

Move Your Mood: A Wholistic Evidence-Based Approach to Enhancing Physical and Mental Well-Being in Adolescence: An Executive Summary

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Adolescence can be a stressful period for many, as it is characterized by a multitude of physiological, social, and environmental changes (Binning et al., 2021; Bluth et al., 2016; Bluth & Eisenlohr-Moul, 2016; Ramseyer Winter et al., 2019). These changes may make adolescents vulnerable to developing mental health difficulties which can persist through adulthood (World Health Organization [WHO], 2021). Adolescence is a pivotal period for developing healthy habits to defend against these issues (WHO, 2021). Move Your Mood is an 8 week program developed by the Recovery Alberta Move Your Mood Coordinator and the Prevention & Promotion Mental Health and Addiction team. with the aim of encouraging individuals to engage in healthy lifestyle practices to improve well-being (Move Your Mood, 2011). Move Your Mood (MYM) enhances well-being through four interconnected pillars; Practice Mindfulness, Move Your Body, Fuel Your Body, and Expand Your Mind.

During a typical Move Your Mood session, each of these pillars are addressed. A session may begin with a brief mindfulness practice to touch on the Practice Mindfulness pillar, followed by a movement activity to touch on the Move Your Body pillar. This is usually followed by eating a healthy snack together to touch on the Fuel Your Body pillar and finishing with an activity that builds positive coping strategies to touch on the Expand Your Mind pillar.

Oddie and colleagues (2014) found that 8 weeks of physical activity (PA) in Move Your Mood resulted in significantly reduced depressive symptoms, improved mood, improved coping ability, and increased motivation to exercise. In 2024, a studio devoted to Move Your Mood was opened, providing a space for sessions to be run and allowing children and adolescents accessing mental health services in the area to use the space.

Move Your Mood serves many groups including children and youth, new mothers, and older adults (Move Your Mood, 2011). Each of the pillars and the accompanying activities to address them are built upon a body of supporting research evidence illustrating how they can enhance well-being in each of these groups. The current review focuses on how each of the pillars benefit adolescents, as this is one of Move Your Mood's most served populations. The program was developed based on evidence supporting the benefits of each of the pillars, however

research is always evolving. As such, the current review focuses mainly on research that was published within the last 10 years (2015 and later) to reflect the current body of literature.

Practice Mindfulness

Mindfulness is often referred to as enhanced attention to current experiences, especially with an open sense of acceptance (Brown & Ryan, 2003). A strong relationship between mindfulness and well-being for adolescents has been reported in the literature. Multiple studies have shown a reduction in depression and anxiety symptoms among youth following a mindfulness program (Bluth et al., 2016a, 2016b; Gomez-Odrizola & Calvete, 2021; Johnson & Wade, 2019a; Volanen et al., 2020). Being present in the moment and noticing internal physical sensations interrupts rumination and protects against negative thought cycles (Bluth & Eisenlohr-Moul, 2017; Galla, 2016). Practicing mindfulness can also decrease adolescents' perceived stress and improve their ability to manage that stress (Bluth & Eisenlohr-Moul, 2017; Bluth et al., 2016b; Galla, 2016; Mrazek et al., 2019). Numerous studies have also shown that practicing mindfulness can build adolescent resiliency (Bluth & Eisenlohr-Moul, 2017; Razza et al., 2021; Volanen et al., 2020). In addition, mindfulness has been associated with increased life satisfaction and increased positive affect (Bluth et al., 2016b; Galla, 2016).

Many programs aiming to increase mindfulness have been created and are often originally directed toward adults and are later adapted to be more suitable for adolescent audiences (Bluth et al., 2016b; Bluth & Eisenlohr-Moul, 2017). However, research points to the importance of tailoring mindfulness programs to a more specific and tighter age range, as mindfulness programs delivered to younger adolescents have had mixed results, and mindfulness is often found to be more beneficial for older adolescents (Bluth & Eisenlohr-Moul, 2017; Gomez-Odrizola & Calvete, 2021; Johnson et al., 2017; Johnson & Wade, 2019a; Volanen et al., 2020). Many researchers make suggestions for how to best suit mindfulness interventions to an adolescent group (Bluth et al., 2016a; Gomez-Odrizola & Calvete, 2021; Coholic et al., 2023; Johnson & Wade, 2019b; Tumminia et al., 2022). Recommendations often highlight the importance of ensuring that adolescents feel safe (Bluth et al., 2016a), that the activities are designed to be fun (Coholic et al., 2023), and that techniques to incorporate mindfulness into daily routine are taught (Bluth et al., 2016b; Volanen et al., 2020).

Move Your Body

Move Your Mood encourages daily PA and provides youth with multiple different fun and engaging ways to do so, providing youth with additional ways to get active that they may otherwise not be exposed to through traditional physical education or organized sport. Multiple options for PA are important as they allow more opportunities for youth with varying interests and degrees of motivation to find activities that they enjoy. This is important as individuals are more likely to continue an exercise program if they find it enjoyable, and developing these habits during adolescence may lead to lifelong involvement in physical activity (Teixiera et al., 2022; Tompkinson et al., 2009).

The Canadian Society for Exercise Physiology (CSEP, 2023) recommends that children and youth aged 5 to 17 years old engage in at least 60 minutes of moderate- to vigorous- physical activity (MVPA) per day. Additionally, recommendations for several hours of light physical activity per day and limiting screen time are made. Evidence has suggested that overall, Canadian youth are failing to meet these guidelines, as only 39% were achieving the recommended amount of MVPA per day and only 4% of youth were meeting all the movement guidelines laid out by the CSEP (ParticipACTION, 2024). Additionally, PA has been shown to decrease throughout adolescence, highlighting the importance of programs like Move Your Mood, which seek to increase PA among youth (Doré et al., 2019; Guddal et al., 2019; Roberts et al., 2017; Zulyniak et al., 2020).

Youth who engage in PA have been shown to fare better in terms of overall mental health (Doré et al., 2019). Specifically, adolescents with higher levels of PA experience higher life satisfaction and higher self-esteem (Brown et al., 2021; Guddal et al., 2019; Janssen et al., 2017). The other movement guidelines made by the CSEP are important as well, as Janssen and associates (2017) demonstrated that the more of the guidelines that were met, the better off youth were. Similarly, Brown and colleagues (2021) showed that adolescents with a combination of higher MVPA and low sedentary time demonstrated the highest well-being, with higher self-esteem, more resilience, and more flourishing. The Move Your Mood studio is equipped with a number of different devices that pair gaming with exercise, referred to as exergames, which can provide youth with a new and fun way to increase their PA. Exergaming has been shown to be as effective as more traditional forms of PA and may also be a useful tool in motivating youth to get active (Finco et al., 2015; Gao et al., 2017).

Fuel Your Body

Move Your Mood encourages youth to develop and practice healthy food practices. This includes eating a variety of nutritious foods, preparing food at home rather than eating pre-packaged meals, and enjoying food with others. As mentioned, the Move Your Mood studio is equipped with a kitchen to support this pillar, and sessions usually end with adolescents making and eating a nutritious snack together. The Canadian Government (2020) makes recommendations for food and nutrition which involves the suggestion of making half of each meal consist of fruits and vegetables, a quarter consist of whole grains, and the last quarter consist of a source of protein. Programs which support positive food habits during adolescence are crucial as youth often gain more control over their food choices at this stage, and a nutritious diet is important in supporting the physical changes associated with this developmental period and promoting better health outcomes later in life (Jonsson et al., 2024; Norris et al., 2022). Evidence has shown that adolescents are not currently meeting the recommendations laid out by Canada's food guide, and that eating habits tend to become poorer as adolescence progresses, supporting the importance of the Fuel Your Body pillar of MYM (Hack et al., 2021).

Both the types of food being eaten and the habits surrounding eating can play a large role in adolescent well-being. Maintaining a well-balanced diet, including a high consumption of fruits and vegetables has been associated with more positive self-concept, higher self-esteem, and better overall mental health for adolescents (Huang et al., 2019; Muros et al., 2017). In addition to the actual foods being eaten being important for well-being, the habits surrounding eating are important as well. Regularly eating breakfast and regularly eating meals with family has consistently been shown to be beneficial for adolescent well-being (Geraets & Heinz, 2023; Jonsson et al., 2024; Lopez-Gil et al., 2024; Ramseyer Winter et al., 2019; Utter et al., 2017). Engaging these habits has been associated with higher life satisfaction, more positive body image, decreased stress, fewer depressive symptoms, and regular engagement in health promoting behaviours like PA and tooth brushing (Geraets & Heinz, 2023; Hong & Peltzer, 2017; Jonsson et al., 2024; Lopez-Gil et al., 2024; Ramseyer Winter et al., 2019; Utter et al., 2017).

Expand Your Mind

In a typical Move Your Mood session, while the adolescents are eating together, they will do an activity that touches on the Expand Your Mind pillar. The Expand Your Mind pillar

centers around simple, positive coping strategies that enhance an individual's mental health (Move Your Mood, 2011). This pillar encompasses a wide variety of activities and practices which can be done both at home and within a Move Your Mood session. Four common ways the Expand Your Mind pillar can be practiced are creativity, gratitude, affirmations, and kindness.

Creativity and performing acts of kindness are two simple ways to practice the Expand Your Mind pillar. Activities that engage an adolescent's creativity, including drawing (Malboeuf-Hurtubise et al., 2021), writing poetry (Delamerced et al., 2021), and practicing improvisational theater (Felsman et al., 2019) have been shown to increase adolescent well-being. Activities like these can be positive outlets to help adolescents through difficult times, which is promising as there are many simple and inexpensive ways to promote creativity. For example, Delamerced and colleagues (2021) found a short poetry practice to be effective in reducing fear, anger, and sadness among pediatric cancer patients. Similarly, a short-form of art therapy was found to be beneficial for students re-entering school amidst the COVID-19 pandemic (Malboeuf-Hurtubise et al., 2021). These examples demonstrate that even during challenging periods, expanding your mind through creative practices can be beneficial for maintaining well-being. Performing acts of kindness is another way that adolescents can expand their minds. Performing acts of kindness for others has been found to significantly increase adolescents' positive affect, decrease negative affect and perceived stress (Tashjian et al., 2021).

Another way the Expand Your Mind pillar is practiced within Move Your Mood is through positive affirmations. Affirmations involve positive messages that an individual can say to themselves to build a strong mindset (Move Your Mood, 2011). Brief interventions in which adolescents practice positive affirmations have been shown to have academic benefits, with students who participate maintaining higher grade point averages and enrolling in more challenging courses compared to control group peers (Binning et al., 2021; Goyer et al., 2017). Additionally, students who engage in an affirmation intervention have been shown to have reduced incidences of behavioural misconduct at school (Binning et al., 2019). Self-affirmation has also been linked with self-esteem, Lannin and associates (2021) found youth who use affirmations to deal with stressful situations tend to have higher self-esteem than those who do not. Evidence also suggests that self-affirmation may be effective for increasing adolescents' physical activity by decreasing anxiety and building confidence (Good et al., 2013).

And finally, gratitude has been associated with improved perceived emotional well-being and self-worth, higher life satisfaction, and reduced negative affect (Bono et al., 2019; Bosacki et al., 2018; Li et al., 2023; Shourie & Kaur, 2016). Practicing gratitude through concrete activities, such as writing letters to important people in their lives to express their gratitude have been shown to be effective ways to gain these benefits (Armenta et al., 2022; Bono et al., 2020).

Discussion

Move Your Mood is an evidence-based program which supports individuals through the challenging period of adolescence through pillars of wellness. Each of the pillars is built on and continues to be backed by large bodies of research supporting their efficacy. Because each of the pillars touches on different aspects of an adolescent's life, they can provide a well-rounded sense of well-being to adolescents who practice them. Furthermore, learning about and practicing these healthy habits with others offers a social aspect to the program which is beneficial as well.

A major strength of the Move Your Mood program is the fact that it is holistic in nature. The pillars revolve around different aspects of an individual's life and therefore can provide opportunities to enhance well-being in several ways, providing the youth with a well-rounded sense of wellness. Practicing each pillar can improve how adolescents feel overall, and each pillar can be used individually at different times in the adolescent's daily life. For example, an adolescent may have learned that PA helps them to reduce their stress, however they cannot always get up and move around in a stressful situation, therefore youth may choose to practice mindfulness in the moment and participate in PA later in the day. Although each pillar is distinct and has standalone benefits, the ways that each pillar can be practiced may often overlap. For example, while eating a nutritious snack at the end of a program, the group may engage in a mindful eating practice. Mindful eating simply involves approaching eating with a nonjudgmental awareness of sensations, both physical and emotional (Framson et al., 2009). There are also clear links between the Expand Your Mind pillar and the Practice Mindfulness pillar. Namely, practicing gratitude aligns closely with both. Many mindfulness programs may include gratitude practices and have in fact been shown to increase gratitude (Bluth & Eisenlohr-Moul, 2017). Additionally, the Practice Mindfulness pillar and the Move Your Body pillar can relate to one another through yoga. Yoga involves PA and can contribute to muscle and joint strength and balance (Karisetty & Tiwari, 2019). It can also improve mindfulness, for example through practices involving drawing attention to the breath (Karisetty & Tiwari, 2019). Another

clear link exists between the Move Your Body and the Fuel Your Body pillars. Maintaining healthy eating habits with a balanced diet supports PA. Studies have demonstrated that adolescents who have healthier eating habits, including regularly eating breakfast, engage in more PA (Gereats & Heinz, 2022; Muros et al., 2017; Nishie et al., 2018).

Although it is not a distinct pillar, a major strength of Move Your Mood is its social element. In the previously discussed study assessing Move Your Mood, focus groups were also conducted to understand participant's thoughts about the program (Oddie et al., 2014). The most predominant theme emerging from the focus groups was that the participants enjoyed the social element of the program. Participants not only reported that they enjoyed the opportunity to get to know new people, but also that they felt supported by the group and by the Move Your Mood coaches. Social support is an extremely important aspect of an individual's well-being, and especially for adolescents as social relationships often become more complex during this stage (Orben et al., 2020). It is also important that adolescents receive social support from a variety of sources including family, friends, and classmates (Castella et al., 2015; Mendonca & Simoes, 2019). Having adequate social support from multiple sources has been related to increases in perceived quality of life and life satisfaction, lower social anxiety, and lower depression among youth (Bi et al., 2021; Mendonca & Simoes, 2019). Move Your Mood provides an opportunity for adolescents to make new friends, expanding their social network further than simply the friends they can make in school. Additionally, Move Your Mood coaches may also act as an important source of social support for adolescents, especially those who may be lacking other positive adult role models. Research has shown that teachers and classmates are a particularly important source of social support, second only to support from family, but still being perceived as more important than support from friends (Bi et al., 2021). As Move Your Mood involves a coach that may act as a "teacher" and other participants that may act as "classmates", the social support received during Move Your Mood is one of the major strengths of the program.

Conclusion

Adolescence is a crucial time in an individual's life and may involve numerous changes that give rise to a range of difficulties. Interventions aimed at helping adolescents develop healthy habits for the future and increase well-being are extremely important. The four main pillars of Move Your Mood enhance well-being in a variety of ways and are backed by a large body of evidence to support them. Regular PA (Move Your Body), maintaining a nutrient rich

and balanced diet (Fuel Your Body), remaining mindful (Practice Mindfulness), and practicing positive coping strategies (Expand Your Mind) are all important ingredients in maintaining and enhancing well-being in adolescents. Further strengths of the program include its wholistic nature and the opportunity that it provides for enhanced social support.

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