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THE CALIFORNIA ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION, RECREATION AND DANCE.

e-JOURNAL

Winter 2017 Volume 3 Number 3

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EDITORS MESSAGE

CAHPERD would like to welcome Dr. Chris Gentry to serve as the new Editor-in-Chief

I appreciate the opportunity to be involved in the growth of the CAHPERD e-Journal, because I understand the importance of research not only on a global and national level but at the local level. The ability to support or contest various views related to the HPERD fields is extremely valuable. I would like to focus on the word *support* because research helps to validate our actions in the physical activity and health environment. For example, physical education is many times impacted by those surrounding the programs. It is not surprising that negative personal experiences result in a lack of respect and support for the subject. Why would you invest your time and energy in something that you see having little value? It is our job as educators to successfully argue our viewpoints through evidence. We are salespeople every time we talk to those around us!

I had the great honor of attending one of our nation's great research institutions, the University of Illinois. As a graduate student I taught a physical education teacher education class in one of the activity spaces that Dr. Charles Hillman utilized for his studies on the effects of exercise on cognition. At the time I was not thinking about the final results of his studies, but now I see the impact. Six years later SHAPE America is using the results of Dr. Hillman's research to suggest the importance of physical education and health and its impact on the success of students (Hillman, Erickson, & Kramer, 2008; Hillman et al., 2009). This is just one example of how research is supporting the efforts of all of us in HPERD fields.

If you are interested in making an impact I urge you to engage in and submit research to the CAHPERD e-Journal or other state or national publications. Literature reviews such as the work of Charles E. Basch (2011) will provide you with not only ideas of what recent research suggests but also what we still need to know to support the excellent work of those fighting for the growth of our fields. We thank you for considering a submission and for reading the articles in this publication.

Basch, C. (2011). Physical activity and the achievement gap among urban minority youth. *Journal of School Health, 81*(10), 626-634.

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Hillman, C., Pontifex, M., Raine, L., Castelli, D., Hall, E., & Kramer, A. (2009). The effect of acute treadmill walking on cognitive control and academic achievement in preadolescent children. *Neuroscience, 159*(3), 1044-1054.

Coming Together
In Memoriam

M. Kathryn Scott

August 21, 1946 – July 21, 2016

M. Kathryn Scott (Kathy) held the title of Supervisor and Director of Physical Education at UC Berkeley from 1997-2015 with pride and passion. Prior to that, she was the Vice Chair of the longstanding Physical Education Department, and a UC Berkeley grad. Her professional career at Berkeley spanned an astounding 48 years. She never left the campus that she so loved, or the career that allowed her to expand her reach as an expert in her field of aquatics and Physical Education, at the city, state, and national levels.

Kathy's list of accomplishments is extensive. She held numerous leadership positions in CAHPERD, including President (1989-90), Legislative Committee Chair, Governance & Structure Committee Chair, Parliamentarian, Conference Manager and service on several committees over the years. She received the CAHPERD Honor Award in 1991, the prestigious Verne Landreth Award in 1999 and the Phyllis A. Blatz Exemplary Leadership Award in 2008.

In addition to her leadership in CAHPERD, Kathy was a member of the California Task Force on Youth and Workplace Wellness. From 2010-2014, she chaired their Advisory Board and was the UC's faculty representative of the Physical Education component of the California Physical Education-Health Project. In 2010, then Senator Tom Torlakson appointed her to his Transition Advisory Team and Policy Working Group, which grew into her involvement with Team California for Healthy Kids, the Physical Education Policy Accountability Group, and the Partners Team.

But at heart, she was and always has been an educator first, and a gifted one at that. In fact, last year she stepped down as the Director of Physical Education in order to, "leave Berkeley as I began my career— by teaching." During her time at Berkeley, she forged the path for her Physical Education faculty and staff to fulfill its mission to provide education and activities to thousands of students each year. Nothing was more important to her than insuring that the Berkeley campus and its students fully realized the mind-body connection and the importance of leading a physically active life. She often said, "you must be well to do well."

Family, friends and colleagues will greatly miss the woman who always brought great energy, detail, a wealth of knowledge and a good dose of humor to everything she touched.

PEER-REVIEWED ARTICLE

The Effect of Upbeat Music on PACER Performance of Middle School Students

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ABSTRACT

This study measured middle school student achievement on the Fitnessgram test for aerobic capacity (PACER) five times during a 3 week period. Participants were middle school aged students from one school in three separate physical education classes: sixth grade (N=47) and seventh grade (N=34) and eighth grade (N=51). One class took the PACER test with just the PACER cadence and with no background music each time, another group had the PACER cadence with upbeat background music each time, and the third group alternated trials with just the PACER cadence with those that also included the upbeat background music. A one-way repeated measures ANOVA was calculated comparing the PACER tests scores of participants for the five trials. The No Music group experienced a significant decrease in PACER laps from the 1st to the 5th trial whereas the Music Every Time group had a significant increase in PACER laps. The Alternating No Music/Music group performed significantly higher PACER laps when the background music was present than when it was not present. The results suggest incorporating music can increase student performance in aerobic capacity testing. These findings are consistent with those of previous research involving elementary and high school student performance on the PACER test.

Stimulating background music has been shown to enhance exercise intensity and duration in various physical activities including in cycling, interval training, and treadmill walking (Karageorghis, Priest, Williams, Hirani, Lannon, & Bates, 2010); Karageorghis & Priest, 2008). Exercise trials accompanied by music have been shown to not only increase levels of participation, but also result in greater enjoyment and other psychological and psychophysical benefits (Bharani, Sahu, & Mathew, 2004; Elliott, Carr, Elliott & Orme, 2005; Karageorghis, Mouzourides, Priest, Sasso, Morrish, & Walley, 2009;). Manire, Robert & Tiev, (2010) found that any music choice accompanying the exercise was significantly preferable to participants rather than exercising with no music. Nethery (2002) found that music listening during exercise can reduce perceptions of effort and fatigue by up to 12%. Music also appears to narrow attention and reduce the awareness of bodily sensations of fatigue (Rejeski, 1985). There is also evidence music is most effective in stimulating movement when there is synchronicity between the movement patterns required by running and tempo. This may be due to a reduction in energy cost of exercise because of enhanced neuromuscular metabolic efficiency (Simpson and Karageorghis, 2006) or because it allows runners to adjust tolerance through the diversion of attention from uncomfortable physical sensations to the various features of the music (i.e., rhythm, melody, and lyrics). These studies and others provide strong evidence that music has measurable and relatively positive effects on their stride rate to the tempo of the music using the supplementary motor area of the brain. Others have speculated that music enhances arousal, particularly when the music has personal value to the participant (Blumenstein, 1992; Karageorghis & Terry, 1997). In a qualitative research study, Gfeller (1988) concluded that music enhances exertion both behavioral and psychological states on people

when exercising (Hirani, Lannon, & Bates, 2010; Karageroghis, Terry, Lane, Bishop, & Priest, 2012).

To estimate cardiovascular endurance and VO2 max, K-12 children in public schools complete the PACER test, which is part of the required Fitnessgram test. The results are measured against the Healthy Fitness Zone Standards, a criterion-referenced standard that indicates the level students should achieve to reach the Healthy Fitness zone for their age and gender. In 2015, over 80% of the students in California failed to reach the healthy zone in the PACER test. Deutsch & Hetland (2010) found the performance of elementary school students on the PACER test could be positively enhanced by the playing of concurrent high or moderate tempo music beat in the background. Dunaway and Ward (1995) found in their study of high school students, significantly more running laps were completed when stimulating music was present because students perceived the presence of the music was dependent upon strong effort. Interestingly, there appears to be no comparable research regarding the effect of music on the aerobic activity performance of middle school students. Since stimulating background music has been shown to result in higher PACER test scores with other age groups, it appears important to also determine whether the PACER performance of middle school aged students can also be enhanced by supplementing the PACER Beep test with upbeat tempo background music. Given the unique characteristics of middle school students in regards to their growth and development stage and emotional and maturity level, the results of this study may be very important to those who teach physical education at that level.

Methods

Students in three different middle school physical education classes (N=132) with the same teacher in one school completed the PACER five times within a three week period. The three week time frame for the five trials was selected to minimize any effects of growth and development or increases in outside-of-class aerobic capacity. The students ranged from 10-13 years of age. The ethnic composition of the students was 57.8% Latino, 26.7% White, 8.9% Black or African American, 4.5% mixed ethnicity, and less than 1% of any other ethnic group. Approximately 89% of the students in this school were classified as socioeconomically disadvantaged. Permission to conduct the study was granted in accordance with district Institutional Review Board policies regarding research studies involving children. Each class was randomly assigned to one of the three research groups. Students in the 6th grade class (males =24 and females =23) performed every PACER test, other than the pre-test, with music incorporated into the background during the "beeps" (ABBBB treatment schedule). Students in the 7th grade class (males = 21 and females = 21) performed the PACER test alternating between the no music and music incorporated into the background with the following weekly sequence: no music, music, no music, music, no music (ABABA treatment schedule). Students in the 8th grade class (males=24 and females=27) performed every PACER test with the original format (no music, only beeps (AAAAA treatment schedule). During all “music” tests, A Block Rocker stereo system was used to play pop music from iTunes Top 20 that was selected by the researchers within a high tempo band of 125- 140 beats per minute (Karageorghis,et., al., 2012). Songs were switched approximately once per minute to add variety and increase the chances it would be enjoyable for the majority of the students. A specific music fading android application called "Garage Band" pre-set the songs in accordance with the exact time of the PACER “Beeps" so the music automatically faded down before each beep and increased in volume after every beep. Students were encouraged to give their full effort both when music and non-music trials were performed. Scores were recorded for each student for each of the five trials by the instructor, with the help of a student assistant in each class. Each group performed the PACER test in the original format (without music, only beeps) on the first week of the study to attain baseline scores. After the initial test during the first week, each group tested twice during each of the next two weeks (*See Table 1, p.11).* All five tests were completed, scores were entered into Microsoft Excel and SPSS for further analysis. Descriptive statistics were used to analyze the data. A one-way repeated measures ANOVA was used to compare the music vs non music differences on the PACER tests. In addition, the instructor subjectively assessed two behaviors for each group for each of the five PACER trials: 1) Frequency of negative facial expression and complaining, and 2) Frequency of dancing or singing during the PACER testing period.

Results

In the No Music group, a significant effect was found between the five trial means ($F(4,200) = 2.73$, $p = .003$). Mean scores decreased from Test 1 ($m = 27.02$, $sd = 13.07$) to Test 2 ($m = 26.45$, $sd = 16.52$) to Test 3 ($m = 23.16$, $sd = 13.38$), increased

in Test 4 (m= 26.84, sd = 15.25) and then decreased in Test 5 (m = 24.29, sd = 12.96). In the Music/No Music Alternating group, a significant effect was found between the five trial means ($F(4, 184) = 13.84$, $p < .000$). Mean scores increased from Test 1 (No Music) (m = 20.91, sd = 9.75) to Test 2 (Music) (m = 25.32, sd = 12.46) then decreased in Test 3 (No Music) (m = 24.23, sd = 11.86), increased in Test 4 (Music) (m= 28.30, sd = 14.46) and then decreased in Test 5 (No Music) (m = 23.13, sd = 12.17) (See Table 1, p.11). In the All Music group, a significant effect was found between the five trial means ($F(4,132) = 6.83$, $p < .000$). Mean scores increased from Test 1 (m = 25.59, sd = 13.46) to Test 2 (m = 27.21, sd = 14.20) to Test 3 (m = 28.68, sd = 15.98), to Test 4 (m= 30.38, sd = 18.64) and then to Test 5 (m = 31.56, sd = 16.78) (*see Table 1, p.11)*. The primary researcher also subjectively assessed two class behaviors during each of the five PACER trials: 1) Frequency of negative facial expressions and complaining, and 2) Frequency of dancing or singing during the PACER testing period. Groups were assigned a 1-5 nominal rating for each behavior for all five trials utilizing the ordinal scale: 1 = no occurrence and 5 = high frequency of occurrence. The primary value of using a scale of this type was to show changes from one trial to another; a ratio or interval relationship cannot be assumed (Betram, 2007). For the ALL MUSIC group, there was a low incidence of negative facial expressions or complaining and a high percentage of students were observed singing and dancing along with the music during Trials 2-5. For the Music/No Music Alternating group, there was no incidence of negative facial expressions and complaining on the days when there no music was incorporated, however the frequency of negative facial expressions and comments increased dramatically when the music was not present. There was also a high frequency of singing, dancing and smiles on faces each time the test was administered with music, whereas there were many more expressions of dissatisfaction and complaints from members of the class when the music was absent. For the No Music group, the frequency of student negative facial expressions and complaints increased steadily from the first to the fifth trial and, and predictably, there was no evidence of singing or dancing during any of the trials (*see Tables 2, p11 & 3, p.12)*.

Discussion

These findings are consistent with previous research demonstrating the positive effects of upbeat background music on an aerobic capacity task. The significantly higher number of PACER laps completed when background music was played is consistent with Deutsch & Hetland (2010), who reported similar results with elementary school aged students. The results are also consistent with studies involving older participants which found that participant output was greatest when exercising while listening to the motivational music in the background (Bates, et. al, 2010; Karageorghis & Priest, 2008; Karageorghis et al., 2009; and Dunaway 1995). The results for the MUSIC/NO MUSIC ALTERNATING group are particularly compelling because the average number of PACER laps performance was about 18% higher when the music was added (26.8 vs. 22.8). This is consistent with Nethery's (2002) findings that physical exertion is increased dramatically when upbeat music is present. The verbal and physical expressions of students, that were consistently observed by the researcher when music was present, are consistent with Gfeller (1988), who found that upbeat music enhances mood and stimulates students to synchronize mood and stimulates students to synchronize their movements with the rhythm of the music.

Since upbeat music increased PACER scores, it is very likely it would also facilitate an increase in student exercise intensity during other activities in physical education classes (Hirani, Lannon, & Bates (2010). If students learn to enjoy being physically active during physical education classes, they may be more likely to incorporate physical activity into their daily lives. Future research involving middle school students could compare arousal and performance levels during, 1) continuous tasks and discrete tasks with music of different tempos, and 2) upbeat music that is familiar vs. unfamiliar. In addition, having middle students complete a self-report measure of student mood, such as the Profile of Modes State for Adolescents (POMS-A) (Terry, Lane, Lane, & Keohane, 1999) after exercising, both with and without music, might provide more insight regarding affective benefits of incorporating various types of music into physical activities.

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TABLES

Table 1. Number of PACER Laps Completed by Middle School Students in No Music, All Music, and Alternating No Music/Music Groups

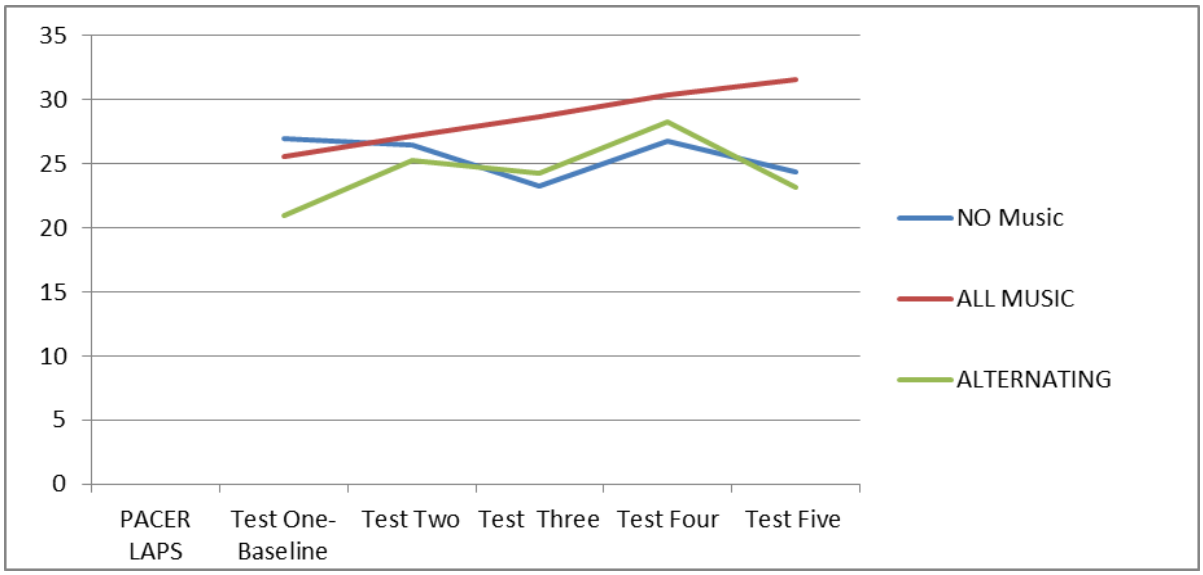
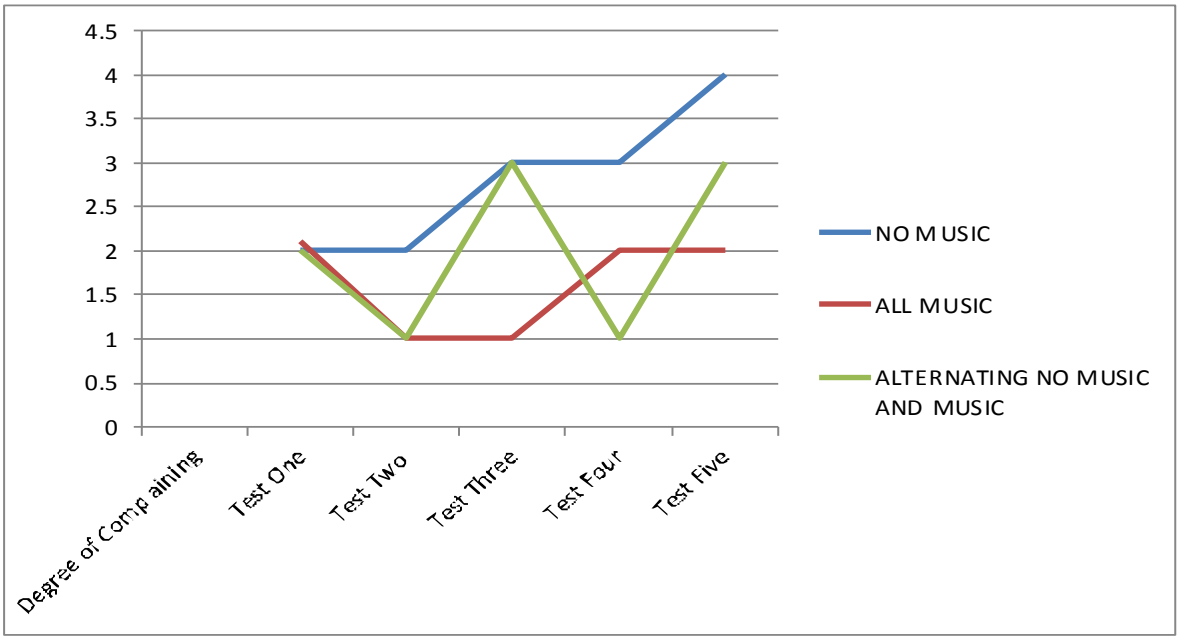
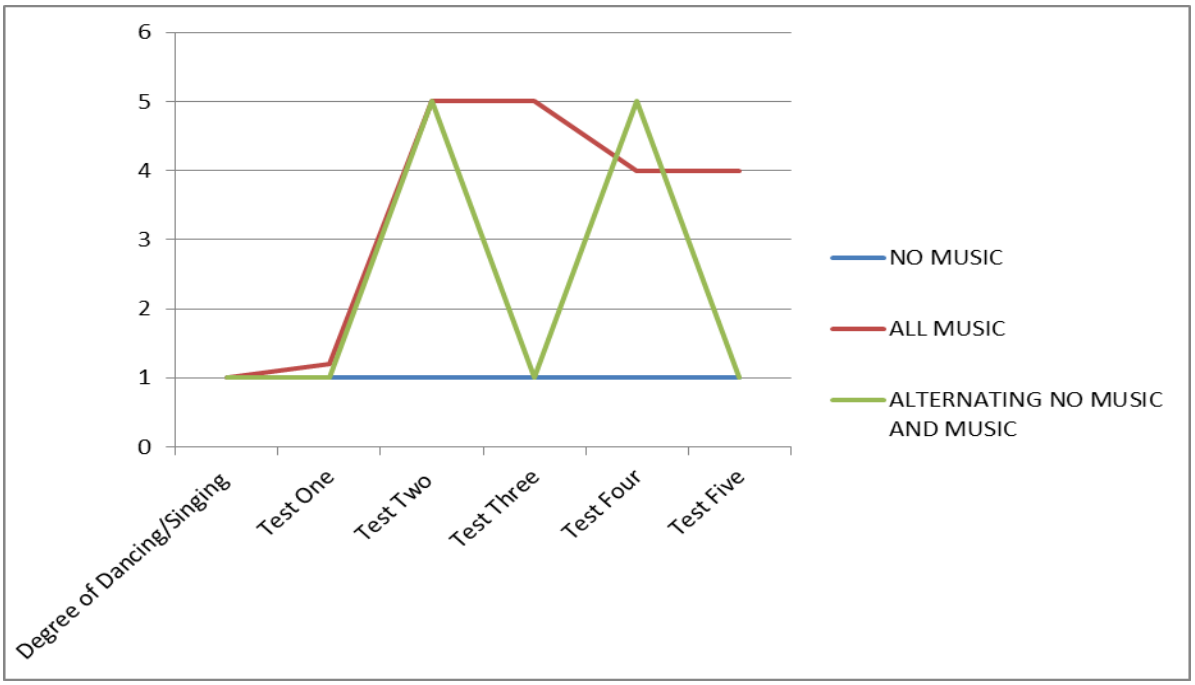


Table 2. Teacher Rating of Frequency of Class Complaining During Administration of Five PACER Test Trials for Middle School Students in NO MUSIC, ALL MUSIC, and ALTERNATING NO MUSIC/ALL MUSIC Groups



Scale: 1 = No occurrence 5 = Very high frequency of occurrence

Table 3 Teacher Likert Scale Rating (1-5) of Frequency of Singing or Dancing During Administration of Five PACER Test Trials for Middle School Students in NO MUSIC, ALL MUSIC, and ALTERNATING NO MUSIC/ALL MUSIC Groups



Scale: 1 = No occurrence 5 = Very high frequency of occurrence

Conceptualizing Mindfulness for Health and Physical Educators

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ABSTRACT

Mindfulness is a form of focused attention on the present moment. Kabat-Zinn (2003) defined mindfulness as, "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (p. 145). There is promising evidence suggesting that mindfulness can be used as a valid practice or tool in education to promote an assortment of desired cognitive, social, and emotional outcomes for youth (Zoogman, Goldberg, Hoyt, & Miller, 2015). This type of learning modality can also help educators demonstrate student-learning outcomes associated with some of the health and physical education national standards (National Health Education Standards, 2016; Society of Health and Physical Educators, 2014). The purpose of this paper is to provide health and physical educators with a foundation in mindfulness theory, concepts, activities, and related resources. Interested readers should be able to pursue these concepts and ideas further by designing their own curriculum to use within the classroom.

Mindfulness, a type of contemplative practice, is defined as being aware of current experience and fully present in any day-to-day moment, without any judgment on whether current thoughts or feelings are good or bad (Bishop et al., 2004). As Kabat-Zinn (1994) noted, mindfulness is purposively "paying attention in a particular way: on purpose, in the present moment, nonjudgmentally" (p. 4). Mindfulness techniques offer great potential in helping an individual: increase focus/attention, regulate emotional events, develop deeper capacity for compassion, and reduce the amount of stress in their lives (Barbezat & Bush, 2014). There continues to be evidence that anxiety, depression, and stress are serious problems facing students (Dyrbye, Thomas, & Shanafelt, 2006). Mindfulness holds tremendous promise as a valid and useful tool in helping reduce undesirable social and emotional behavior within the teaching-learning paradigm of education. The purpose of the article is to provide health and physical educators with the theoretical and empirically-based underpinnings of mindfulness, as well as introducing strategies and activities that can be used to help students be more 'aware of' and 'present with' their learning. The activities and resources found in this article should be thought of as tools that novice-to-experienced teachers can use to design and implement mindfulness practices within their own classrooms. This manuscript is broken into three sections. Section one (Framing Mindfulness) provides an overview of some of the salient literature and supporting evidence surrounding mindfulness, including K-12 empirical outcomes from using these practices in the school environment. Section two (The ABC's of Mindfulness) covers the conceptual and theoretical underpinnings of mindfulness; discussed here are three of the more prominent pillars that frame these practices. Section three (Mindfulness Activities) entails the pragmatic lesson ideas and resources that teachers can use to start developing their own mindfulness curriculum.

Framing Mindfulness

Put simply, mindfulness is moment-to-moment awareness without judgment (Kabat-Zinn, 2003). "Mindfulness opens the mind and gives space for new understanding…" (Barbezat &

& Bush, 2014, p. 98). Practices associated with mindfulness can be designed to promote and cultivate greater ability for knowledge construction and help individuals to focus more attentively on the present here and now (Zoogman, Goldberg, Hoyt, & Miller, 2015). There is great potential for, and sound empirical evidence supporting the use of mindfulness in helping individuals decrease anxiety and improve mood (Hoffman, Sawyer, Witt, & Oh, 2010), reduce stress and rumination (Keng, Smoski, & Robins, 2011), and increase self-compassion while forming stronger interpersonal relationships (Barnes, Brown, Krusemark, Campbell, & Rogge, 2007; Birnie, Speca, & Carlson, 2010). The outcomes associated with practicing this form of meditation are becoming more widely acknowledged and accepted as an integral aspect of healthy living (Meiklejohn et al., 2012; Moore & Malinowski, 2009). Based upon this growing body of literature it seems plausible that using mindfulness techniques can be a relatively simple, yet effective means for maintaining physical and emotional health.

In recent years there has been a resounding surge in the popularity of mindfulness and the various effects these practices have on adults (de Vibe, Bjørndal, Tipton, Hammerstrøm, & Kowalski, 2012). However, advocates and researchers note that mindfulness is not solely intended for adults (Zoogman et al., 2015). Within K-12 education there is a growing body of literature depicting the potential benefit and practical application of including mindfulness practices as part of the school curriculum (Flook et al., 2008; Napoli, Krech, & Holley, 2005; Rosaen & Benn, 2006; Wall, 2005). Using mindfulness training for adolescents has been shown to decrease behavior problems and increase attention and focus (Bogels, Hoogstad, van Dun, de Schutter, & Restifo, 2008; Weijer-Bergsma, Frmsma, de Bruin, & Bogels, 2012). Zoogman et al. (2015) provided a meta-analysis of mindfulness interventions with youth participants. Findings from this twenty-article analysis pointed out that mindfulness was indeed a helpful intervention strategy for a variety of social, emotional, and academic measures. Other researchers contend that mindfulness training within K-12 has been shown to improve/strengthen an assortment of critical intrapersonal and interpersonal relationship skills, such as memory, attention, social skills, emotional regulation, and self-esteem (Meiklejohn et al., 2012). With the aforementioned comments in mind it is becoming increasing apparent that mindfulness techniques should be considered within the K-12 curriculum.

Mindfulness aligns very well with designed K-12 national standards. The learning outcomes associated with mindfulness directly align with National Health Education Standards 5 and 7: promoting healthy decision making and health enhancing behavior (National Health Education Standards, 2016). There is also tremendous potential for using mindfulness practices within physical education to help teachers demonstrate student-learning outcomes that are associated with the Society of Health and Physical Educators National Standard 4: responsible personal and social behavior (Society of Health and Physical Educators, 2014). Central to mindfulness in education is the idea that students can learn more readily if they can remain focused, calm, open-minded, and perceive their environment to be free from stressors. The next section will cover three tenets that play a large role in the practice of mindfulness, and in ultimately reaching desired health and wellness outcomes for teachers and students.

The ABC's of Mindfulness

An argument can be made that the building blocks or essential cornerstones of mindfulness are *attention*, *balance*, and *compassion* (i.e., the ABC's of mindfulness). Attention refers to having a 'gentle focus' and being keenly aware of the present moment. Focusing attention and being mindful sounds simple; however, the reality of being consciously aware of the present moment for any given amount of time can be quite difficult. To stay focused on the present moment without the mind 'wandering' to something that has happened in the past or something that is planned for the future can be a difficult task. Go ahead and give it a try. Close your eyes and see how long you can focus on, for example, your breath coming in and out of your body. Before long your mind will naturally start to wander to one thought and then another. This 'habitual chatter' is what one 'quiets down' when practicing the art of mindfulness. Increasing one's ability to stay focused and attentive can help reduce the 'habitual chatter' that can be a distraction in the learning process.

A critical skill for students to develop in order to stay on task and solve problems is consistent concentration and focus. Mindfulness can hone and refine attention (Jha, Krompinger, & Baime, 2007). There are numerous studies that have used mindfulness interventions to increase focus and attention (Chiesa & Serretti, 2009; Sedlmeier et al., 2012). In one such study, MacLean et al. (2010) discovered that mindfulness training can actually improve the efficiency in which the brain operates in

order to 'free up extra space' for increased attention. Cultivating greater attention is one element toward improved academic success.

Another outcome that mindfulness can achieve in an effort to help foster conducive learning environments for teachers and students is emotional stability, also known as equanimity. Equanimity can be thought of as having 'mental calmness' or a feeling of complete composure, especially in situations that might cause stress. Desbordes et al. (2015) defined equanimity as "an even-minded mental state or dispositional tendency toward all experiences or objects, regardless of their origin or their affective valence (pleasant, unpleasant, or neutral)" (p. 1). Emotional regulation is at the heart of balance within mindfulness. With emotional regulation one is consciously aware of his or her own affect and can react to situations of stress/demand in ways that are socially acceptable. These individuals have conscious control over their emotions (i.e., emotional and mindful balance). Thus, emotional balance or equanimity can be considered an emotion regulation strategy that can impact how, and to what degree an individual responds to a perceived emotional stressor (Desbordes et al., 2015).

There is empirical evidence suggesting that mindfulness can alter the brain in ways that help individuals improve their emotional balance (Goldin & Gross, 2010). Some studies show that mindfulness practices can help individuals complete tasks with equanimity even in emotionally stressful situations (Ortner, Kilner, & Zelazo, 2007). Emotional balance within the classroom is especially important when students are faced with situations that might cause them to panic (e.g., not answering a question correctly in front of the rest of the class or doing poorly on an exam), become socially fearful (e.g., working in a group, participating in teambuilding activities, or using an assortment of interpersonal skills while on a team), or any situation in which they need to regulate their emotions because of a perceived, external stressor. The ability to prevent oneself from being overwhelmed by circumstances that arise in the classroom can be a tremendously useful tool for students to develop. Not only is having the ability to regulate personal emotions important, being able to show care, concern, and compassion toward others is another cornerstone in establishing a healthy learning environment.

The third piece of the mindfulness picture is compassion. Compassion has three components: cognitive ("I understand what you're going through"), affective ("I feel your pain"), and motivational ("I want to help you"). Gratitude, empathy, loving-kindness, self-esteem, and social connection are all important intrapersonal and interpersonal relationship skills associated with compassion and supported within a mindfulness framework (Barbezat & Bush, 2014). With the rise of bullying, teasing, and other forms of social harassment in schools it becomes paramount that teachers create a learning environment that fosters supportive and nurturing interactions for all members of the classroom (O'Connor & Graber, 2014). There has been promising research associating mindfulness training with higher instances of compassion (Birnie, Speca, & Carlson, 2010). In one randomized control study Neff and Germer (2013) demonstrated significant self-compassion and well-being outcomes as a result from an 8-week mindfulness program. Shapiro, Brown, and Biegel (2007) maintained that mindfulness practices helped participant's lower stress while at the same time increased their capacity for self-compassion, both of which may be helpful as a preventative measure to thwart off depression (Nolen-Hoeksema, Morrow, & Fredrickson, 1993). Carson, Carson, Gil, and Baucom (2004) used a mindfulness intervention in their randomized controlled study and found improved interpersonal relationship benefits (e.g., high relatedness, closeness, and acceptance of one another) from establishing the contemplative practices. There appears to be a clear and ever-growing body of evidence illustrating the link of mindfulness to heighted levels of compassion, a behavioral trait that would be welcomed in any educational environment.

The work of Noddings (1992) that positioned care as an essential feature of the classroom also is a reminder of the importance for teachers to create a classroom community where acts of compassion are not only felt but, actively and purposively enacted by students. Through her extensive writing on an ethic of care, Noddings has championed the need for all educators to establish ways to infuse care into the classroom: whether it is through listening attentively to students, supporting student needs, modeling empathy around students, and/or identifying ways to demonstrate that students are meeting intended learning outcomes. By establishing care as a form of compassion, a teacher can build strong, appropriate teacher-student relationships that enhance the classroom community (Frank, 2013; Noddings, 1992). Developing the capacity for compassion allows for the development of a classroom where stu-

dents can nurture psychological well-being among themselves. Mindfulness practices hold the potential to promote exactly that, the possibility for loving-kindness (i.e., care, concern, and tenderness) among students to exist.

Attention, balance, and compassion (i.e., The ABC's of mindfulness) are some of the more salient features/outcomes associated with the practice of mindfulness. These three building blocks or cornerstones are desired traits to develop, especially for students who are growing, making mistakes, and learning their place within a larger society. While mindfulness has been shown to cultivate these elements of intrapersonal and interpersonal development, it also holds potential in allowing students the opportunity to explore their own personal meaning and value system. Barbezat and Bush (2014) eloquently pointed this out by stating, "meditation and introspection provide effective means for students to become aware of their emotions and reactions while at the same time helping them clarify what is personally most important" (p. 17). In supporting students' evaluation and examination of personal and moral values one might contend that mindfulness becomes spiritual or even religious in nature. One important caveat to note here is that, although mindfulness practices were originally developed as part of a religious tradition, teachers should not fear using such practices in the classroom, as they can be taught and utilized as purely secular activities designed to create space for enhanced learning opportunities.

Mindfulness Activities

Provided here are sample activities that can be implemented in health and physical education classrooms to help students develop the benefits associated with mindfulness. The intent of this section is to provide content/lesson ideas for teachers to utilize in developing their own mindfulness curriculum. Though important and briefly covered at times, the pedagogy surrounding the implementation of these activities does not fall within the scope of this paper. However, the content/lesson ideas summarized should be considered a starting point for K-12 and university instructors to design their own mindfulness lessons or curriculum. This section is divided into two categories: focused-attention activities that require *stillness* (calm and stationary positions) and focused-attention activities that require *movement* (mindful walking). It should be noted that these activities only represent a small 'sampling' of the totality of mindfulness practices from which teachers could choose to use within their own classrooms.

Stillness: Calm and stationary positions. Three different types of mindfulness practices will be covered under the category of calm and stationary positions: contemplative breathing, body scan, and harnessing the four elements. Contemplative breathing (adapted from Barbezat & Bush, 2014) is a useful introductory activity to help students start practicing the act of mindfulness. This activity it great to use at the start or end of a lesson to help students focus on a desired concept, topic or learning outcome that was or will be covered during the lesson. The following narrative in italics lists instructions to have students perform: *Sit comfortably in a position that allows you to be both relaxed yet alert at the same time. Now, gently close your eyes, leave them half-open, or gaze, unfocused at an object in the room. Take two-to-three slow, relaxed breaths. Now, focus and place attention on your breathing. This can be the air going into and out of your nose or even your chest or belly expanding and contracting. If at any time, you are distracted by a noise, thought, or feeling; acknowledge it, experience it, and then gently let this go and focus back on your breathing. Your mind will find it nearly impossible to stay focused on your breathing for even a short time – that's perfectly okay! The key is to realize that your mind wandered off and return back to focusing attention on your breathing.* After 1-2 minutes, ask students to move their focus from their breath to a question, topic, or lesson focus and repeat the same process. For example, have students focus on what they believe they were able to accomplish from the day's lesson. *Now, focus on what you thought you learned today or were able to accomplish successfully. When an answer comes up, acknowledge it, then go ahead and drop it. Drop the answer and continue to think deeper about what your accomplishments were. Try to come to a final answer in a short phrase or a few sentences. If your mind starts to wander no problem, no big deal, acknowledge you have wandered off topic and return to thinking about what you learned today.* After 1-3 minutes have students take 2-3 short, slow breaths and open their eyes. At this point the teacher can conduct a pair/share discussion, ask volunteers to share with the entire class, or move on to the next part of the lesson.

Body scan (adapted from Barbezat & Bush, 2014) is an activity that can help students become more attuned to several parts of their body. This practice is also an excellent tool to help students identify and release physiological stress. The body scan can be thought of as an

extension to contemplative breathing in that the teacher helps students to move focus from one part of the body to the next. As with the contemplative breathing have students find a relaxed yet alert position with eyes closed, and focus on breathing for about a minute (i.e., the same steps as contemplative breathing). Remember to remind the students that it is perfectly okay for the mind to start to drift or go off to another thought; the key is to acknowledge it and then gently return back to the focus on the breath. *Now, move your attention to the top of your head, ears, and the back of your head. Notice any sensations, or lack thereof in this region of your body.* For each body part or region, have students maintain focus for 30-seconds up to 2 -minutes, depending on time and preference. *Move your attention to your face, forehead, eyes, nose, and lips. Now, let's go ahead and focus on the neck and shoulders, as these areas tend to hold a lot of tension and stress.* After a few minutes (and focus on a few body parts) remind students: *If at any time, you are distracted by a noise, thought, or feeling, acknowledge it, experience it, and then gently let this go and focus back on your breathing. Your mind will find it nearly impossible to stay focused on your breathing for even a short time – that's perfectly okay! The key is to realize that your mind wandered off and return back to focusing attention on your breathing.* Depending on allotted time, a teacher can have students focus on a wide variety of body parts such as, the back, stomach, arms, legs, internal organs, and even the whole body at once.

Harnessing the four elements (adapted from Willard, 2014) is an activity that can help individuals practice focused attention, while remaining calm and relaxed in order to reduce stress and anxiety. This lesson idea requires knowing the four elements of western culture: earth, air, fire, and water. Have students sitting in a comfortable position with their eyes closed, or unfocused staring at an object in the room. Start with the element of earth. *Ladies and gentlemen go ahead and focus your attention on your feet touching the ground. The ground represents earth, a solid presence that will give you strength and stability. Focus on your strength and stability as you feel the earth beneath you.* For each element, allow students 1-3 minutes of focused attention before moving on to the next one. *Next comes the element of air. Now focus your attention to your breathing. Feel the air going in and out through your nose. The air holds the potential to be a powerful force. Air represents the independence and power of the mind, and with each breath you are consciously blowing away your stress, anxiety, and fears. Let us turn our attention to water. Take a moment and swallow. The act of swallowing represents water moving, wandering, and meandering down a path. Water represents your ability to reflect and think deeply about yourself, who you are and what your goals are in life. Finally, let us focus our attention on fire, deep within the core of our body. This element represents our confidence in rising above our challenges in life. Each element brings focus to important elements in our own life: earth for stability and strength, air for independence and power of mind, water for its reflective abilities, and fire for building within us confidence to overcome challenges.* Take 1-3 minutes and have students focus on all of these elements. *Ask yourself how you personally feel connected to each element, and whether you need more practice with any of these qualities.* After 1-3 minutes have students take 2-3 short, slow breaths and open their eyes. At this point the teacher can conduct a pair/share discussion, ask volunteers to share to the entire class, or move on to the next part of the lesson.

Contemplative breathing, body scan, and harnessing the four elements are three simple ideas for teachers to use to incorporate mindfulness within the classroom. Two great resources for designing activities/lessons for the classroom are: *Mindfulness for Teen Anxiety* (Willard, 2014) and *The Mindful Teen* (Vo, 2015). Both texts offer an assortment of pragmatic lesson ideas that can be easily modified/implemented in any school environment.

Movement: Mindful walking. Movement can also be used to focus students' attention. Although mindful walking will be the focus in this section, it should be noted that there are several physical activities in which mindfulness can be incorporated within health or physical education classes. Aikido, tai chi, yoga, and even surfing are physical movement forms that align with mindfulness practice that will not be covered within the scope of this paper; however, these movement forms hold tremendous potential for helping students further develop beneficial social and emotional outcomes. Walking meditation "brings close attention to the ordinary action of walking…" (Barbezat & Bush, 2014, p. 161). The importance of mindful walking is to bring acute focus to the muscles of the body, the movement of the legs and feet, the arms swaying, the balance that occurs with each step. Mindful walking de-emphasizes speed or competition in moving from one location to another; instead, the individual practices becoming fully aware of his or her body, and what they are doing moment-to-

moment (Barbezat & Bush, 2014). There are various forms of contemplative walking (see Live and Dare, 2016 for a list); with all the forms of walking meditation there are a few tips for teachers to consider. Slower, longer sessions tend to work best; however, 10—15 minutes is a good allotted time to start with for beginners. Before starting tell students to keep their eyes open, stand with their feet shoulder-width apart, and balance weight evenly on both feet. Have students take a couple of slow, deep breaths so that they can feel relaxed yet alert. Remind students, *if at any time, you are distracted by a noise, thought, or feeling, acknowledge it, experience it, and then gently let this go and focus back on your breathing. Your mind will find it nearly impossible to stay focused on your breathing for even a short time – that's perfectly okay! The key is to realize that your mind wandered off and return back to focusing attention on the technique being practiced.* The two techniques of contemplative walking that will be mentioned in this section are: Thich Nhat Hanh and Zen (a.k.a. kinhin) walking, because they are arguably two of the easier forms to pick up. With Thich Nhat Hanh walking (adapted from Live and Dare, 2016), mention to students that this form of walking uses affirmations to produce positive emotional balance (i.e., greater equanimity). Students will walk slowly, focusing on their breathing, and bringing attention to the present moment. They will silently repeat the following phrases (in italics) as they focus on their breathing: breathing in *I have arrived*; breathing out *I am home*. Breathing in *I am here*; breathing out *I am present*. Breathing in *I am solid*; Breathing out *I am free*. The key is to provide students with an opportunity to choose to be in the present moment, instead of having them dwell on the past (e.g., the latest gossip they heard at lunch) or what they plan to do in the future (e.g., going to a friend's house after school).

Zen walking or kinhin (adapted from Live and Dare, 2016) occurs in a clockwise motion around a room or outside area. Teachers can start with providing students with the aforementioned tips (listed above) for mindful walking. Then, have students position their eyes about four to six feet in front on the ground. Remind students about safety and being aware not to bump into another student. Students will take one small step (~1-2 feet) for each breath (inhalation and exhalation). The focus will remain with syncing the breath with the step in unison. If the teacher would like to modify this technique they can have students switch from the *focused-attention* of the breath/step to *open-awareness*, where the focus shifts to experiencing all aspects of walking (e.g., movement of each muscle, parts of the body, feet touching and leaving the ground, mental thoughts, emotional feelings, awareness of outside sensations such as the wind or noise coming from the environment). In essence this modification aligns with *mindfulness walking* (Live and Dare, 2016), where being open and aware of the totality of the walking experience is the main goal rather than the focused-attention of the breath and step.

Resources and Concluding Remarks

There are an assortment of mindfulness tools/methods that teachers can use to help students cultivate deeper awareness, concentration, and insight (Barbezat & Bush, 2014). These tools/methods hold great potential in helping create environments that are conducive to learning. The goal of using mindfulness activities in the classroom setting is to have students who come away with a better understanding of *self*, as well as targeted learning outcomes. Table 1 lists over twenty different resources (including apps, articles, books, videos, and websites) for educators interested in learning more about mindfulness. These resources offer a variety of techniques, tips, lessons, web links, and research-based literature to expand anyone's mindfulness repertoire (See Table 1, p.21).

Incorporating mindfulness practices as part of a health and physical education curriculum holds tremendous promise for students. The purpose of mindfulness is to help individuals become more aware of the present here-and-now, nonjudgmentally, and with loving-kindness that can permeate to others. Mindfulness has been linked to an assortment of social and emotional learning benefits such as lower levels of anxiety and stress, better emotional regulation and equanimity, higher focus and attention, and increases in overall production on learning tasks. Whether mindfulness is used as a short brain-break activity for a couple of minutes in class or as a series of lessons within the larger scope of an entire unit, the evidence supporting its use and benefits seems promising enough for teachers to take notice and embrace it.

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TABLE

Table 1. Twenty Mindfulness Resources

Apps (for your phone or tablet)

Calm

Flipboard (mindfulness topic)

Headspace

Insight Timer

Stop, Breathe & Think

The Mindfulness App

Books

Anh-Huong, N., & Hanh, T. N. (2006). *Walking meditation*. Boulder, CO: Sounds True.

Broderick, P. (2013). *Learning to breathe*. Oakland, CA: New Harbinger Publications.

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Research-based Articles

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Videos

Jon Kabat-Zinn on Mindfulness (60-Minutes) at http://www.cbsnews.com/news/mindfulness-anderson-cooper-60-minutes/

9 Mindfulness videos at http://mrsmindfulness.com/9-mindfulness-videos/

UCLA Mindful Awareness Research Center videos at http://marc.ucla.edu/body.cfm?id=100

Websites

www.mindfulschools.org

www.liveanddare.com/types-of-meditation

www.valleymindfulness.com

www.beginnerstaichi.com

3 Reasons

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Feb. 23-25, 2017

CAHPERD

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Town and Country
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1

Social and Emotional Learning

*Linking content standards to life-skills
*Setting and achieving SMART, positive goals
*Accessing and creating learning environments and physical spaces that supports learning
*Working and interacting effectively with others
*Communicate and advocate clearly for the needs of teachers and students

2

Standards & Skill Based

*Learn to apply skill based instruction concerning content standards
*Authentic assessment
*Pedagogical methods to teaching physical and health literacy
*Engaging students in learning
*Use of planned and sequential framework to instruction

3

21st-Century Learning

*Ideas you can modify to provide personalized learning
*Innovative learning methods that use supportive technology, and higher-order thinking
*Balancing technology-based formative and summative assessments
*Teaching 21st-century skills within subject matter
*Teaching 21st-century skills across subject matters

CALL FOR PAPERS

The California Association for Health, Physical Education, Recreation, and Dance issues this call for papers anticipated to appear in the Fall (2017) edition of the CAHPERD e-Journal. The e-Journal contains two types of articles: (a) practical manuscripts related to teaching, professional practice or performance, (b) research articles in the HPERD disciplines. All submissions will be subject to a blind peer review process. Authors who are professionally engaged in the study of HPERD and related fields are encouraged to submit articles for review and potential publication. Authors need not be professional writers. Graduate students in the HPERD disciplines are also encouraged to submit. The editors will give priority consideration to those articles that relate directly to HPERD issues confronting California professionals. Authors may not submit the same article to this e-Journal and other publications for simultaneous review.

Authors seeking publication in the e-Journal should include the following materials: (1) Cover letter indicating the desire to have materials reviewed for possible publication. The cover letter should indicate acknowledgement that CAHPERD will hold the copyright to all information published in the e-Journal. (2) Email attachment of the desired publication as a word document only. (3) Biographical information about the author (not to exceed 25 words).

Manuscripts should not exceed 2500 words (not including references or graphics). References should be listed numerically as they appear in the text. Text citations should be made by placing a number in parentheses at the appropriate point. The order of information included in the manuscript should be as follows: (1) Cover letter, (2) Title Page, (3) Title page with author(s) and affiliation information, (4) Abstract, (5) Text, (6) References, (7) Tables, (8) Figures, and (9) Acknowledgements, if appropriate.

Manuscripts for this issue may be submitted electronically to Chris Gentry at cgentry@csusb.edu

Submission deadline is May 1, 2017