student disengagement have also been noticed that should be addressed with appropriate additional techniques. Future research should attempt to design more mindfulness based school program or curriculum with parental involvement along with the briefer versions of MBIs to improve their utility and cost-effectiveness in school setups especially for teachers also. Fourthly, neurocognitive developmental maturity should also be taken into consideration as it has the potential to influence the outcomes of mindfulness based school programs across different age groups students⁶⁷. Fifthly, with respect to mental health promotion, a recent meta analysis has shown a lack of utility of MBIs in addressing the adolescent students anxiety in school setups⁶⁸ that needs to be further explored in future studies. Lastly but not the least, research in other cultural contexts is also warranted especially in Indian context as most of the studies on MBIs have been done in western countries which restrict their findings to generalize universally. Furthermore, all the above described limitations have potential to impact the implication and generalization of findings that should be investigated in future studies. Overall, mindfulness based practice is very safe for school students but ethical aspects are strictly needed to be considered and digital or technologically assisted interventions should be increasingly utilized in current situation.

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