

# Improving Students' Sense of School Connectedness and Mindfulness Skills through Participation in a School-Based Circus Arts Mindfulness Program

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Mindfulness based interventions have accrued an increasing efficacy in depression and anxiety, especially in young people and adolescents for whom pharmacotherapy is discouraged. Depression and anxiety in adolescents are strongly related to various psychosocial determinants, including a lack of connectedness and isolation, lower levels of mindfulness and Internet addiction, and psychological flexibility and openness to experience. We propose organising a circus-based mindfulness intervention, which would fulfil these three purposes. It would deliver a circus-based physical exercise-focussed intervention, promoting wellness, and strengthening the primary prevention of depressive and anxiety disorders. It would also allow mindfulness exercises, with high levels of evidence, to be taught in a fun way through gamification and flipped learning approaches. Lastly, it would improve community well-being and sense of belonging via the shared creation of an innovative and interesting circus-based mindfulness intervention, which would be sustainable at the community level post-research, utilise traditional craftsmanship resources, increase mental health literacy, and combat stigma. The objective of this project was to develop and pilot an innovative mindfulness-based circus skills programme within a rural secondary school through a participatory action research method, which is based on the theoretical considerations of this project. Four circus-based skills — juggling, stilt walking, unicycling, and tightrope walking — were integrated with core mindfulness skills. Throughout the pilot development, the qualitative feedback of teachers and students were incorporated in terms of measures of self-confidence, social skills,

communication skills, and attention. The results of the pilot project were presented briefly. In conclusion, this novel circus-based mindfulness module is a key innovation in adolescent mental health. It can be used in lower and middle-income countries, as an effective public health intervention.

**Keywords:** *Circus, Mindfulness, Connectedness, Participatory action research.*

## **Introduction**

### ***Research Background***

With increasing numbers of young people attempting or completing suicide, child and adolescent mental health has become an immediate and urgent concern worldwide (Gunnell et al., 2018). In 2013, suicide alone accounted for 8.4 per cent of deaths among 15–19 year-olds worldwide (Hawton et al., 2020; Mokdad et al., 2016). In the Malaysian context, the prevalence of suicidal ideation among adolescents was found to be as high as 27.9 per cent (Ibrahim et al., 2017). It was reported that seven per cent of adolescents had more serious suicidal ideation, with 10.4 per cent of them making suicidal plans at the same time (Chen, Lai, Kam, & Kaur, 2005). This has led the World Health Organisation (WHO) to identify it as a major point of concern for the future (Auerbach et al., 2018), and this is especially so in light of the expected rise in mental health issues and suicides in youth following the coronavirus pandemic (Pan American Health Organization, 2020; Sher, 2020). Japan has seen a surge of suicide cases in school-going age individuals during this pandemic, with 59 cases of suicide in 2020, which was an increase of 15.4 per cent from the previous year (Tomisawa & Katanuma, 2020). Mindfulness has been increasingly accepted as a treatment tool to assist those identified as experiencing or being at risk of developing mood disorders.

Mindfulness is increasingly accepted as an evidence-based tool in the treatment of depression and anxiety (Khoury et al., 2013). Mindfulness based exercises are found to be effective applications in the primary prevention of depression and anxiety (Goyal et al., 2014; Zou et al., 2018). From an economic perspective, this is beneficial through a focus upon prevention and reducing the need for tertiary intervention for mental health issues (McDaid, Park, & Wahlbeck, 2019). By using mindfulness exercises in the context of overall interventions to promote mental wellness, rather than merely treating mental illness when it is detected, it could significantly prevent or delay the onset of common mental disorders, therefore reducing the burden of care of diagnosable mental illnesses in young people (Tan, 2015).

Delivering mindfulness-based classes and workshops to young people by using a replica of school-based didactic classroom teaching has the potential to disinterest or alienate young people from engaging. Therefore, innovation in introducing this concept to young people is required if efficacy of an intervention is to be maximised. Hence, there is utility in ‘gamifying’ or concealing the delivery of evidence-based intervention classes in the midst of activities that



young people enjoy and regard as socially acceptable or desirable (Cheng, Davenport, Johnson, Vella, & Hickie, 2019).

One of these accepted 'gamified' strategies is circus-based activities. There is evidence that circus-based activities can promote and improve various positive qualities in young people, including vital soft skills such as discipline, perseverance, personal responsibility, the ability to work well with others, self-confidence, creativity, and appreciation for life (Woodhead, 2002). From a sociological perspective, it can boost connectedness, encourage group laughter, and combat feelings of alienation and isolation, which are crucial elements in the overall well-being of children and adolescents. Circus skills are also inextricably linked with mindfulness; to be a good circus practitioner you need to be mindful or present in each moment and movement, as with any form of physical activity involving high levels of dexterity, balance, and physical coordination (Ross & Shapiro, 2017). A result of this is an increasing enjoyment of circus skills along with other aspects of life (Meilman, 2018). Therefore, introducing mindfulness to young people may yield better results when combining psychological and physical states, as it will improve psychological mindedness as well, which will improve depressive symptoms and reduce the use of dysfunctional coping styles (Tze & Pang, 2020).

Often mindfulness exercises tend to lack the physical element. Currently, if it occurs in an educational context, teaching about mindfulness is delivered as a standalone session or short series of classes, and is mostly didactic rather than experiential (Jha et al., 2015). The intervention piloted in this research was developed to combine the physical circus skills with mindfulness skills introduced as a part of the overall development of circus skills, where one will increase the other, and vice versa.

Next to the development of circus and mindfulness skills, this research also provides a sense of community and connectedness during the creation and building of several of the necessary equipment, such as stilts. Including the community and young people with traditional stories related to stilts, often a component of circus skills programs, along with other aspects of traditional customs, may be an additional benefit from the program. Involving families and communities in activities with the school can also increase the sense of connection and community well-being.

For this study on circus-based intervention and prevention of depression and anxiety in youth, we propose the following objectives. The general objective is to facilitate a pilot circus-based mindfulness program for young people within a rural school community. The specific objectives are to assess the feasibility, workability, and assess the general feedback of the participants; gather and analyse preliminary qualitative data considering the levels of connectedness, social relatedness, and well-being; develop an intervention that can be



transferred into other settings with minimal modifications; and produce a ‘training manual’ for the proposed intervention.

## **Literature Review**

### ***Connectedness and Engagement***

Human nature includes a desire to seek out a sense of community, belonging, connection, and engagement (Townsend & McWhirter, 2005; Zukauskiene, Baumeister, & Leary, 2018). The ability to communicate, engage, and interact effectively with fellow tribe members could mean the difference between life and death. These early psychological drivers — to seek other people, engage with them, and to find a connection — are innate and the social skills required are developed at an early age. Therefore, engagement and connectedness may be key elements influencing mental well-being in young people. In this literature review, we consider research on engagement and connectedness, and how that can influence human emotions and mental health.

### ***Engagement***

Fredricks et al. (2004) define engagement in three ways: behavioural, emotional, and cognitive. The concept of engagement has received increasing attention as a potential method to “ameliorate low levels of academic achievement, high levels of student boredom and disaffection, and high dropout rates...” (Fredricks, Blumenfeld, & Paris, 2004). Recent literature reports that “when adolescents feel cared for and included by people at their school, they are less likely to use substances, engage in violence, or initiate sexual activity at an early age. Students who feel connected to school report higher levels of emotional well-being” (McNeely, Nonnemaker, & Blum, 2002). Although school attendance is compulsory up to a certain age, students that are disconnected or disengaged from the educational process will not achieve the full benefit of the social and academic learning that they can acquire while at school (Fredricks et al., 2004). Numerous interventions have been implemented at both the school and community level, in an attempt to increase young people’s sense of engagement or connectedness (Battistich, Schaps, & Wilson, 2004; Chapman, Buckley, Sheehan, & Shochet, 2013; Karcher, 2008).

### ***Connectedness***

#### ***Definition***

Connectedness can be viewed in a similar fashion to engagement, using the same constructs which involve participation, feeling emotionally connected to others, and a willingness to exert the effort required to gain mastery over difficult skills (Fredricks et al., 2004). Townsend et al. (2005) stated that “researchers have reported different forms of connectedness such as



connectedness to the self; connectedness to others, including the social network of family, friends, colleagues and other social groups; and connectedness to a larger meaning or purpose in life” (p.193). Mostly these concepts are seen as being multi-dimensional constructs that are fluid and changeable and that can be influenced by a number of factors including environment, personal temperament, and family background (Oregon Department of Education, 2000).

### *Connectedness in Schools*

Next to family background, schools have been identified as the most likely place where young people can experience the conditions necessary to learn and develop the skills that may protect them from adverse life conditions and foster their resilience and well-being (McGrath & Noble, 2004; Noble & McGrath, 2005). It has also been suggested that “connectedness to peers and teachers in the school environment can be characterised as a resource that may promote positive coping responses” (Cunningham, Werner, & Firth, 2004). Positive coping responses are necessary life skills to develop in childhood and carry into adulthood. These skills have been shown to increase an individual’s mental health and the ability to cope with stress and adverse life events (Hagan et al., 2017; Rettie & Daniels, 2020). Connectedness is increasingly being viewed as both a “protective agent in preventing problems and an aid in helping to resolve inter- and intrapersonal concerns” (Townsend & McWhirter, 2005). Studies over the past two decades have shown a strong link between how students feel about or relate to the school environment and their attendance, motivation, and academic performance (Oregon Department of Education, 2000). McNeely et al. (2002) report that “school connectedness is maximised when the social environment meets their core developmental needs. The main developmental needs of middle and high school students include steadily increasing opportunities for autonomy, opportunities to demonstrate competence, caring and support from adults, developmentally appropriate supervision, and acceptance by peers” (p.138). A school-based circus program can be an element of meeting these developmental needs.

### *At-Risk Students*

This sense of connection or engagement, although important for all students, is even more important for those students labelled ‘at-risk’ (Morris, 2020). At-risk students include those who have difficult home and family experiences; those who have difficulty with the academic or social aspects of success expected in schools; have a disability, language or cultural barriers; or other challenges (Bulger & Watson, 2006; James, 2012; McNeely et al., 2002; Oregon Department of Education, 2000). Other studies suggest that students who feel connected or engaged with their school show better mental health throughout childhood and into adulthood, and are less likely to engage in negative risk-taking behaviours (Blum & Rinehart, 1997; Fredricks et al., 2004; McLaughlin & Clarke, 2010; Townsend & McWhirter, 2005). In understanding the important role schools play during the mental development stages of a child into adulthood, it is becoming increasingly important that schools and educators employ unique



and innovative programs aimed at increasing students' engagement and sense of connectedness with school. One innovative training approach for a school setting could be a circus skills training program.

### ***Theoretical Principles of How Circus Works***

Reginald Bolton wrote a thesis in 2004 titled: "Why Circus Works. How the values and structures of circus make it a significant developmental experience for young people". In this paper, he states that "a child involved in circus activities has a chance to make good some deficits, by experiencing constructive physical risk, aspiration, trust, fun, self-individuation and hard work" (p.1). Firstly, Bolton argues that the circus addresses a child's developmental needs, as it is an experience that helps the child develop (Bolton, 2004, p.2). Moreover, circus programs provide the appropriate values and structures that enable it to become a significant developmental experience for young people. While other interventions may address areas of need in young people, including targeting specific deficits or identified problem areas, circus is less specific. It works by providing the young people with positive experiences and constructive relationships. Social skills are not explicitly taught; however, young people learn through experience, practice, and observation of other people. Thirdly, it is an opportunity for deficit compensation, as it is in the high school years that a child's deficits become really apparent, manifested in self-esteem problems and social misbehaviour (Bolton, 2004, p. 15). Bolton contends that the experience of learning circus skills can provide an opportunity to overcome these deficits and to develop the skills necessary to grow into responsible young adults.

There is further evidence supporting the use of circus skills programs in working with disaffected or disconnected youth. In detention centres, circus skill training resulted in "a clear improvement in the boys' behaviour, physical skills and feelings of self-worth" (Muldoon, Kilpatrick, & Lerrch, 1996). Hence, circus skills programs have the potential to change the lives of those young people involved through the development of self-esteem, self-discipline, and self-confidence (Bolton, 2001). Teresa Kocis (2003) states that "circus arts offers critical life skills including discipline, perseverance, personal responsibility, the ability to work well with others, self-confidence, creativity, and appreciation for life. It is an amazing tool for working with youth in difficulty" (cited in Woodhead, 2005, p1).

### ***Circus skills and mindfulness***

Apart from the obvious physical skills that are required for circus skills, and the benefits that can be accrued in terms of discipline, creativity, and responsibility, mindfulness is a very key component of the circus performing experience. Mindfulness, in essence, refers to the ability to be present in the current moment, open up and be flexible, and apply all five senses to accept feelings, thoughts, and emotions as they are, without judgement and with self-compassion and



kindness (Berthon & Pitt, 2019). Mindfulness ranges from age-old meditation practices to current secular mindfulness methods (Burnett, 2011). Most adopt a combination of breathing and body scanning techniques (Colgan, Christopher, Michael, & Wahbeh, 2016), attention to all five senses (Yeganeh, 2016), and opening up to accept feelings of discomfort, dis-ease or any potential emotions conventionally labelled as ‘negative’ (Keyes, Shmotkin, & Ryff, 2002). Mindfulness has a wealth of evidence, suggesting it is highly efficacious in various depressive and anxiety disorders (Khoury et al., 2013). Moreover, it is a key component in the maintenance of psychological wellness. Teaching mindfulness skills to individuals who do not have diagnosable mental disorders can serve as a useful primary prevention technique to reduce psychiatric morbidity. Mindfulness, in essence, works in synergy with the plethora of benefits of circus skills. One needs to be in the present moment and be acutely aware of all five senses to maintain balance or control the movement of circus tools. Hence, there are benefits other than the aforementioned disciplinary, and responsibility benefits. Individuals who learn circus skills employ and hone their mindfulness, which in turn heightens their ability to perform circus tricks, which will then in turn further exponentially increase their mindfulness acquisition, creating a virtuous cycle.

### ***Gamification of Learning***

Many efforts to instruct secondary or upper primary school students in mindfulness still employ conventional techniques, featuring a combination of classes and teaching breathing exercises through groupwork or role play scenarios (Barnes, Hattan, Black, & Schuman-Olivier, 2017). However, in an already overburdened Malaysian educational system, with an overload of subjects and ‘things to learn’, adding another ‘course’ on mindfulness may prove to induce more stress than it reduces. Hence, gamification of the learning experience of mindfulness can potentially be attained through incorporating them into circus skills training. Instead of separate mindfulness coaching classes, students can be opportunistically exposed to mindfulness activities while being taught circus tricks. This may improve their interest in learning both sets of new skills and help to stave off the association between ‘classroom activity’ and disinterest in learning a new skill. Moreover, healthcare interventions of a primary prevention nature are frequently perceived as ‘authoritarian’ and stolid in nature, coming with associations of either pain, inconvenience or institutional conformity (Jacka, Mykletun, & Berk, 2012). By disguising evidence-based primary prevention healthcare interventions as fun circus activities, this potentially will increase the uptake of mindfulness skills by sceptical and disinterested teenagers.

### ***Relationship between connectedness and positive mental health***

It has also been suggested that “connectedness to peers and teachers in the school environment can be characterised as a resource that may promote positive coping responses” (Cunningham et al., 2004, p141). Positive coping responses are necessary life skills to develop in childhood and carry into adulthood. These skills have been shown to increase an individual’s mental health and the ability to cope with stress and adverse life events. Connectedness is increasingly being viewed as both a “protective agent in preventing problems and an aid in helping to resolve inter- and intrapersonal concerns” (Townsend & McWhirter, 2005, p.192). Schools have been identified as the most likely place, next to family, where young people can experience the conditions necessary to learn and develop the skills that may protect them from adverse life conditions and foster their resilience and well-being (McGrath & Noble, 2004). Osterman (2000) has suggested that it may be the sense of belonging and achievement that are critical for student engagement. Whatever it is labelled, it is becoming increasingly important that schools and educators employ unique and innovative programs aimed at increasing students’ engagement and sense of connectedness with school. Circus skills training programs in the school setting can be considered as a unique and innovative program. Studies over the past two decades have shown a strong link between how students feel about or relate to the school environment and their attendance, motivation, and academic performance (Oregon Department of Education, 2000).

### ***Conceptual Framework of Research***

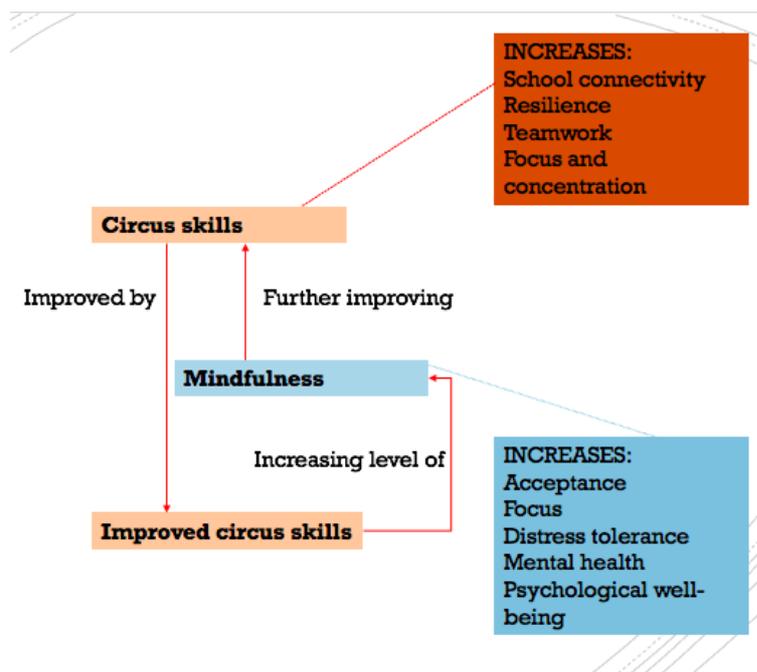


Figure 1: Diagrammatic Summary of Benefits



## **Practical Implementation of a Theoretical Idea**

The theoretical model was run once and used in designing a pilot programme to obtain feedback from the public. As mentioned in the theoretical underpinnings, a simple circus skills programme was combined with a series of brief mindfulness classes. Three types of circus equipment were built or sourced: stilts, juggling equipment, and unicycles. The course was conducted initially over one day, with an introduction to mindfulness in the morning. The cohort was then divided into groups of 15 and taught the circus skills separately. After each circus skill was taught, mindfulness exercises were used to reinforce the circus skill to improve focus, concentration, flexibility, and openness to experience and failure, and to help them deal with difficult and overwhelming emotions. Students then proceeded to continue with existing circus skills, this time incorporating mindfulness into what they had done. After one hour, students were rotated to the next circus skill, and the same sequence of circus interspersed with mindfulness was performed. The students' and teachers' feedback were used continually in a feedback loop to improve the delivery of each session, and to optimise the use of time and the organisation of students in each session, enhancing the benefits from limited exposure to both circus and mindfulness skills.

The mindfulness-based skills integrated in this program were adapted from the Ultra Brief Psychological Interventions protocol developed by Shoesmith and James et al. (N. T. P. Pang et al., 2020). The core mindfulness skills were modified to be taught between five and 15 minute intervals and to be delivered by any trained allied health professional.

The pilot reported in this paper was part of a larger project of quantitative and qualitative data collection, which was approved by the Ethics Committee of the Universiti Malaysia Sabah.

## **Results of the Pilot Cycle**

The pilot program was run in the same secondary school, as qualitatively it was discovered that there is an increasing rate of self-harm coupled with the high rates of depression, and very minimal outlets for the youth of the village to expend their free time. Hence, much of the Internet addiction and depression may be mediated by a general chronic feeling of emptiness and a lack of productive outlets. It is hoped that the circus-based mindfulness skills projects can encourage change for students physically, psychologically, and socially.

The feedback from the initial qualitative data — which was collected from ten respondents, including teachers and students — was that the program was greatly beneficial to them in terms of connectivity and improving social skills. This was because in circus skills training, they had to rely on each other and communicate both verbally and non-verbally with one another more effectively. They also reported finding that the mindfulness skills enhanced the ability to perform the circus skills better and created a sense of enjoyment. They could also recognise



and appreciate that this improvement in one domain could be transferable to other domains. The vast majority of participants also reported that if this skill of increased mindfulness could improve their ability to do circus tricks better, it would also improve their ability to do schoolwork, focus in class, and connect with their peers better. They all felt it was too early to note what effect it would have on their mood or the substantial time spent online, as it had only been a single session. However, they could see how this could help in reducing both anxiety and depression, but felt that this would only occur following more practice.

### **Discussion of Practical Implementation**

Circus skills have long been recognised in the literature as a highly effective method to increase multiple adaptive skills in school children. The “Circus in Schools” project in Australia aims to increase the students’ self-confidence, communication skills, and ability to seek help when required. It is anticipated that through participating in the circus program, students will develop greater confidence through engagement with healthy risk-taking behaviour and experiencing success at difficult tasks. Students will also be required to work as part of group, learning to communicate effectively and ask for help in appropriate ways. Effective communication and help-seeking behaviours are also modelled by the staff involved in the program. These skills are important in the development of resilience and positive coping responses. It is anticipated that the program will assist students to gain a sense of belonging, achievement, and to develop skills in teamwork and mutual respect, among other things. Thus, thereby increasing their sense of connectedness to school and their engagement in the educational process. The program also provides challenges and gives students the opportunity to experience success in difficult tasks and experience positive risk taking, which has been suggested by Bolton (2004) as being a necessary developmental experience for young people. “Circus skills training is a non-competitive, creative, physical activity that fosters team work, develops strength and balance and builds confidence” (Australian Circus and Physical Theatre Association, 2006). Kim Walker, the artistic director of the Flying Fruit Fly Circus at the time, in a statement about their outreach program, commented: “We have found that imparting circus training and skills to young people increases awareness of physical fitness, self-confidence and the ability to work as part of a group. Circus is an art form that everyone can participate in as it incorporates a broad range of skill areas. It has no social boundaries and is an international language that is easily integrated into all areas” (The Flying Fruit Fly Circus, 2007). At the same time, circus skills are a form of physical activity, and there is highly compelling meta-analytic level evidence that exercise and physical activity are as effective as pharmacotherapy alone for mild levels of depression (NICE, 2015), and are available in the United Kingdom National Institute of Clinical Excellence (NICE) guidelines and National Health Service in the United Kingdom as an ‘exercise prescription’.

There are other reported benefits to using mindfulness, which were also corroborated by the respondents in this pilot. Circus-based mindfulness represents the use of innovative methods



to teach an existing skill. Mindfulness is usually taught akin to a classroom or gym-based setting, as a series of classes. This method incorporates mindfulness lessons as part of an existing circus-based module. Furthermore, it involves people using their hands for creative skills and the production of circus equipment. Students and researchers must make their own equipment, so there is a tangible ‘innovation product’, used as a unique and necessary tool to teach mindfulness skills.

At the same time, there is utility in this project in the parallel teaching of entrepreneurial and innovation skills. As mentioned, since we are not purchasing ready-made equipment, students involved will learn how to establish an innovation project from the conceptualisation stage, secure funding and raw materials, and how to use the Internet and search for information regarding how to build these tools. This will also allow a higher level of cultural sensitivity in the project, as local sensitivities are being appreciated in the project (N. Pang et al., 2020).

## **Conclusion**

There are huge theoretical and practical implications for introducing circus-based mindfulness, both within and outside school settings. There is a synergistic effect proposed between the use of circus skills, and the use of mindfulness. Improvements in one domain will, in theory, boost the other, causing a virtuous cycle. Circus skills can increase connectedness, a sense of belonging, resilience, teamwork, focus, and concentration, whereas mindfulness can reduce psychopathology and improve abilities to be present, pay attention, be flexible, and be open to one’s own emotions. The theoretical framework has been trialled in a small pilot setting and will be further subjected to quantitative and qualitative participatory action research in the future, assessing if it is a suitable and replicable model of delivering mindfulness education via gamification and interactive learning in the affective and psychomotor domains. Once the circus-based mindfulness programme has been established through the participatory action research, it can then be fully manualised to allow it to be disseminated to the widest audience possible.



## REFERENCES

- Australian Circus and Physical Theatre Association. (2006). No Title.
- Barnes, N., Hattan, P., Black, D. S., & Schuman-Olivier, Z. (2017). An Examination of Mindfulness-Based Programs in US Medical Schools. *Mindfulness*, 8(2), 489–494. <https://doi.org/10.1007/s12671-016-0623-8>
- Battistich, V., Schaps, E., & Wilson, N. (2004). Effects of an Elementary School Intervention on Students' "Connectedness" to School and Social Adjustment during Middle School. *Journal of Primary Prevention*. <https://doi.org/10.1023/B:JOPP.0000018048.38517.cd>
- Berthon, P. R., & Pitt, L. F. (2019). Types of mindfulness in an age of digital distraction. *Business Horizons*. <https://doi.org/10.1016/j.bushor.2018.10.003>
- Blum, R. W., & Rinehart, P. M. (1997). *Reducing the risk: Connections that make a difference in the lives of youth*. Minneapolis: University of Minnesota.
- Bolton, R. (2001). *Circus to Save the World*.
- Bolton, R. (2004). *Why Circus Works. How the values and structures of circus make it a significant developmental experience for young people*. Murdoch University.
- Bulger, S., & Watson, D. (2006). Broadening the definition of at-risk students. *The Community College Enterprise*.
- Burnett, R. (2011). Mindfulness in Schools: Learning Lessons from the Adults, Secular and Buddhist. *Buddhist Studies Review*. <https://doi.org/10.1558/bsrv.v28i1.79>
- Chapman, R. L., Buckley, L., Sheehan, M., & Shochet, I. (2013). School-Based Programs for Increasing Connectedness and Reducing Risk Behavior: A Systematic Review. *Educational Psychology Review*. <https://doi.org/10.1007/s10648-013-9216-4>
- Chen, P. C. Y., Lai, K. L., Kam, C. W., & Kaur, J. (2005). Factors relating to adolescent suicidal behavior: A cross-sectional Malaysian school survey. *Journal of Adolescent Health*. <https://doi.org/10.1016/j.jadohealth.2004.10.018>
- Cheng, V. W. S., Davenport, T., Johnson, D., Vella, K., & Hickie, I. B. (2019). Gamification in apps and technologies for improving mental health and well-being: Systematic review. *Journal of Medical Internet Research*. <https://doi.org/10.2196/13717>
- Colgan, D. D., Christopher, M., Michael, P., & Wahbeh, H. (2016). The Body Scan and Mindful Breathing Among Veterans with PTSD: Type of Intervention Moderates the Relationship Between Changes in Mindfulness and Post-treatment Depression. *Mindfulness*. <https://doi.org/10.1007/s12671-015-0453-0>
- Cunningham, E. G., Werner, S. C., & Firth, N. V. (2004). Control Beliefs as Mediators of School Connectedness and Coping Outcomes in Middle Adolescence. *Australian Journal of Guidance and Counselling*. <https://doi.org/10.1017/s1037291100002454>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*. <https://doi.org/10.3102/00346543074001059>



- Goyal, M., Singh, S., Sibinga, E. M. S., Gould, N. F., Rowland-Seymour, A., Sharma, R., ... Haythornthwaite, J. A. (2014). Meditation programs for psychological stress and well-being: A systematic review and meta-analysis. *JAMA Internal Medicine*, *174*(3), 357–368. <https://doi.org/10.1001/jamainternmed.2013.13018>
- Hagan, T. L., Fishbein, J. N., Nipp, R. D., Jacobs, J. M., Traeger, L., Irwin, K. E., ... Temel, J. S. (2017). Coping in Patients With Incurable Lung and Gastrointestinal Cancers: A Validation Study of the Brief COPE. *Journal of Pain and Symptom Management*. <https://doi.org/10.1016/j.jpainsymman.2016.06.005>
- Hawton, K., Hill, N. T. M., Gould, M., John, A., Lascelles, K., & Robinson, J. (2020). Clustering of suicides in children and adolescents. *The Lancet Child and Adolescent Health*. [https://doi.org/10.1016/S2352-4642\(19\)30335-9](https://doi.org/10.1016/S2352-4642(19)30335-9)
- Ibrahim, N., Sidik, S. M., Kar, P. C., Mukhtar, F., Awang, H., Kiat, A. J., ... Ghaffar, S. F. A. (2017). Prevalence and predictors of depression and suicidal ideation among adolescents attending government secondary schools in Malaysia. *Medical Journal of Malaysia*.
- Jacka, F. N., Mykletun, A., & Berk, M. (2012). Moving towards a population health approach to the primary prevention of common mental disorders. *BMC Medicine*, *10*(1), 149.
- James, C. E. (2012). Students “at Risk”: Stereotypes and the Schooling of Black Boys. *Urban Education*. <https://doi.org/10.1177/0042085911429084>
- Jha, A. P., Morrison, A. B., Dainer-Best, J., Parker, S., Rostrup, N., & Stanley, E. A. (2015). Minds "at attention ": Mindfulness training curbs attentional lapses in military cohorts. *PLoS ONE*. <https://doi.org/10.1371/journal.pone.0116889>
- Karcher, M. (2008). The Cross-Age Mentoring Program: A Developmental Intervention for Promoting Students’ Connectedness Across Grade Levels. *Professional School Counseling*. <https://doi.org/10.5330/psc.n.2010-12.137>
- Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*. <https://doi.org/10.1037/0022-3514.82.6.1007>
- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., ... Hofmann, S. G. (2013). Mindfulness-based therapy: A comprehensive meta-analysis. *Clinical Psychology Review*. <https://doi.org/10.1016/j.cpr.2013.05.005>
- McDaid, D., Park, A. La, & Wahlbeck, K. (2019). The Economic Case for the Prevention of Mental Illness. *Annual Review of Public Health*. <https://doi.org/10.1146/annurev-publhealth-040617-013629>
- McGrath, H., & Noble, T. (2004). *BOUNCE BACK! A classroom resiliency program. The teacher’s handbook*. Sydney: Pearson Education.
- McLaughlin, C., & Clarke, B. (2010). Relational matters: A review of the impact of school experience on mental health in early adolescence. *Educational and Child Psychology*.
- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health*. <https://doi.org/10.1111/j.1746-1561.2002.tb06533.x>
- Meilman, A. (2018). *Circus Arts as Expressive Arts Therapy*. Lesley University.

- Mokdad, A. H., Forouzanfar, M. H., Daoud, F., Mokdad, A. A., El Bcheraoui, C., Moradi-Lakeh, M., ... Murray, C. J. L. (2016). Global burden of diseases, injuries, and risk factors for young people's health during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*. [https://doi.org/10.1016/S0140-6736\(16\)00648-6](https://doi.org/10.1016/S0140-6736(16)00648-6)
- Morris, A. (2020). *Personalized Learning: An Engagement Strategy for At-risk Student Populations*. Murray State University.
- Muldoon, O., Kilpatrick, R., & Lerrch, R. (1996). New circus: The benefits of circus training for young people in a residential setting. *Child Care in Practice*. <https://doi.org/10.1080/13575279608415287>
- Noble, T., & McGrath, H. (2005). Emotional growth: Helping children and families “bounce back.” *Australian Family Physician*.
- Oregon Department of Education. (2000). *Keeping kids connected: How schools and teachers can help all students feel good about school ... and why that matters*. Oregon: Oregon Department of Education.
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*. <https://doi.org/10.3102/00346543070003323>
- Pan American Health Organization. (2020). COVID-19 pandemic exacerbates suicide risk factors.
- Pang, N., Lee, G., Tseu, M., Joss, J. I., Honey, H. A., Shoesmith, W., ... Lasimbang, H. (2020). Validation of the Alcohol Use Disorders Identification Test (AUDIT)--Dusun Version in Alcohol Users in Sabahan Borneo. *Archives of Psychiatry Research: An International Journal of Psychiatry and Related Sciences*, 56(2), 129–142.
- Pang, N. T. P., Shoesmith, W. D., Sandi, J., Hadi, N. M. N., Koh, E. B. Y., & Lin, L. J. (2020). Ultra Brief Psychological Interventions for COVID-19 Pandemic: Introduction of a Locally-Adapted Brief Intervention for Mental Health and Psychosocial Support Service, 27(2), 51–56.
- Rettie, H., & Daniels, J. (2020). Coping and Tolerance of Uncertainty: Predictors and Mediators of Mental Health During the COVID-19 Pandemic. *American Psychologist*. <https://doi.org/10.1037/amp0000710>
- Ross, A., & Shapiro, J. (2017). Under the big top: An exploratory analysis of psychological factors influencing circus performers. *Performance Enhancement and Health*. <https://doi.org/10.1016/j.peh.2017.03.001>
- Sher, L. (2020). The impact of the COVID-19 pandemic on suicide rates. *QJM: An International Journal of Medicine*. <https://doi.org/10.1093/qjmed/hcaa202>
- Tan, L. B. G. (2015). A critical review of adolescent mindfulness-based programmes. *Clinical Child Psychology and Psychiatry*. <https://doi.org/10.1177/1359104515577486>
- The Flying Fruit Fly Circus. (2007). No Title.
- Tomisawa, A., & Katanuma, M. (2020). Suicide Spike in Japan Shows Mental Health Toll of Covid-19.



- Townsend, K. C., & McWhirter, B. T. (2005). Connectedness: A Review of the Literature With Implications for Counseling, Assessment, and Research. *Journal of Counseling & Development*, 83(2), 191–201.
- Tze, N., & Pang, P. (2020). Psychological mindedness as a mediator in the relationship between dysfunctional coping styles and depressive symptoms in caregivers of children with autism spectrum disorder, (June 2019). <https://doi.org/10.1111/ppc.12481>
- Woodhead, P. (2002). *To study in-school Circus programs with emphasis on the management and teaching practices, and efficacy of the visited programs in terms of student welfare, performance and physical education opportunities, in the USA and UK*. New South Wales, Australia.
- Yeganeh, B. (2016). Mindfulness as a Disruptive Approach to Leader Development. *OD PRACTITIONER*.
- Zou, L., Yeung, A., Quan, X., Hui, S. S. C., Hu, X., Chan, J. S. M., ... Wang, H. (2018). Mindfulness-based baduanjin exercise for depression and anxiety in people with physical or mental illnesses: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*. <https://doi.org/10.3390/ijerph15020321>
- Zukauskiene, R., Baumeister, R. F., & Leary, M. R. (2018). The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation. In *Interpersonal Development*. <https://doi.org/10.4324/9781351153683-3>