

Techniques to Promote Healthy Self-Regulation in Physical Education

By Duke Biber, Peter Stoepker and Brent Heidorn

Adolescence is a transitional period for students during which physical and social factors have a large effect on individual health and well-being (Patel, Flisher, Hetrick, & McGorry, 2007; Shoshani & Slone, 2013). Most mental health issues arise in middle school, with research suggesting that 20% of adolescents experience a mental illness that will last into adulthood (Kessler et al., 2005; Paus, Keshavan, & Giedd, 2008). Nearly 13% of students will struggle with depression, 32% with anxiety, and 3% with an eating disorder during adolescence (United States Department of Human Services [USDHHS], 2017). This article highlights mental health symptoms, applicable techniques for physical educators, and theory-based management techniques. Strategies that promote effective emotional self-regulation, such as mindfulness, self-talk, and self-compassion, are explained.



Common Mental Health Symptoms

Some of the most common adolescent mental health issues are anxiety, depression, eating disorders, and attention deficit hyperactivity disorder (Merikangas et al., 2010). While each mental illness has distinct symptoms, it is necessary for physical educators to become aware of broad behavioral and emotional signs of subclinical symptomatology (Loades & Mastroyanopoulou, 2010). For example, a student may be struggling with a mental health issue if any of the following symptoms are present: sadness or withdrawal lasting two weeks or more; talking about harming others or oneself; fear of eating, not eating, or overeating; out-of-control or erratic behavior that impairs the student or others; mood swings resulting in social problems; self-isolation during physical education, physical activity experiences, and/or group activities; overwhelming fear; or racing thoughts for no apparent reason. These symptoms are especially detrimental if on-task behavior and relationships with other students are negatively affected (USDHHS, 2018). Physical educators who can identify symptoms and intervene through the help of school counselor services can help reduce further emotional distress or negative coping mechanisms (e.g., self-injury; Whisenhunt & Heidorn, 2018).

Limited Resources

While nearly 20% of children and adolescents suffer from a mental health or learning disorder, schools do not always have the resources to identify and treat students (McLeod, Uemura, & Rohrman, 2012). Although 71% of schools report having necessary diagnostic resources for the assessment of mental health disorders, only 64% have the resources to treat such disorders (Robers, Zhang, & Morgan, 2015). During this academic year 2018–2019, approximately 56.6 million students will attend elementary and secondary schools in the United States; therefore, the setting is ideal for mental health promotion (Eccles & Roeser, 2011; U.S. Department of Education, 2018). Because of the unique learning environment, students may also express their emotions differently in physical education when compared to the classroom, providing the physical educator with the opportunity to observe student emotional and behavioral expressions (Whisenhunt & Heidorn, 2018). Students who exhibit the aforementioned symptoms often struggle to self-regulate their emotions and resultant behaviors (Popham, Counts, Ryan, & Katsiyannis, 2018). A physical educator who advocates for and practices emotional self-regulation can cultivate an environment in which students can learn to do the same (Mainhard, Oudman, Hornstra, Bosker, & Goetz, 2018).

Self-Regulation

Self-regulation is an individual's ability to engage in and adhere to strategies that promote positive emotional awareness and expression (Baumeister & Heatherton, 1996; Carver & Scheier, 2001; Gross, 2013). Self-regulation is a four-step

process that involves: 1) setting goals (e.g., setting norms for students' emotional expression in the physical education setting); 2) engaging in goal-directed behavior (e.g., appropriately communicating with others without yelling, shouting); 3) monitoring goals and resultant behaviors (e.g., maintaining a daily journal of feelings); and 4) adjusting goals when necessary (e.g., changing norms to target more advanced behaviors or reduce expectations; Baumeister & Heatherton, 1996; Carver & Scheier, 1981). Regular self-regulation practices can improve behavioral and emotional expressions in students, which can improve academic success (Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011; Popham et al., 2018; Wisner, Jones, & Gwin, 2010). Three validated and effective self-regulation strategies are mindfulness training, self-talk reconstruction, and self-compassion training.

Mindfulness training

Mindfulness training can promote a physical education environment of emotional awareness (Hill & Updegraff, 2012). Physical educators could begin each class with mindful breathing techniques, asking students to bring awareness to their present thoughts and emotions without judgment (National Center for Complementary and Alternative Medicine, 2007). Beginning or ending the class with mindfulness can set the tone for learning and help students calm down after breaks during the school day (e.g., lunch, transitions between classes) or before returning to the classroom environment.

Teachers can guide students through the 4-7-8 mindful breathing technique (Adam et al., 2017; see Figure 1). First, students close their eyes and breathe in for 4 seconds. Second, students hold their breath for 7 seconds. Last, students breathe out slowly for 8 seconds. This cycle should be completed four times, with approximately 30 seconds rest between each breathing series, for a total practice of approximately four minutes. Mindful breathing improves physical, social, emotional, psychological and cognitive functioning in children and adolescents and is an easy-to-administer tool for physical educators (Beauchemin, Hutchins, & Patterson, 2008). This three-step process could be performed while the teacher is taking attendance, just before identifying the day's learning objectives, or as the final learning experience before class is dismissed. As an additional learning

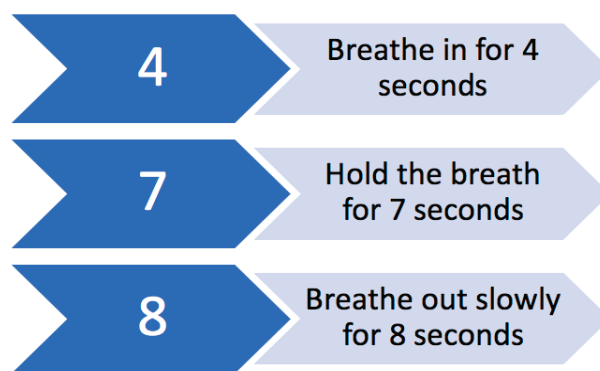


Figure 1. 4-7-8 mindful breathing

Table 1. Restructured Self-Talk

Example: A student who receives a poor grade on an exam or skills test may have the following automatic thoughts. We restructured the negative self-talk to be instructional and positive.	
Automatic Negative Self-Talk	Restructured Self-Talk
<i>"I am not smart, I am a bad student, and I should have done better."</i>	<i>"This is just one exam. I can study with a friend for the next exam, receive tutoring, and study a few minutes each day. My grade does not define me as a student."</i>
<i>"I am not going to get any better at shooting a basketball."</i>	<i>"I really enjoy playing basketball; I just need to practice a little more and it will help improve my shooting. I can do this!"</i>

opportunity, students could rotate each day as leaders of the mindful breathing activity.

Self-Talk Training

Mindfulness training helps students become aware of their negative self-talk (e.g., the verbal and internal stream of thoughts running through a student’s head; Whaley & Schroyer, 2010). The majority of self-talk is negative. However, positive, instructional and motivational self-talk can increase confidence, focus, mood, effort and task completion (Hatzi-georgiadis & Biddle, 2008; Schunk & Zimmerman, 2003; Theodorakis, Weinberg, Natsis, Douma, & Kazakas, 2000). Students can log their self-talk in a daily journal before or after

a physical education lesson. For example, students could take three to five minutes to record their self-talk after completing the 4-7-8 mindful breathing technique. Whether positive or negative, it is important to unconditionally accept, rather than judge, self-talk and its associated emotions. This would help students and physical educators become aware of how students speak to themselves internally before or after each activity. To promote positive self-talk, students can change their self-talk by crossing out negative statements in their journal and replacing them with positive, encouraging or instructional self-talk statements (see Table 1). This technique, known as cognitive restructuring, can help students become aware of and better regulate their emotions, as well as improve social interactions,

Table 2. Self-Compassion Training

Self-Reflection	What Would a Best Friend Say?	Compassionate Letter
Students reflect on any personal qualities, traits or characteristics that make them feel inadequate, ashamed or insecure. Students can think about how such qualities make them feel physically and emotionally. For example, an obese student may reflect, <i>"I do not feel as beautiful or athletic as the other kids in class."</i>	Students focus on how a best friend or family member, who is loving and unconditionally accepting, might treat them even with their perceived flaws. What might their best friend say and how might they act? A best friend or loved one might respond to the obese student’s self-reflection, <i>"You are beautiful, a caring friend, and you give your best effort every day in PE. You also have other unique talents, such as playing the piano!"</i>	Students write a letter to themselves from the perspective of a loved one, focusing on their perceived weakness. How would that best friend treat them, talk to them, or urge them to treat themselves in light of that perceived flaw? Writing a letter can infuse feelings of acceptance, kindness, caring and positivity. <i>"Dear best friend,</i> <i>Try not to be so critical or hard on yourself. Everyone is beautiful! However, everyone also has something they wish they could change about themselves. You are so much more than how you look in a mirror. You are a caring friend, who is always there for me. You are also an amazing pianist who has practiced for countless hours. And you always give your best effort in PE! It is easy for us to compare ourselves to others, but not everyone is as talented as you are in piano, as caring, or willing to listen in times of need like you! I hope you can remember how unique, talented, and driven you are!</i> <i>Sincerely,</i> <i>Your Best Friend"</i>

behavioral conduct, and competence in school (Kapçı, Uslu, Sukhodolsky, Atalan-Ergin, & Çokamay, 2012).

Self-Compassion Training

A third technique that can promote emotional health and expression in physical education is self-compassion training. Self-compassion is the ability to treat oneself in the same manner as a best friend would treat one during that same situation (Neff, 2003). Physical education can be a highly stressful and competitive environment, potentially resulting in perceived bullying and emotional distress (Whisenhunt & Heidorn, 2018). Students who are struggling with social relationships or in a sport during physical education could benefit from self-compassion training. Self-compassion is positively associated with happiness, emotional intelligence, personal initiative, and the ability to handle stress. The lack of self-compassion, on the other hand, is negatively associated with depression, anxiety, stress and fear of failure (Neff & Germer, 2017). Self-compassion training is short in duration and is easy to implement in one-on-one or group situations. Physical educators can have students practice self-compassion through guided meditation, journaling, role-playing, and letter writing (Neff & Germer, 2013; see Table 2). These efforts can also be extremely beneficial for developing numerous affective qualities among students. Other effective self-compassion exercises can be found at www.selfcompassion.org.

Conclusion

Due to the high number of adolescents suffering from mental health-related issues (McLeod et al., 2012), creating a class culture that promotes emotional self-regulation can help students manage and express emotions more effectively. Physical educators who regularly implement emotional regulation techniques (i.e., mindfulness, positive self-talk, and self-compassion) will foster an environment of self-efficacy, potentially increasing on-task behavior, confidence in social situations, and overall student well-being.

References

- Adam, S. K., Kes, M., Tuju, S. O., Kes, M., Losu, F., SiT, S., & Kes, M. (2017, December). The effectiveness of deep breathing relaxation technique and 4-7-8 method against intensity pain during first active phase of normal delivery at maternity clinics in North Sulawesi. In *Proceeding Manado Health Polytechnic 1st International Conference*, 1(1), 201–206.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological inquiry*, 7(1), 1–15.
- Beauchemin, J., Hutchins, T. L., & Patterson, F. (2008). Mindfulness meditation may lessen anxiety, promote social skills, and improve academic performance among adolescents with learning disabilities. *Complementary Health Practice Review*, 13(1), 34–45.
- Carver, C. S., & Scheier, M. F. (2001). *On the self-regulation of behavior*. New York: Cambridge University Press.
- Duckworth, A. L., Grant, H., Loew, B., Oettingen, G., & Gollwitzer, P. M. (2011). Self-regulation strategies improve self-discipline in adolescents: Benefits of mental contrasting and implementation intentions. *Educational Psychology*, 31(1), 17–26.
- Eccles, J. S., & Roeser, R. W. (2011). Schools as developmental contexts during adolescence. *Journal of Research on Adolescence*, 21(1), 225–241.
- Gross, J. J. (Ed.). (2013). *Handbook of emotion regulation*. New York: Guilford.
- Hatzigeorgiadis, A., & Biddle, S. J. (2008). Negative self-talk during sport performance: Relationships with pre-competition anxiety and goal-performance discrepancies. *Journal of Sport Behavior*, 31(3), 237–253.
- Hill, C. L., & Updegraff, J. A. (2012). Mindfulness and its relationship to emotional regulation. *Emotion*, 12(1), 81–90.
- Kapçı, E. G., Uslu, R. İ., Sukhodolsky, D., Atalan-Ergin, D., & Çokamay, G. (2012). Cognitive-behavioral therapy for anxiety in elementary school students. *Journal of Cognitive-Behavioral Psychotherapy and Research*, 1(2), 121–126.
- Kessler, R. C., Demler, O., Frank, R. G., Olfson, M., Pincus, H. A., Walters, E. E., ... & Zaslavsky, A. M. (2005). Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine*, 352(24), 2515–2523.
- Loades, M. E., & Mastroyannopoulou, K. (2010). Teachers' recognition of children's mental health problems. *Child and Adolescent Mental Health*, 15(3), 150–156.
- Mainhard, T., Oudman, S., Hornstra, L., Bosker, R. J., & Goetz, T. (2018). Student emotions in class: The relative importance of teachers and their interpersonal relations with students. *Learning and Instruction*, 53, 109–119.
- McLeod, J. D., Uemura, R., & Rohrman, S. (2012). Adolescent mental health, behavior problems, and academic achievement. *Journal of Health and Social Behavior*, 53(4), 482–497.
- Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... & Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(10), 980–989.
- National Center for Complementary and Alternative Medicine. (2007, October). Meditation: An introduction. Retrieved from <http://nccam.nih.gov/health/meditation/overview.htm#meditation>
- Neff, K. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, 2, 223–250.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self-compassion program. *Journal of Clinical Psychology*, 69(1), 28–44.
- Neff, K. D., & Germer, C. (2017). Self-compassion and psychological wellbeing. In J. Doty (Ed.), *Oxford handbook of compassion science* (pp. 371–385). New York: Oxford University Press.
- Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *The Lancet*, 369(9569), 1302–1313.
- Paus, T., Keshavan, M., & Giedd, J. N. (2008). Why do many psychiatric disorders emerge during adolescence? *Nature Reviews Neuroscience*, 9(12), 947–957.
- Popham, M., Counts, J., Ryan, J. B., & Katsiyannis, A. (2018). A systematic review of self-regulation strategies to improve academic outcomes of students with EBD. *Journal of Research in Special Educational Needs*. DOI: doi.org/10.1111/1471-3802.12408
- Robers, S., Zhang, A., & Morgan, R. E. (2015). *Indicators of school crime and safety: 2014* (NCES 2015-072/NCJ 248036). Washington, DC: National Center for Education Statistics.

Schunk, D. H., & Zimmerman, B. J. (2003). Self-regulation and learning. In I. B. Weiner (Series Ed.), W. M. Reynolds, & G. E. Miller (Vol. Eds.), *Handbook of psychology: Vol. 7. Educational psychology* (pp. 59–78). Hoboken, NJ: John Wiley & Sons.

Shoshani, A., & Slone, M. (2013). Middle school transition from the strengths perspective: Young adolescents' character strengths, subjective well-being, and school adjustment. *Journal of Happiness Studies, 14*(4), 1163–1181.

Theodorakis, Y., Weinberg, R., Natsis, P., Douma, I., & Kazakas, P. (2000). The effects of motivational versus instructional self-talk on improving motor performance. *The Sport Psychologist, 14*(3), 253–271.

U.S. Department of Education. Institute of Educational Sciences, National Center for Education Statistics (2018). *Digest of Education Statistics*. https://nces.ed.gov/digest/d17/tables/dt17_105.20.asp?current=yes

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Administration. (2017). *Key substance use and mental health indicators in the United States: Results from the 2016 National Survey on Drug Use and Health*. Retrieved from <https://www.samhsa.gov/data/sites/default/files/NSDUH-FFR1-2016/NSDUH-FFR1-2016.pdf>

U.S. Department of Health and Human Services. (2018). *Talk about mental health: For educators*. Retrieved from <https://www.mentalhealth.gov/talk/educators>

Whaley, D. E., & Schroyer, R. (2010). “I yam what I yam” ... The power of the self in exercise behavior. *Journal of Sport Psychology in Action, 1*, 25–32. doi:10.1080/21520704.2010.518225

Whisenhunt, J. L., & Heidorn, B. (2018). The role of physical educators as allies for students who self-injure. *Journal of Physical Education, Recreation & Dance, 89*(1), 46–51.

Wisner, B. L., Jones, B., & Gwin, D. (2010). School-based meditation practices for adolescents: A resource for strengthening self-regulation, emotional coping, and self-esteem. *Children & Schools, 32*(3), 150–159. **S**

Duke Biber and Peter Stoepker are assistant professors in the Department of Sport Management, Wellness, and Physical Education in the College of Education at the University of West Georgia in Carrollton, GA; Brent Heidorn is a professor and associate dean in the College of Education at the University of West Georgia in Carrollton, GA.

Submissions Welcome!

Readers are encouraged to send “Theory into Practice” submissions to column editor Anthony Parish at anthony.parish@armstrong.edu.

The purpose of the *Strategies* Theory into Practice column is to distill high-quality research into understandable and succinct information and to identify key resources to help teachers and coaches improve professional practice and provide high-quality programs. Each column (1,000–1,300 words or roughly four typed, double-spaced pages) summarizes research findings about a timely topic of interest to the readership to enable practitioners to apply research, knowledge and evidence-based practice in physical education and sports.

Advertiser Index

SHAPE America National Convention	Back cover
SHAPE America Publication	Inside front cover; Inside back cover; p.48