

# The Virginia Journal



SPRING 2015

Vol. 36, No. 1



Radford University's Student Recreation and Wellness Center

*Photo taken by Lora Gordon*

VAHPERD Members,

*It is my pleasure to serve as the editor of The Virginia Journal (TVJ) and Communicator. Enclosed you will find the Spring 2015 issue. I hope to continue the successful publications of TVJ and Communicator.*

*However, the success of TVJ and the Communicator only go as far as the members and our submissions. I ask that you continue to submit the quality work you have in the past. Let the state, region and nation know the outstanding work we are doing in VAHPERD. So this is my continued call for manuscripts for the Fall 2015 issue of TVJ and news information for the Communicator. The TVJ and Communicator depend on the submissions from our exceptional professionals working in the field.*

*So please continue to e-mail me your manuscripts and news by July 15, 2015 as a Word attachment for the two publications. Please follow the manuscript guidelines posted in each issue of TVJ. My contact information is below.*

Sincerely,

Michael Moore, PhD, ATC, Associate Professor, HHP

Clinical Coordinator, ATEP, Radford University

P.O.Box 6957, Radford, VA 24142

540-831-6218

mbmoore@radford.edu

www.radford.edu/mbmoore

## About VAHPERD

### Mission Statement

VAHPERD is a professional association of educators that advocate quality programs in health, physical education, recreation, dance and sport. The association seeks to facilitate the professional growth and educational practices and legislation that will impact the profession.

### VAHPERD Values

- Excellence in teaching, research and educational practices in HPERD and related professions
- Positive efforts to promote our disciplines
- Professional integrity and high ethical standards
- Effective communication within and between members and related professionals
- An active and healthy lifestyle
- Embracing the role of special and diverse populations

### VAHPERD Priorities

Member Services  
Communication  
Marketing and Promotion  
Education

Visit VAHPERD's Web Site

[www.vahperd.org](http://www.vahperd.org)

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## President's Message

Fred Milbert



Happy Spring,

First, I want to extend my congratulations to Jack O'Donnell from St. Christopher's School, was selected "National Assistant Coach of the Year" by the National Soccer Coaches Association of America" and to Cindy Ferek, Turner Ashby High School – Winner of the Farmers Insurance "Thanks A Million" Teachers program.

These are wonderful results to the commitment and hard work of their efforts as professionals CONGRATULATIONS!

I want to wish everyone a very warm and Happy Spring that is filled with great moments of warmth, friendship, and a successful close to the 2014-15 school year. 2015 is going to be a wonderful year for the VAHPERD membership and all professionals in Health and Physical Education. As the President, I am very excited to serve the membership and move closer to bringing positive change and growth to our profession. I am accepting the opportunities this year presents to engage you, the members, in determining the direction of your professional organization. I intend to move VAHPERD forward to become a stronger voice in the state, have all members engaged in the selections of the leadership, and to share with you the important information you need to be successful in the classroom and as an advocate of health and physical education instruction and the improvement of the wellness of our students.

I am looking forward to the challenges ahead, however, in order to get this accomplished, I do need you to take the extra step forward. I encourage you to utilize our website. Start reading and embracing the information shared with you on the webpage, from the leadership, and take full advantage of any and all opportunities offered for professional growth and support.

By incorporating the new changes from last year, VAHPERD has encouraged greater membership involvement and awareness:

- VAHPERD opened the voting for the President Elect and the Vice President Elects to the entire membership for the first time.
- Addition of a dedicated web master has enabled us to add great resources for membership access;
- Support all of VAHPERD functions with the addition of a Treasurer/Bookkeeper and a Lobbyist.
- The participation of key resource individuals to provide information and direction to the Board of Directors;

This year already presents opportunities for improving the organization that I want you to become familiar with and help the Board of Directors with making the right choices. The following list provides key points of information that you should have for the New Year:

- As successful as the level of participation was for the first time, we can do better for the next year. Every member is eligible to vote for the leadership of VAHPERD. This will be publicized and share in greater detail over the course of the year.

*continued on page 7*

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## President-Elect's Message

Chad Triolet



Greeting VAHPERD members and colleagues:

Wow! Where has the time gone? It's been 5-months short months the 2014 VAHPERD Convention in Virginia Beach. I am excited about this opportunity to lead our organization and serve the membership. Thank you for your support!

Over the past few months, I have been reviewing our governing documents and working very closely with President Milbert and Past-President Kirk to get up to speed on the direction of VAHPERD. I have also been able to represent VAHPERD at several professional development conferences. In January, I attended and took an active role at the VAHPERD Leadership Development Conference (LDC) in Manassas, VA. In February, I attended the SHAPE Southern District Conference in Atlanta, GA. In March, I attended the SHAPE National Convention in Seattle, WA. I was very proud to represent VAHPERD at these events and look forward to building and strengthening relationships with other professionals from our state, our district, and our national organizations.

There many exciting opportunities for our members on the horizon, I hope you will join me in participating/supporting some of these events.

- The Virginia Summer Health and Physical Activity Institute - <http://www.jmu.edu/kinesiology/hpainstitute/> is scheduled for July 13 -15, 2015. This amazing conference is a great way to get ready for a new school year. It will also be a excellent way to learn practical ways to integrate the new SOL standards for health and physical education at your school.
- In late September (19<sup>th</sup> - 27<sup>th</sup>), Richmond will be hosting the UCI Road World Championships (<http://richmond2015.com/>). This is another great opportunity for VAHPERD members to celebrate, educate, and promote the lifelong physical activity of biking in our schools.
- In February 2016, VAHPERD will co-host the 2016 SHAPE Southern District Conference in Williamsburg, VA. This is an awesome opportunity to showcase the amazing teaching talent in our state. Since we are co-hosting, we need lots of VAHPERD volunteers. If you are interested in volunteering, contact Regina Kirk ([kirkvahperd@gmail.com](mailto:kirkvahperd@gmail.com)).

As part of my responsibilities as the President-elect, I am working to fill committee positions that will open in the Fall of 2015. I have am attempting to fill 15 opens on a variety of committees. I am proud to announce that I have filled 11 out of the 15 position but need your help to complete my task. If you are interested in serving on the following committees (it is a 3 year commitment) please feel free to contact me ([ctriolet@gmail.com](mailto:ctriolet@gmail.com)).

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## Executive Director's Message

Henry Castelvecchi



As we come to the end of another school year I am very proud of the accomplishments of VAHPERD this year. This past year we had over 600 people attend our annual convention and held/sponsored many workshops and in-services that served close to 1000 people. We held a Speak Out Day in Richmond, lead by our lobbyist. This gave members a chance to speak to their representatives on current HPE issues that were important to them. We investigated and secured one grant and looking to continue to secure grants that will benefit the teachers. The membership committee is working hard on ways to increase benefits to the membership. If there is anything that you would like to see VAHPERD do in terms of services to the members, please send your suggestions.

Looking forward to next year, we have the opportunity to have the SHAPE America Southern District come to Virginia. The last time that it was in Virginia was 2006 and it was a great convention. Planning has started already on the convention and we need your help. A call has been sent out for volunteers. If you have not responded and would like to be a part please contact me and I can help you find a committee.

Thank you for all of your hard work in the schools and educating the children of Virginia to be active for a lifetime!

Henry Castelvecchi

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## President-Elect's Message

*continued from page 2*

- Legislative Affairs Committee
- Membership Committee (must be from the Hampton Roads area)
- Awards Committee (must be a past VAHPERD award winner)
- Nominating Committee

Please know that your membership in VAHPERD is valued and appreciated. If you have any questions or need assistance, please feel free to contact me (ctriolet@gmail.com). I look forward to work with you and for you!

Chad Triolet

*Be a Champion for YOUR Profession (advocate, educate, encourage, and empower)*

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## Past President's Message

Regina Kirk



Greetings,

It was my privilege to represent VAHPERD at the 2015 "Speak Out Day" at the Virginia General Assembly. While participation was small, it was a valuable experience to meet with our legislatures and discuss health/physical education issues. President Milbert and I also took this opportunity to meet with Senator John Miller and thank him again for his continued support. I encourage all VAHPERD members to mark their calendar and attend this event in 2016.

Congratulations to Jack O'Donnell from St. Christopher's School, on being selected "National Assistant Coach of the Year" by the National Soccer Coaches Association of America and SHAPE SD Recreational Professional of the Year", Dr. Tarin Hampton, Southern District Ethnic Minority Award recipient, Meredith Morton, SHAPE SD and VAHPERD Adapted Teacher of the Year, and to Cindy Ferek, Turner Ashby High School – Winner of the Farmers Insurance "Thanks A Million" Teachers program. So proud to call them "colleagues!"

I want to "thank" everyone who has contributed to making VAHPERD the outstanding organization that it is. In April, I attended the SHAPE America conference and participated in meetings that helped outline the future of our professional organization. I was pleased to note that VAHPERD was ahead of many of the items being proposed at this conference. The talent and wealth of knowledge of our members is beyond bounds.

As Past-President, I am responsible for helping organize our next conference. This will be in conjunction with the Southern District Conference in Williamsburg in February, 2016. I encourage you to submit a proposal for this conference. The deadline is June. Please submit your proposal so that we can showcase Virginia's efforts in Health and Physical Education. Volunteers will also be needed at this conference. Please contact me ([kirkvahperd@gmail.org](mailto:kirkvahperd@gmail.org)) if you can help.

Nominations for VAHPERD President-Elect and Division Vice-Presidents are now open. If you have been a section chair in the past, you are eligible for a Division VP position. Help VAHPERD continue to improve. VAHPERD needs you! Remember, every member of VAHPERD is eligible to vote. Let's have another slate of outstanding nominees.

Nominations are also being accepted for VAHPERD awards. Help us recognize the outstanding professionals in Virginia. Nominate a colleague!

Special thanks to Larissa Lemp, webmaster extraordinaire, for her patience and diligence in updating the VAHPERD website. Her patience and professionalism are greatly appreciated.

I looking forward to working with President Milbert, and President-Elect Triolet, for the rest of my term. It has been a privilege to represent you at all things VAHPERD. Thank you for this great opportunity and I look forward to a great 2015.

Regina Kirk

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# ***Brief Mindfulness Training and Short-Term Memory***

Christine Yates, BA., *Physical Therapy Technician*, Lynchburg College

## **Abstract**

Mindfulness involves sustained focus of the present moment. It is a concept of growing interest in both clinical settings and mainstream culture. Research has shown a correlation between mindfulness practices, such as meditation, and memory improvement. However, current studies have focused on long-term meditators who have consistently practiced mindfulness over thirty years. For this study, a Digit-span Task was administered to 74 Lynchburg College students enrolled in lecture-based classes (introductory psychology), active-learning based classes (math), or mindfulness-based classes (hatha yoga or conscious relaxation) on three occasions over a two month period in order to measure and compare improvement in short-term memory. While the yoga classes displayed the greatest average improvement between sessions, results indicated that subjects of the mindfulness-based classes did not show significant improvement in average digit span over time, nor did they show significant improvement when compared to the lecture and active-learning based classes. The study should be repeated in order to further measure the significance of short-term memory improvement after brief mindfulness training.

## **Introduction**

### **Defining Mindfulness**

Mindfulness involves sustained focus of the present moment, including non-judgmental awareness of sounds, physical sensations, thoughts, emotions, and sights, as well as changes in these stimuli (Buttle, 2011; Garland & Gaylord, 2009; Kabat-Zinn, 2005; Shapiro, Oman, Thoresen, Plante, & Flinders, 2008). Some forms of mindfulness focus on the practice of bringing attention to a single factor, such as breathing, while others focus holistically on one's present internal and external environment from moment to moment (Buttle, 2011; Kabat-Zinn, 2005). Mindfulness is a key part of meditation and yoga as well as a variety of religions including Buddhism, Hinduism, Christianity, Judaism and Islam (Kabat-Zinn, 2005).

### **Mindfulness and Short-term Memory**

Research has consistently shown that mindfulness cultivates the ability to sustain attention on relevant information while ignoring distractions. As a result, its impact on short-term memory, the ability to temporarily hold small amounts of information for immediate recall, is a growing area of study (Baddeley, 2001; Chiesa, Raffaella, & Serretti, 2011; Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010). Neuroimaging and performances on cognitive tasks have shown a correlation between mindfulness training and short-term memory improvements. For instance, Event Related Potentials (ERPs) have shown increased cerebral blood flow and changes in cortical auditory processing, regions associated with learning and memory (Cahn & Polich 2006). Several studies comparing mindfulness groups to controls have also shown significant improvement in memory-related tasks including the

Forward and Backward Digit-Span Task of the Wechsler Adult Intelligence Scale and Operation-span Task (OSPAN) (Cahn & Polich 2006; Chambers, Lo, & Allen, 2008). For the Forward Digit-Span, subjects are read or briefly shown a list of numbers and asked to immediately recall them. (In the Operation-Span Task), subjects are asked to recall a list of words or letters after completing a simple arithmetic problem or counting.

### **Aims of Research**

Because current research has mainly focused on long-term mindfulness training ranging from seven to over thirty years of daily practice, the focus of this study was to measure short-term memory improvements over a brief, two month period (Cahn & Polich, 2006; Gothe, Pontifex, Hillman, & McAuley, 2013; Kjaer, Bertelsen, Piccini, Brooks, Alving, & Lou, 2002). The study looked specifically at college-aged students (18 to 25 years of age) in three different settings including lecture-based psychology courses, an active-learning based math course, and mindfulness-based yoga and relaxation courses in order to compare the memory improvement of students in traditional learning and mindfulness-based classes. Each subject performed a Forward Digit-span Task around the first, middle, and last day of the training period in order to measure and compare brief short-term memory improvements over time. It was hypothesized that the mindfulness groups would show greater improvement in Digit-span Task performance over time than the non-mindfulness groups (active-learning and lecture-based classes).

## **Methodology**

### **Sessions and Participants**

After receiving approval from the Institutional Review Board (IRB), the recruitment process took place in a small liberal arts college in central Virginia during the spring semester of the 2013-2014 academic year. The following courses participated in the study: General Psychology (PSYC 104 sections C and H), Liberal Arts Math (MATH 106), Introduction to School Mathematics I (MATH 117 section A), Conscious-Relaxation Techniques (HPE 191 section A), and Hatha Yoga (HPE 190 sections A and B). PSYC 104 was an introductory psychology course, and the content was covered in a lecture-based setting using PowerPoint Presentations. The same psychology instructor taught both sections. The instructor of the math courses, MATH 106 and MATH 117, based her curriculums on team-work, problem solving, exploration, and hands-on learning. The math courses served as the active-learning group, and the psychology courses served as the lecture-based group. Courses HPE 191 and 190 served as the meditation-based groups. Although each HPE section was taught by a different instructor, all meditation-based classes aimed to cultivate self-efficacy, relaxation, balance, physical strength, and mindfulness through guided visualization, controlled breathing, movement and posture.

Volunteers from each class participated in a Digit-span Task on

three separate occasions. Session one was completed across the first week of the 2014 spring semester. Due to inclement weather, the second session occurred over a two week period (Table 1). MATH 106 was also dropped from the study because exams were scheduled on days available to make up session two.

**Table 1.** Courses in which students participated in the Digit-Span Task and the dates on which the task was administered

Course	Session 1 Date	Days between Sessions 1 & 2	Session 2 Date	Days between Sessions 2 & 3	Session 3 Date
HPE 190 A	1/22	18	2/10	21	3/5
HPE 190 B	1/23	27	2/20	13	3/4
HPE 191 A	1/22	20	2/12	19	3/5
MATH 117 A	1/21	20	2/11	20	3/6
PSYC 104 C	1/20	29	2/19	12	3/5
PSYC 104 H	1/23	27	2/20	13	3/6

At the beginning of session one, before collecting data, packets containing a coded consent form, index card and demographic questionnaire were distributed. In order to maintain anonymity, responses to the Digit-span Task were tied to the code numbers rather than subjects' names. Anonymity was also maintained in sessions two and three; students were given blank index-cards to record their individual responses to the Digit-span Task and asked to record their code number at the top of their cards. To ensure that no subjects were minors, only students between the ages of eighteen and twenty five were able to participate. All students were asked to stay in the classroom regardless of participation so that neither the test administrator nor class instructor knew which students volunteered to participate in the study.

### The Digit-Span Task

The Digit-span Task requires participants to write down a series of numbers read to them. For each session, the same administrator read the numbers at a pace of one number per second. Participants were given twenty seconds to write down the sequence on individual, coded index-cards. The length of each sequence ranged from three to ten numbers and increased by one number each time. Each sequence was read once only. To eliminate the possibility of subjects remembering number orders over time, a different number series was used for each session, for a total of three different Digit-span Tasks. Each Digit-span Task was constructed using a random number generator (Glosser, 2014; Goldstein, 2008). During session one, participants completed the Digit-span Task at the beginning of the class-period so that each individual's base-line short-term memory-span was obtained. On the second and third sessions, the Digit-span Task was administered at the end of the class in order to observe the immediate effects of meditation on short-term memory.

### Results

Data collected on students enrolled in more than one of the participating classes was omitted from analysis so that every subject was exposed to only one treatment and the same number

of sessions. Data collected on students who did not participate in all three testing sessions was also omitted. Last, any duplicates in code numbers were omitted. The data of 74 students, 31 in lecture-based psychology classes, 14 in the active-learning based math course, and 29 in mindfulness-based classes, was analyzed using a mixed-model ANOVA on SPSS 21.0 software. Courses HPE 190 and HPE 191 were analyzed separately in order to determine if one technique of mindfulness improved mean digit-span compared to the other.

With the exception of MATH 117, the mean digit-spans of each analyzed course improved from session 1 to 3 (Table 2). Although the HPE 190 group displayed the greatest improvement across sessions, no analyzed course displayed a significant improvement in average digit-span. The variance of calculated standard deviations outweighs the overall improvement of each course. Several factors were analyzed for significance; the difference in average digit-span of each session for all subjects was calculated (labeled as "Time" in Table 3); the difference in average digit-span of each session for individual classes was calculated (labeled as "Time and Class" in Table 3); and the difference in average digit-span for each class was calculated (labeled as "Class" in Table 3). The significance of these factors answered the following questions about the experimental results: Did the subjects' collective short-term memory significantly improve over time? ("Time"); did the subjects of one class have a collective short-term memory significantly greater than the other classes? ("Class"); or did one class show significantly greater improvements in short-term memory over time than the other classes? ("Time and Class"); All F values were close to one and no p value was under 0.05; therefore no course analyzed displayed a significant change in mean digit-span between sessions.

**Table 2.** Average Digit Span of Each Class per Session

Session	Class	Mean	Std. Deviation
1	HPE 190	6.3810	1.11697
	HPE 191	6.5000	0.53452
	PSYC 104	6.3871	1.25638
	MATH 117	6.3571	1.64584
	Total	6.3919	1.22550
2	HPE 190	6.9048	1.17918
	HPE 191	6.0000	0.75593
	PSYC 104	6.7742	1.33441
	MATH 117	7.0000	1.24035
	Total	6.7703	1.23363
3	HPE 190	7.0952	1.51343
	HPE 191	6.7500	1.16496
	PSYC 104	6.8387	1.50769
	MATH 117	6.2143	1.36880
	Total	6.7838	1.45499

**Table 3.** Main Effects

Factor	df	F	Sig.
Time		1.280	0.281
Contrast	2		
Error	140		
Time and Class		1.191	0.314
Contrast	6		
Error	140		
Class		0.430	0.732
Contrast	3		
Error	70		

Time-  $F(2, 140) = 1.280, p=0.281$   
Time and Class-  $F(6, 140)=1.191, p=0.314$   
Class-  $F(3, 70)=0.430, p=0.732$

### Conclusions & Implications

According to the calculated  $p$  values, no analyzed class displayed significant changes across sessions. All class-type digit-span averages most likely improved from the baseline to session three because the subjects became familiar with the task's protocol.

There are several confounding variables that likely impacted the data. First, the settings of each class were different, exposing participants to different environmental distractions. The mindfulness-based classes were taught in a large, open room while the math and psychology courses were taught in average-sized class-rooms. Therefore, each class type was exposed to different acoustics, and if subjects did not sit in the same location for each session, their performances may have been affected by the varying acoustics. Furthermore, the different times of each class likely impacted the results. The pace (one second per word, 20 seconds between sequences) of the digit-span reading was also not consistent. For instance, in the second session for HPE 190 A, the administrator noticed an increase in pace while reading out the Digit-span Task. Also, in the first session for HPE 190 B, the seventh line of numbers was re-read because the test administrator left out the second number in the sequence during the first reading.

The sample size was also small, and therefore may not accurately represent the studied population. There were only eight participants in HPE 191 A and 14 in MATH 117 A. While both courses have distinct learning styles, the sample sizes are too small to draw conclusions regarding their results. The prior experience in mindfulness training may also have influenced the results. Over half of students enrolled in the psychology and math courses had either previous experience in yoga, deep breathing, or guided imagery.

Because session two occurred over two weeks, the average digit-spans of the second and possibly third session are not accurate points of comparison. Instead of an even three weeks between sessions, both psychology courses and one yoga section had about four weeks between the first and second sessions and two weeks between the second and third (Table 1). Furthermore, some sessions were administered on days with compressed schedules or

delays such as Session Two for HPE 191 A. The shortened period and changes in class time may have caused confusion and added distractions for students.

Last, the likelihood that college classrooms are already incorporating mindfulness must be considered. Some students actively listen to lectures by writing organized notes; others create flash cards and study or re-write notes outside of class; studying works the areas of the brain involved in memory (Baddeley, 2001; Buttle, 2010). Furthermore, many classes encourage active listening and participation by rewarding points that boost final grades. A perception of mindfulness survey, such as the Mindful Attention and Awareness Scale (MAAS) should be added to the demographic questionnaire in order to determine if students feel that they are engaging in mindfulness practices within lecture and active-learning based classrooms (Shapiro, Oman, Thoresen, Plante, & Flinders, 2008). A different negative control, such as having subjects watch a movie, should also be considered.

Various cognitive tests have shown significant improvements in meditators' cognitive functions over time, suggesting that this study has the potential to display a positive correlation. For instance, Gothe Pontifex, Hillman, & McAuley, (2013) had each subject participate in both yoga and aerobic activity on three separate occasions with about three days in between sessions. If the same subjects were tested after a lecture-based lesson and yoga session, results may reflect changes in cognitive recall. Furthermore, Gothe and colleagues used the Flanker Task and N-back Task to test cognition. The Flanker Task requires subjects to press a left or right arrow in correspondence to seeing a left or right facing arrow on a computer screen; the N-back Task requires participants to distinguish among five shapes. Using such computer programs likely eliminates cheating, improves organization of data collection, and standardizes testing conditions. Measuring changes in both short-term memory and attention through the use of different tests creates more opportunities to evaluate the cognitive-related benefits of mindfulness practices. Mrazek, Franklin, Phillips, Baird, & Schooler, (2013), who also used a lecture-based class as the control, had subjects complete the verbal section of the Graduate Record Examinations (GRE) as well as the Operation-span Task (OSPAN). In the OSPAN test, subjects are shown stimuli to be memorized, alternated with un-important or distracting stimuli; perhaps using a more complicated task such as OSPAN would decrease the likelihood of subject improvement based on task familiarity. Furthermore, these tests are visual so that a different stimulus involved in memory may be tested other than auditory (Buttle, 2010). Since each subject has a personal test to work on, seating differences and acoustics would not be significant confounding factors.

Effective methodologies on quantizing the cognitive benefits of mindfulness are still being explored. This study should be repeated again with a larger sample size that pools from individuals with no prior mindfulness experience. Ideally, participating courses should take place at the same time, and all subjects should test together after their assigned class. Other memory tests such as OSPAN, Controlled Oral Word Association, and even a GRE section should also be considered.



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## President's Message

*continued from page 2*

- In November of 2015, the annual conference will not be held in November, VAHPERD will be a host for the Southern District SHAPE conference in Williamsburg in February 2016. We are going to do all we can to make this a successful opportunity for our Virginia Professionals!
- VAHPERD will consider changing the name to follow the National Organization, SHAPE. This will be an important process, in which all of the members can have a part. Watch for future communication to provide your comments and ideas.
- VAHPERD wishes to increase membership and membership opportunities. What kinds of benefits would you like as a member; access to publications, professional development, and personal services? What ideas can you share?
- Adoption of new Standards of Learning; this is a great move forward for our students in Virginia. However, it is going to take professional development and support to make these SOLs come to life in our schools. VAHPERD will seek ways to make this happen.

The New Year, 2015, will begin with questions that need to be answered. In the weeks to come, I am asking you to work with the VAHPERD Leadership to take advantage of the opportunities to engage in our next opportunities for growth. My intent is to ensure that you are better informed and have the opportunity to voice your ideas and serve as an informed advocate for your profession.

I am challenging you to take action, seize the opportunities available and share your voice to impact your ability to influence the children we teach. Join together as a true professional organization in a renewed effort to ensure we, VAHPERD, are recognized as a significant contributor to the educational success of the students in Virginia.

I am excited about the new opportunities ahead of me for 2015-16. I will make the most of the professional growth opportunities ahead to gain valuable insight to serve VAHPERD. I will find the needed information that will lead the decision making of the Board of Directors and move our organization forward to better serve our stakeholders.

With all of this possible in the New Year, I am asking you to join me and your fellow members to join me to move our membership and organization to the appropriate direction. Thank you for this great opportunity and I look forward to a great 2015 with you,

Fred Milbert

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# *Students with Depression in Recess*

Matthew D. Lucas, Ed.D., C.A.P.E., *Associate Professor, Department of Health, Athletic Training, Recreation, and Kinesiology, Longwood University*

## **Introduction**

The participation of a student with depression in recess can often be rewarding for the student, peers, and teacher. This paper will address common characteristics of students with depression and present basic solutions to improve the experience of these students in the recess setting. Initially the definition, prevalence, and characteristics of depression will be presented. The paper will then address the recommendations for addressing children with depression in recess.

## **Definition and Prevalence of Depression**

The Individuals with Disabilities Education Act (IDEA) states that children who are determined to have disabilities receive special education if the condition negatively affects the educational performance of the child. One disability category defined in IDEA, which includes a variety of specific disabilities, is *emotional disability (ED)*. The following definition of ED is noted in IDEA (2007). Please note that depression is included in the definition. ED is defined as:

“(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.

(C) Inappropriate types of behavior or feelings under normal circumstances.

(D) A general pervasive mood of unhappiness or **depression**.

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance” (CFR §300.7 (a) 9) (IDEA, 2004).

As noted, depression is included in the definition of ED. Depression is defined by the Mayo Clinic as “a mood disorder that causes a persistent feeling of sadness and loss of interest” (Mayo Clinic: Diseases and Conditions – Depression (major depressive disorder), 2014, p. 1). Depression occurs in children at a rate of about 3%, and 70% of these students do not receive treatment for the condition. In terms of extreme cases, 3000 children die from suicide each year as a result of depression. This makes depression the third leading cause of death of children in the United States

(US National Library of Medicine: National Institutes of Health: Depression, 2014).

## **Characteristics of Depression**

The importance of diagnosing childhood depression is very important. This is usually done by teachers or parents. Depression varies from person to person and no two people are the same. Depression has many signs and symptoms in children including:

- Persistent sad, anxious, or “empty” feelings
- Feelings of hopelessness or pessimism
- Feelings of guilt, worthlessness, or helplessness
- Irritability, restlessness
- Loss of interest in activities or hobbies once enjoyed
- Fatigue and decreased energy
- Difficulty concentrating, remembering details, and making decisions,
- Insomnia, early-morning wakefulness, or excessive sleeping
- Overeating, or appetite loss
- Thoughts of suicide, suicide attempts (US National Institutes of Mental Health: What is Depression, 2014)

## **Benefits of the Recess Setting for Children with Depression**

Simply stated, the benefits of the recess setting are high for all children. Included in these benefits are both physical and social benefits. In terms of physical benefits, recess has been shown to lead to:

- Improvement of out-of-school activity levels – children usually are involved in physical activities on days in which they participate in in-school physical activities (Dale, Corbin, & Dale, 2000).
- Improvement of general fitness and endurance levels for children (Kids Exercise, 2009).

For children with depression, the social benefits of recess can be extremely important. Imagine a child with depression being completely included with peers in recess activities as opposed to walking aimlessly around a playground. Also, exercise has been shown to help fight depression in children (KidsHelth.org, 2012). According to the MayoClinic, exercise can help reduce anxiety and

help improve mood (Mayo Clinic: Diseases and Conditions – Depression and anxiety: Exercise eases symptoms, 2014). Exercise can thus reduce the likelihood of a child from being depressed.

### Recess Recommendations for Children with Depression

To achieve the aforementioned goal of addressing some of the characteristics often associated with recess, a few procedures should be put into play. The most of important is to relay your observations and concerns to the school administration, guidance counselor, and nurse. In addition, in terms of recess, the following recommendations should be put into place:

Characteristics	Recommendations
Feelings of hopelessness or pessimism	Implement fun, easy to do activities
Feelings of guilt, worthlessness, or helplessness	Implement activities during recess that do not involve winning and losing
Irritability, restlessness	Allow students to choose from a variety of activities in which to participate
Fatigue and decreased energy with, or you participate with them	Do not allow students to sit during recess – find them a buddy to participate
Difficulty concentrating, remembering details, and making decisions	Have short recess periods – but have more of them

Again it should be noted that you need to contact the school administration, guidance counselor, and nurse. They can hopefully put procedures in place to address the root of the problem, not simply to deal with the characteristics.

### Conclusion

The participation of a student with depression in recess can often be both challenging and rewarding for both the student and teacher. The rewards can manifest themselves in the ability of the teacher to guarantee the safety of all students in an instructionally sound environment. This paper has hopefully addressed some basic concerns and solutions to improve the recess setting of students with depression.

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# *The Influence of Exercise Therapy on Concussed Athletes*

Katelynne Seager, *Health and Human Performance Student*, Radford University

Danielle Bishop, *Health and Human Performance Student*, Radford University

Dr. David Sallee, *Health and Human Performance Faculty Member*, Radford University

Concussion is a serious disorder defined as “a complex pathophysiological process affecting the brain [that is] induced by traumatic biomechanical forces” (Edwards & Bodle, 2014). In the United States alone, The Centers for Disease Control and Prevention (CDC) estimates that 1.7 million traumatic brain injuries occur annually (Edwards & Bodle, 2014). Concussions are caused by a direct blow to the head, face, and neck. The outcomes are “long-term neurological consequences including potential extended behavioral changes, post-concussion syndrome, chronic traumatic encephalopathy, and chronic traumatic encephalopathy with motor neuron disease” (Robbins, et al., 2014). Box 1 describes the symptoms of a concussion:

**Box 1 Signs and symptoms of a concussion**

- ▶ Physical
  - Headache
  - Nausea
  - Vomiting
  - Balance problems
  - Dizziness
  - Visual problems
  - Fatigue
  - Sensitivity to light
  - Sensitivity to noise
  - Numbness/tingling
  - Dazed
  - Stunned
- ▶ Cognitive
  - Feeling mentally 'foggy'
  - Feeling slowed down
  - Difficulty concentrating
  - Difficulty remembering
  - Forgetful of recent information and conversations
  - Confused about recent events
  - Answers questions slowly
  - Repeats questions
- ▶ Emotional
  - Irritable
  - Sadness
  - More emotional
  - Nervousness
- ▶ Sleep
  - Drowsiness
  - Sleep more than usual
  - Sleep less than usual
  - Difficulty falling asleep

(Harmon et al., 2013)

Early symptoms occur within minutes to hours of initial impact, which include: “...vacant stare, delayed verbal and motor responses, confusion, or inability to focus attention, slurred or incoherent speech, gross incoordination...” (Edwards & Bodle, 2014). Late onset symptoms occur within a day to a week after initial impact and include persistent headache, sleep disturbance, hypersomnia, poor attention, depression...” (Edwards & Bodle, 2014).

Concussions presented in younger children express even more subtle signs, such as abdominal pain or behavioral changes (Caine, Purcell, Maffulli, 2014).

Concussion symptoms involved in younger children typically last 7-10 days, although; it's possible for the symptoms to extend longer. Due to the negative cognitive effects of concussions, children and adolescents become at risk for cognitive impairment's during the formative years. If the concussions are not managed appropriately, harmful long-term impacts on the cognitive development and the continuation in sport participation can result (Caine, Purcell, Maffulli, 2014).

Concussions can be graded by a set of clinical symptoms (e.g. headache, feeling in a fog, emotional symptoms), physical signs (e.g. loss of consciousness or amnesia), behavioral changes (e.g. irritability or change in personality), cognitive impairment (e.g. slowed reaction times), and sleep disturbances (e.g. drowsiness, unable to sleep) (McCrory et al., 2013) as well as by a grading scale (grade 1, grade 2, grade 3). A grade 1 concussion exerts common symptoms that include dizziness, nausea, motion sickness, impaired balance, and vomiting. Grade One concussions normally last between 15 to 30 minutes and are treated with rest and slowly going back to the activity that caused it. Grade two concussions are more severe than grade one by showing symptoms of memory loss, headaches, and confusion. Grade two concussions can last anywhere from 24 hours to a couple of days and are treated by medical attention and drugs provided by a physician. Grade three concussions are the most severe concussions that involve the loss of consciousness, which can cause mild brain damage. A grade three concussion requires immediate medical attention and if symptoms should worsen (e.g. more frequent headaches, slurred speech, decreased motor skills, etc.) further medical attention is required.

Other tools such as Baseline Testing (e.g. direct comparison between an athlete's post-injury status and pre-morbid level of functioning), Standardized Assessment of Concussion [SAC] (e.g. orientation of questions around time, place, person) (McCrory et al., 2013) and Standardized Concussion Assessment Tool 3 [SCAT3] (e.g. sections devoted to evaluate presence frequency of symptoms with a side line assessment, symptom evaluation, physical and cognitive evaluation, neck evaluation, balance examination, coordination examination and delayed recall.) (Mrazik, Naidu, Lebrun, Game & Matthews-White, 2013) can be used to grade and monitor concussions.

According to Caine, Purcell, and Maffulli (2014), concussions

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continue to be “the hottest topic” in sports injury with avid media coverage. With 250,000 concussions taking place in patients aged 8-19, pediatric concussions are viewed as a public health concern. It can be theorized that young athletes are predisposed to concussions as well as more vulnerable to sport injury because of their physical and physiological growth. The risk of injury can also be caused by immature or underdeveloped coordination, the perception of the child and skills, which supports the theory of younger athletes being predisposed to concussions as supported by Caine, Purcell, and Maffulli (2014).

Typically, young children take longer to recover from concussions than adults resulting in an increased concern for the severity of the concussion. Due to children and adolescents taking longer to recover after a concussion than that of adults, there is a need for more conservative approaches to concussion symptom management and the return to play decision. Any child or adolescent suspected to have sustained a concussion should immediately be removed from play and not allowed to return until cleared by a physician (Caine, Purcell, Maffulli, 2014).

Concussions can be evaluated on the sideline by a coach or athletic trainer using concussion tools such as baselines, King-Devicks (K-D Test) and simple H exams. Before the athletic season begins, the athlete’s should receive a baseline test, which examines the athlete’s normal cognitive function. If it’s suspected an athlete has a concussion, the athlete will first receive a simple H exam that has the athlete follow the administrator’s finger in an H formation. Should an athlete fail the H exam, the administrator will then give the King-Devicks exam. The King-Devick exam consists of a two-minute test that requires the athlete to read single digit numbers displayed on cards or on an electronic device. After the completion of the test, if the time needed to complete the test is longer than the athlete’s baseline test, the athlete should be removed from the game and be evaluated by a licensed professional. These assessments would include both a neurological exam and an evaluation of attention and memory. According to Caine, Purcell, Maffulli (2014), a physician should evaluate any athlete suspected to have sustained a concussion directly after the injury to ensure proper diagnosis.

Although there is limited research on the prevention of concussions in youth sports, some research indicates concussions among youth athletes go unreported. Coaches, athletic trainers and parents should encourage fair play, respect, and less violence when playing contact sports with youth athletes. Those involved in youth sports should be educated further on the seriousness and potential long-term affects of concussions as well as how to recognize and manage them.

Rest and exercise therapy go hand in hand for individuals with concussions. Typically, rest is the answer to healing, while exercise is prohibited and avoided because of the potential to worsen symptoms. Following a concussion, both cognitive and physical rest is recommended to allow symptoms to resolve. Although research assessing the management of concussion in adolescents is scarce, a recent study involving college and high school athletes presented, “cognitive and physical rest, both immediately following injury and later during recovery, decreased symptoms and improved performance on computerized neuropsychological tests” (Purcell, 2014). Cognitive concussive deficits include slowed information

processing, memory loss and inability to concentrate, which may require temporary school absence and/or modified class work or homework load. It also may involve limiting activities that require mental exertion, including reading, texting, watching television, computer work, electronic games and school, until symptoms have completely resolved while at rest (Purcell, 2014). Sleep is very important for physical recovery; a concussed athlete should be closely monitored by a responsible adult for 24 hours to 48 hours for signs of deterioration (severe headache, persistent vomiting, seizure activity), therefore, an adolescent with a concussion should be checked throughout the night but not awakened unless there is concern about deterioration. Both types of rest are exceedingly recommended to allow full recovery from a concussion. Once these symptoms have completely resolved, the athlete must go through a medically supervised exertion protocol in order to be cleared for return to play. Current research indicates that rest is the best option for concussion recovery, although; “observational studies have documented the negative consequences of protracted inactivity in patients” (Silverberg & Iverson, 2013). Activity restrictions have been shown to modulate the relationship between injury and mental health outcomes as well as chronic fatigue syndrome (Silverberg & Iverson, 2013). Not only can inactivity negatively influence recovery, but inactivity can also prolong healing. In a study examining bed rest in concussed individuals, patients reported headache, restlessness, and difficult sleeping within 3 to 6 days. However after a week, mood changes and vestibular sensitivity were commonly reported. It appears that complete bed rest beyond a few days was sufficient to cause post concussion-like symptoms as well as exacerbate feelings of malaise (Silverberg & Iverson, 2013).

Exercise has been shown to influence multiple neurotransmitter systems as well as promote neuroplasticity, neurogenesis, and angiogenesis (Silverberg & Iverson, 2013). Further, graded aerobic exercise has been established as an “effective intervention for chronic fatigue, depression, and anxiety,” while also improving cognitive function (Silverberg & Iverson, 2013).

The accepted standard of care for rehabilitation is used as a “problem-oriented approach in which impairments and functional limitations are identified during the initial evaluation, and customized exercises are prescribed to address the individual’s specific problems” (Alsalaheen et al., 2013). In an uncontrolled study that involved submaximal aerobic training and coordination exercises, patients had improved post-concussion symptoms (Silverberg & Iverson, 2013).

Concussions are a serious disorder especially with adolescents. As concussions continue to be the “hottest topic” in sports injury, (Caine, Purcell, Maffulli, 2014) further research is necessary to fully expose the potential negative impacts concussions pose on the cognitive, physical and psychological developments of an adolescent athlete. Preventative measures should continue to be developed in order to prevent excessive concussion occurrence in adolescent sports and activities. If an adolescent sustains a concussion, they should immediately be removed from play and assessed by a physician as soon as possible. According to Purcell, In order to prevent further injury in adolescent sports, “Athletes, parents, coaches, athletic trainers and anyone working with adolescents involved in sports should be educated about the signs and symp-

toms of sport-related concussions” (Purcell, 2012). Athletes that sustain a head injury during a sport should be closely monitored constantly. During play in all contact sports, Purcell advises that approved helmets are to be worn properly, well maintained and replaced according to the manufactures recommendations, to ensure maximum safety (Purcell, 2012). Adolescent athletes should be taught proper sport techniques and acquire good sportsmanship to help reduce injuries. Other preventative measures can be recommended by the athletes’ physician, with their support of the mandate, that all coaches/trainers in sports organizations be educated about concussions and the development of policies on concussion in sports organizations. Decisions regarding an adolescent athlete’s return to sport ought to be considerably more conservative, cautious and individualized.

Precautions should also be taken to ensure that in the case of any possible concussion, those suspected, should immediately be removed and taken to the side for further testing. Along with testing precautions before the athletic season: coaches, guardians and parents should encourage responsible, fair play in adolescent sports in order to lower the incidence of injury. Following a head trauma, rehabilitation exercises along with appropriate rest should continue to be practiced to ensure a safe and complete recovery. These precautions and new concepts will furthermore improve the management and behavior of concussions among adolescent athletes.

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Photo taken by Dr. Anna Devito

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# *Exploring the effects of yoga on sport performance for physically challenged participants in Bali, Indonesia: A Case Study*

Kimberly Blackwell, MS, LAT, ATC, Hampton University  
Chevelle Hall, Ph.D., Hampton University  
Aaron Livingston, Ph.D., Hampton University

## **Abstract**

The purpose of the study is to explore positive effects of yoga on sport performance for physically challenged participants in Bali, Indonesia. The qualitative methods utilizing cross sectional survey procedures guided the analysis for this non-experimental investigation. The participants in this study were two individuals who were physically challenged and lived in Bali, Indonesia. They were both over the age of 18 and continuously participate at the sport foundation.

This study used a case study approach to collect the data. The researcher analyzed the data using Stake (1995) four forms of data analysis. The first was Categorical Aggregation which the researcher used to describe relevant issues that emerged between the participants. Next, the researcher used Direct Interpretation to analyze single instances between the participants rather than look at multiple instances of the participants' actions. This is a way to dissect useful data that has been collected and reorganize it in a more expressive manner. The researcher employed the use of patterns to look for correspondences between two or more categories in which the participants engaged in during the yoga program. Finally, the researchers used collected data to develop Naturalistic Generalization; which allows for individuals to learn from this case or to generalize it to other populations. The findings of this study yielded positive results in sport performance as result of participation in Yoga.

## **The Effects of Yoga on Sport Performance**

Physical activity illustrates multiple health benefits. In order to reap these benefits, it is suggested that engaging in moderate-intensity aerobic activity minimally for 30 minutes, five days each week or 20 minutes of vigorous –intensity activity for three days a week will promote and maintain health (Hagins et al., 2007). To determine if the physical activity is of moderate or vigorous intensity, things such as choice of activity, heart rate, and age must be considered. Yoga is a type of alternative form of physical activity and can assist in achieving the suggested recommended level of physical activity depending on the individual, ultimately improving quality of life and enhancing sport performance (Hagins et al., 2007).

Physical activity has long-lasting effects on individuals in regards to overall health (Hagins et al., 2007). These effects improve quality of health in so many dimensions. The choice and type of physical activity does fall on the discretion of the individual and may affect a person's health in different ways (Woodyard, 2011). The researcher explored therapeutic effects of yoga and how it could improve the overall quality of life. The researcher did such by searching databases for articles that discussed the therapeutic effects of yoga, carefully selecting articles of such based on the title of the article and interventions of utilized yoga described in

the article as a means to achieve some sort of health outcome. From the initial search, articles were chosen to be included in the manuscript fitting categories of benefits, applications, and therapeutic effects of yoga. Results show that yoga does have positive effects on mental health. (Woodyard, 2011). Physically, yoga improves flexibility, and research does support an increase in this component of health-related fitness, resulting in enhanced sport performance (Hagins et al., 2007).

## **Disabilities in Bali, Indonesia**

Bali is an island and province of Indonesia with a population of 3,890,757. There is approximately 84.5% that adheres to Balinese Hinduism. It is the largest tourist destination in the country of Indonesia.

Having a disability is a disadvantage in Indonesia. There is a huge stigma attached to these individuals and their impairments. The cultures in Indonesia (mainly in Java and Bali) believe that certain disabilities are caused by spirits and that disabled people are seen as possessed by a supernatural spirit that must be exorcised (Maandag, 2011).

Physically disabled individuals are seen as adding no value to the community. They are usually left out, not trained and remain unskilled. They are typically uneducated and are not encouraged to develop personally (Maandag, 2011). In extreme cases, the disabled family member is tied up, placed at the back of the house. The poor families, cannot afford proper care and will lock them up in a hut in the backyard, tied by their ankles and wrists to a tree (Maandag, 2011).

The purpose of the study is to explore positive effects of yoga on sport performance for physically challenged participants in Bali, Indonesia.

## **Theoretical Framework**

Yoga practices are a holistic approach to health and are a form of contemporary medicine, classified by the National Institute of Health (Woodyard, 2011). Yoga promotes strength and endurance, and facilitates self-characteristics, such as tranquility and a sense of well-being. Yoga also facilitates one to relax, causing breathing to slow and focuses the individual to contemplate the present (Woodyard, 2011).

Hagins, Moore and Rundle (2007) examined whether typical yoga practices with various postures met standard recommendations from ACSM and AHA for levels of physical activity to improve and maintain health and cardiovascular fitness. Sole purposes of the study was to determine if hatha yoga satisfies recommendations for intensity of physical activity to improve cardiovascular fitness, reliability of metabolic costs of yoga, and comparisons of metabolic costs between yoga and treadmill walking at two different speeds (Raju, et al., 1994). The investigation

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took place inside a human respiratory chamber, while wearing heart rate monitors. Data was recorded obtaining measures of oxygen consumption, heart rate, maximal heart rate, metabolic equivalents, and energy expenditure. The observational study found low levels of physical activity participating in yoga across the entire session as well as treadmill walking at 3.2 kph. Metabolic costs for those two activities did not meet recommendations for intensity of physical activity to maintain and improve health and cardiovascular fitness (Hagins et al., 2007). Standing sun salutation postures in yoga does constitute as some sufficient intense physical activity, which will improve cardiovascular fitness in sedentary individuals and must exceed bouts of 10 minutes.

So while physical activity does improve overall quality of life, it does pinpoint the exact type of physical activity chosen. To see improvements and gains in overall health, particularly cardiovascular fitness, intensity levels must be observed (Hagins et al., 2007).

### **Effects of Yoga**

Raju et al., (1994) conducted studies to evaluate the effects of yoga (Pranayama) and physical exercise in athletes using two phases (sub-maximal and maximal exercise tests). Phase 1 was concluded in one-year time span and Phase 2, in a two-year span. Each phase consisted of two groups; control (physical workouts only) and experimental (practiced Pranayama and physical workouts). Researchers found physical exercise on athletes to exhibit an increase in oxygen consumption and decrease in blood lactate levels. Pranayama showed a significant decrease in oxygen consumption and blood lactate levels during sub-maximal exercise test. Because past research shows that physical training do effects physiological and hormonal levels in an individual, its important to note the oxygen consumption and lactate levels were lower in the experimental group due to Pranayama practice. This indicates that yoga should be included in regular workouts of an athlete, ultimately improving sport performance.

Physical activity does improve overall quality of health, dependent upon the intensity (Blinde et al., 1997) levels and choice of physical activity. Research does support this notion based on examinations and observations. One study reveals engaging in contemporary therapies, such as yoga (a type of physical activity) does improve psychological aspects of health i.e. mental health problems (depression, anxiety, and insomnia). (Blinde et al., 1997). Other research discovered while engaging in yoga does increase the heart rate of individuals, making the intensity relatively high, this only is applicable to those who are participating in certain yogic postures for bouts longer than 10 minutes and are unfit and have sedentary lifestyles. (Blinde et al., 1997). Yoga is a form of mind and body fitness involving muscular activity and influences a person to focus on self-awareness, breathing and energy. Research does display an increase in blood flow, allowing more oxygen to reach the body, ultimately enhancing their function. (Raju et al., 1994). Consistent regimes of yoga included in regular athletic workouts, does show significant improvements in sport performance.

Caution must be advised; Raju et al. (1994) and Hagins et al., (2007) studies used participants of some athletic caliber. Participants either were intermediate to advanced yoga practitioners

or engaged in some high volume sport such as volleyball on the national level or represented their home state in judo. The participants were subjects of an experimentation investigating the effects of yoga on overall health. Since sport performance is being measured, valid results may not be exhibited if individuals are already at the peak of their athletic ability. Future research should replicate these findings using subjects ranging in athletic ability, virtually exposing a range of effects involving yoga on improving quality of health and sport performance.

### **Statement of the Problem**

There is a lack of empirical investigation within the field of athletic performance and kinesiology addressing the effects of yoga and the role it plays on sport performance for physically challenged individuals. This study seeks to add to the body of literature within this discipline. Athletic performance and kinesiology academicians are often urging for the increase in the body of literature and empirical studies. There are very few journals devoted to our field and much of our research has used theoretical and conceptual frameworks from other more established fields.

### **Research Questions**

Does practicing beginning yoga have a positive effect on the sport performance of physically challenged participants at a sport foundation in Bali, Indonesia?

### **Methods**

#### **Research Design**

The qualitative methods utilizing cross sectional survey procedures guided the analysis for this non-experimental investigation. This study used a case study approach to collect the data. The purpose of the study is to explore positive effects of yoga on sport performance for physically challenged participants in Bali, Indonesia.

#### **Setting of the Study**

The study took place at a sports foundation, located in Bali, Indonesia, May 2014. The foundation upholds a mission to improve the lives of persons with disabilities in Bali and Southeast Asia by using the power of sport and play for development, health and peace. The foundation runs a number of sporting events in Bali, which provides the funds for the foundation's programs. These sporting events include wheelchair basketball and rugby, Paralympic shooting, special needs martial arts, blind judo, powerlifting, and special needs swimming.

The foundation is composed of a group of successful, like-minded individuals who believe in or have experienced the power of sport bringing change in a young person's life. These individuals together have over 30 years of experience in sport and relief organizations, as well as Indonesian educational systems. The foundation is operated by individuals who understand that there are enormous gaps present in the coverage of Indonesian ministries of health, youth, sport and education, national sport federations and Paralympic committees due to traditional malaise of corruption, collusion, and nepotism.



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## Data Collection Procedures

The researchers first applied and were approved through the Hampton University's IRB to conduct the study. Secondly, the researchers requested a list of the participants at a sports foundation in Bali. Based on the list, two participants were selected to develop a case study. The participants (age 18 and older) received cover and participation letters informing them of their rights.

The participants were interviewed initially to introduce them to the study, get signed permission and get background information. The participants took part in yoga exercises for fifteen minutes each day for a week before participating in sports. The participants were observed focusing on their movement as they participate in sporting activities. A chart was used to document all movements taking place.

Finally the participants were interviewed again to determine their feelings of their performance after participating in yoga. The interview took place in one section of the sports foundation. The aforementioned procedures provide triangulation and sufficient evidence to complete the case study and report the findings. The results did not include the participants' names or other contact information.

## Participants

The participants in this study were two individuals who were physically challenged and lived in Bali, Indonesia. They were both over the age of 18 and continuously participate at the sport foundation.

### Participant A:

Participant A is a 38 year old man from Bali. He is married and has one child and his wife was pregnant with their second child. He stated he was injured 18 years ago in a motorcycle accident. He stated he was riding his motorcycle and he ran into a parked car. He severely injured his leg, but due to having no health insurance or money, he could not get his leg properly treated. Over time, he learned to deal with his injury and eventually started going to the sports foundation to build up his strength. He admitted to doing yoga daily and that yoga helps with the pain and builds his flexibility. However, he did not know the names of the moves in yoga and just learned from watching others do it.

### Participant B:

Participant B is a 25 year old man with both legs amputated. He is a single man and is from Bali. He had his legs amputated when he was a child due to medical reasons. He would not explain what exactly happened. There was also a minor language barrier for the researchers and participant. Although, there was a translator present at all times. He stated he visits the sports foundation to build his upper body strength.

## The Categorical Aggregation

The interview questions focused on their injuries and why the participants wanted to participate in the sports foundation. The interview was held on the first day the researchers visited the sports foundation.

## Direct Interpretation

There were differences in the injuries of both participants. Participant A had a leg injury due to a motorcycle accident. The injury was not properly treated when it occurred. Participant A had limited mobility; but he did not walk with a cane or other assistance. Instead, he had a very distinct limp and looked as though he was in pain as he walked. When asked about the pain, he denied having serious pain in the injured leg. Participant B had both legs amputated as a youth. He moved about in a wheel chair. The wheel chair was not one that would be recommended in American society. It was old, and certainly would not have been approved by American standards. Yet, Participant B made full use of it and seemed content with having the mobility device.

Both participants stated they enjoyed going to the sports foundation daily. It was a way to connect with others with disabilities and they loved the camaraderie. It is important to note, the sports foundation was an outside facility with very little equipment and in adequate lighting at night. However, the participants loved having a place to go for such activities.

## Patterns

The injuries were very different with both participants. Participant A sustained his injury 18 years prior, but Participant B incurred his injury in childhood. The commonalities were when both participants talked about why they liked going to the sports foundation. They both stated it was a place to commune with others with disabilities. They were all friends and felt connected to each other.

Participant A already participated in yoga prior to us working with him. He did not have formal training and did not know the names of the yoga moves. He learned by watching others and picked up the practice easily. He was given the appropriate names by the researchers and was explained what each move does for the body. He was also provided instructions to improve his movements. Participant B had never practiced yoga and seemed skeptical at first. He did agree to practice the moves before playing basketball or lifting weights. He was given step by step instruction for each move with accommodations made by the researchers. He was also given the correct names of the moves.

Both participants reported the moves were beneficial and agreed to practice them again in the future.

## Naturalistic Generalization

The process taught both participants a lot about yoga and their bodies. They were able to explore what their bodies could do. Although Participant B was a little skeptical, he was willing to try it. That speaks to his willingness to learn and improve his body flexibility. It is generalized that yoga does improve flexibility and can have a positive effect on sport performance.

## Interviews:

Both participants were interviewed concerning their injuries. The interviews took place upon arrival at the sports foundation. The participants were interviewed by two researchers.

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**Participant A:**

Researcher: Do you participate in yoga? Have you ever participated in yoga?

Participant A: I have practiced yoga, but I do not know the names of the moves. I have never taken a class on yoga. I do not have money and I do not have a lot to take care of my family.

Researcher: How does yoga make you feel?

Participant A: Yoga makes me feel good and I like participating every day.

Researcher: Are you going to get an operation for your leg?

Participant A: I have saved enough money in order to have the operation needed for my leg. It took 18 years in order to save up for the amount needed.

Researcher: Are you now going to practice yoga daily?

Participant A: I am willing to participate in yoga every day for five days to see if it will help with sport participation.

**Participant B:**

Researcher: Do you participate in yoga? Have you ever participated in yoga?

Participant B: I have never practiced yoga.

Researcher: How long have you had a disability?

Participant B: I have not legs since I was a child (*He is an amputee*).

Researcher: How did it happen?

Participant B: (no response) He stated he was an amputee since childhood. He did not want to explain how it happened.

Researcher: How often do you come to the foundation?

Participant B: I come here every day. I work on my arms.

Researcher: Are you now going to practice yoga daily?

Participant B: Yes. I will do it every day now.

*Due to the absence of lower body extremities, accommodations were made for the yoga moves.*

### Procedures

The participants were located in an open warehouse with limited equipment. The environment did not meet ADA requirements; however, the participants were able to have access to an open space, and mats to lie on. The participants had background knowledge of yoga which made the procedure easier. Each day, the researchers first went to a shed that had yoga mats, and exercise balls and continued with the procedures. When participating in yoga, it is wise to be in a quiet area so the individual can have complete focus; and some see it as having complete spiritual nourishment. There were other participants in the sports foundation participating in sports. Therefore, an area was selected to move the two participants for yoga away from the others for fewer distractions.

### Yoga Moves

The first step was telling the participants to relax. In order for one to have full meditation, one has to relax their body and their mind in order to be strictly focused. The participants were then told to lie down on the mat, close their eyes, and take deep breaths.

After getting into the basic fundamentals of the relaxation part, the participants were told to get into positions that were made for beginners. The first position was the Shavasana (corpse) position.

This is a position where an individual is on his/her back and positions the arms and legs (spread) at a 45 degree angle. This move promotes relaxation.

The second move that was introduced to the participants was the Surya Namaskar or commonly referred to as the sun salutation. This is a series of moves composed of 12 poses which help improve strength and flexibility of the muscles and spinal column. Sun salutation warms up the body and tones the abdominal muscles.

Both moves were selected due to their ease and effectiveness. Both moves were done every day prior to participating in sports at the foundation. For five days, the participants had to perform the moves and discuss any improvement in the performance with sports.

The Shavasana and Surya Namaskar were practiced for ten minutes each. Each participant was guided by the researchers and encouraged to take the moves through completion. Accommodations were made for Participant B since he had no lower extremities to carry out the full Surya Namaskar. Participant B sat on the workout bench to perform the moves.

Every day the participants did the yoga moves. Participant A performed the yoga moves effortlessly. In fact, he always had a smile on his face and even decided to do the moves early every morning before the researchers came to the sports foundation. Thus, he had additional practice. It is important to note, Participant A's leg injury caused only limited mobility, which resulted in a limp while walking.

Participant B has a few challenges; mostly, due to his disability. He performed the moves, but did not seem very enthusiastic about them. He did; however, enjoy participating in sports after performing his moves. He appeared happiest when participating in weight training and throwing the basketball in the hoop.

### Sport Participation

The participants were permitted to participate in the sport of their choice after yoga. They both were observed to see if they were able to function after participating in yoga.

Participant A showed a slight difference in playing basketball. He seemed very enthusiastic and often would speak to the other researchers while playing. Participant B did show improvement and appeared to show more flexibility when throwing (shooting) the basketball; in addition to showing more strength in movement when lifting the weights (chest presses).

### Documentation

The participants were asked to provide daily feedback pertaining to their activities. Participant A reported feeling better when participating in sports after participating in yoga daily. However, he had a slight disadvantage because he reported practicing the moves every morning. He also had prior knowledge of yoga; albeit not formal training.

Participant B reported feeling stronger in his shoulder region after participating in yoga. He displayed more explosive (movements) when throwing the basketball. He was indeed a skeptic at first, but realized the increase flexibility and endurance after participating in yoga.

Both participants agreed to continue the taught yoga moves before participating in sports at the foundation. Participant A even

invited one of the researchers to practice yoga with him every morning while in Bali on the beach. Participant A also continued communication via email regarding his yoga practice daily. Participant B agreed to continue yoga, but did not continue communication regarding his progress after the researchers left Bali.

### Discussion

Irrefutable evidence exists confirming the effectiveness of consistent physical activity and how it improves overall quality of wellness. (Raju et al., 1994). Physical inactivity is a preventable, contributing risk factor for a variety of chronic diseases such as cardiovascular disease, diabetes, cancer, etc. and leads to premature death. Yoga is a form of physical activity that influences the mind and body to connect, ultimately achieving self-awareness and creates a sense of well-being. According to the American College of Sports Medicine and American Heart Association, physical activity does improve overall health, but must meet specific requirements to do so (Raju et al., 1994). Yoga may be an alternative form to achieve optimal health, however, individuals' needs should be considered.

Maintaining optimal health stems from a persons daily health habits. Daily health habits must include balanced nutrition and physical activity. Yoga is a form of mind-body exercise and has become a popular widespread therapeutic intervention. Research does support yoga improving not only physiological aspects but psychological aspects as well. (Lin et al., 2011).

Reducing stress and anxiety, along with assisting with pursuance of peace, calmness and greater wholeness and integration in ones life has been associated with yoga (Lin et al., 2011).

While no concrete evidence exists concerning the frequency or time of practicing yoga, our evidence is consistent with supporting a notion that participating in beginning yoga exercises may increase and enhance sport performance. Our participants practiced yoga each day prior to sport while researchers were in Bali. Afterwards, the participants participated in their choice of sport. Despite having prior knowledge or experience with yoga or physical disability, both participants were observed exhibiting more enthusiasm, flexibility, and strength while engaging in sport after performing yoga. Future research should investigate the frequency and duration of yoga everyday versus three time per week) and how it may effect sport performance as well as when the yoga should be performed (just before or just after sport, or both).

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## ***Riverlawn Elementary School Partners with RU's HHP Program***

Michael Kennedy, *Physical Education Specialist*, Riverlawn Elementary

Riverlawn Elementary School's Physical Education classes recently hosted students from the Health & Human Performance Program of Radford University (RU). The RU students are currently in a methods class at the University learning how to become Physical Education Teachers.

In their methods class they learn the overall process and many concepts of how to facilitate a physical education class. They learn the intricacies of preparing for and organizing their lessons, managing the process of their lesson as well as managing their students. They learn how to control a multiple number of students in a very active environment as well as appropriate discipline measures. Proper progressions of skills taught along with seamless transitions are important to a successful learning environment. Relative and meaningful feedback, along with directed cues to keep students on task are some of the many things RU students learn in a Physical Education Methods Class.

At the University, the students are limited in their experience when practicing these methods. Many times their trials are only realized in theory and they are often tasked to realize such concepts without actual real experience. Often times they are required to teach a lesson to their peers. Still, however there is no substitute for a true real life experience. Theory really doesn't mean much to a learner until it is actually realized. Teaching to a handful of peers the same age as you (twenty something's) does not come close to fifty real live 7 year olds.

Mr. Stephen Shelton, the HHP faculty member from RU that teaches the methods class to these aspiring physical education teachers was once also an elementary physical education teacher and is very aware of his students needs in becoming successful teachers. Mr. Shelton also supervises and mentors his students when they are in their final requirements of student teaching. Through his supervisory position with student teachers and working with local school systems in the placement of his students Mr. Shelton was familiar with the works of Chad Owen and Mike Kennedy, the two physical education specialist at Riverlawn Elementary. It is through this relationship that a partnership was formed.

Mr. Shelton asked if Riverlawn Elementary along with Mr. Owen and Mr. Kennedy would host his students from the methods class in order for them to gain true experience in the field. Mr. Owen and Mr. Kennedy readily agreed knowing the importance of such exposure and the value of the experience not only for the RU students but also for themselves and their elementary students.

The RU students would actually get to see some of these methods in real life situations. They were able to observe Mr. Owen and Mr. Kennedy model the very things they were learning about in class. They got to see real live reactions of children in response

to the lessons being taught. They were able to realize how certain situations and issues could be handled and were also free to interact with the young students as well as with the two veteran teachers asking questions and looking for opinions. Not only were they able to observe and interact, the RU students even got to test the waters by teaching real elementary aged children. Each RU student had the opportunity to plan and teach one of their own lessons to an individual class. While one RU student taught a class the others were able to observe, document, assess, evaluate, and critique their lessons providing valuable feedback and insight to each other.

Mr. Owen and Mr. Kennedy were more than pleased to invite them into their classroom to have the opportunity to teach them the skills and knowledge that have been passed down to them from the mentors they have had throughout their career. It's all about the children. If they can help make a better teacher than some child somewhere along the way will have a better learning experience. The veteran teachers are always willing to learn themselves and when the RU students are able to bring in fresh new ideas everybody benefits. Being a good mentor makes you a better teacher, it forces you to always be aware of your own methods so that they are modeled properly and you yourself do not become complacent and less than what is expected from an effective teacher.

The children were very excited to have new faces to look up to and role models who were there to help them learn. Just to have a little extra positive attention that young kids crave so much was a big plus. The children thought they were all "nice" and that the new and different activities they shared with them were "fun". Unbeknown to the children was the great experience they helped provide for the RU students. They just naturally accepted having them here and shared their contagious enthusiasm freely as a parting gift for the RU students.

Mr. John Bowler, Riverlawn Elementary's Principal also got into the act. He found the time to meet with the RU students to talk to them about their future pathway. Mr. Bowler was also an elementary PE teacher before becoming a principal and understands specifically the career they are about to embark on. He spoke about professionalism, the importance of what they are about to do, what he looks for when hiring a new teacher, the expectations of what a teacher should represent and how they should conduct themselves. Most importantly about the lives they are going to affect.

It was a great pleasure to host the RU students at Riverlawn Elementary and share what everyone had to offer each other so that all could benefit. Being part of a community that is willing to help one another, especially in the community of education can only make for a strong future.



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# ***What Every Physical Educator and Athletic Coach Should Know About Bullying, Cyber Bullying, and Hazing***

Bob Case, Ph.D., *ODU Sport Management Program*

School teachers are in the front lines of trying to educate students about the potential negative impacts that bullying, cyber bullying, and hazing can have on the physical and emotional welfare of students. Many people would say that bullying and cyber bullying in schools is a growing national problem that needs to be addressed immediately (McQuade, Colt, & Meyer, 2009). A number of states such as New Jersey, New York, and Virginia have passed “anti-bullying” laws (Kowalski, Limber, & Agatston, 2008; McQuade, Colt, & Meyer, 2009; Quiroz, Arnette, & Stephens, 2008; United States Department of Education, 1998; Virginia Board of Education, 2013; Willard, 2006). Also, a number of school districts throughout the United States have taken action by developing policies, procedures, and codes of conduct to deal with bullying, cyber bullying, and hazing in their schools. Classroom curricula, parent workshops, and teacher training seminars have been developed and offered in many school districts in an effort to educate students, parents, and teachers about bullying behavior and to initiate prevention strategies.

School athletic programs are particularly susceptible to situations that involved bullying, cyber bullying, and hazing behaviors. According to the 2013 Virginia General Assembly, “Bullying means any aggressive and unwanted behavior that is intended to harm, intimidate, or humiliate the victim; it involves a real or perceived power imbalance between the aggressor or aggressors and victim; and it is repeated over time or causes severe emotional trauma.” (Code of Virginia § 22.1-276.01). Moreover, bullying can include systematic or chronic infliction of physical and psychological distress on another student. It can lead to a hostile educational environment that can be described as harassing, threatening, intimidating, and hurtful (Virginia Board of Education, 2013).

Studies have shown that students who are bullied can experience depression, anxiety and fear, isolation, absenteeism, lower academic performance, and retaliation tendencies (Quiroz, Arnette, & Stephens, 2008; Willard, 2006). In selected instances, student suicides have been directly linked to bullying and cyber bullying harassment (McQuade et al., Roth, 2010, Williams, 2010). Cyber bullying is bullying that takes place while using electronic technology to access the internet, send e-mails messages, use text and instant messaging, send tweeting, write blogs, open social media sites (e.g., Facebook), construct web pages, view web sites, etc. Hazing is a form of group bullying behavior that has been linked to athletic programs through the use of embarrassment, harassment, ridicule, humiliation, physical abuse, and sometimes dangerous initiation rituals. Although hazing is often associated with college fraternity and sorority initiation activities, instances of hazing are sometimes found within school athletic programs when older or veteran players attempt to initiate younger or rookie players to the team culture and environment. Various types of student activities such as marching band membership has also experienced hazing activities.

## **Extent of School Bullying**

Although some individuals claim that school bullying (including cyber bullying and hazing) are not problems, data from studies suggest otherwise. For example, according to a Government Accounting Office Report (2012), four nationally representative surveys conducted from 2005 to 2009 reported that an estimated 20 to 28 percent of youth (primarily middle and high school aged youth who participated in the study) stated that they had been bullied during the survey periods. In a Department of Education Report (1998) it was pointed out that in a study of a students from Midwestern towns that 88 percent of the students had observed bullying and that 76.8 percent stated that they had been a victim of bullying.

## **Forms of Bullying**

According to a Virginia Board of Education (2013) publication, bullying can be exhibited in many ways. For example, bullying may be physical, verbal, and social in nature. Physical bullying can include punching, hitting, pushing, kicking, poking, pinching, tripping, taking someone’s belongings, or making mean or rude gestures. Verbal bullying can include saying or writing things that are hurtful to others. This can include name calling, teasing, gossip, racial slurs and insults, taunting, threatening harm to others, etc. Social bullying is a form of intentional aggression that is used to damage or defame someone’s reputation or relationships.

Leaving someone out of a group selection process on purpose, telling other students not to be friends, spreading rumors, or embarrassing someone in public constitute various levels of social bullying. It should be mentioned that bullying behavior should occur more than just one time in order to be considered bullying behavior.

## **Legal Issues Related to Bullying**

Teachers and coaches have a duty to protect students in their care and to ensure that there is no substantial interference with the student’s right to receive an education (Willard, 2006). If students are being bullied, cyber bullied, or hazed in school athletic programs and physical education classes, then there may be a violation of federal statutes, constitutional law, state anti-bullying laws, or school district policies and codes of conduct. In recent years, selected school bullying lawsuits have centered around negligence law, premises liability law, and actions involving the infliction of emotional harm. When death of a student is involved, wrongful death lawsuits are frequently filed (Williams, 2010).

In other instances, legal actions may be criminal in nature with harassment and assault/battery charges being filed. Kowalski et al. (2008) point out that under a variety of federal laws, such as Title IX of the Education Amendments Act of 1972 for gender, Title IV of the Civil Rights Act of 1964 for race, and Title II of the Americans with Disabilities Act for disabilities, students who are members of protected classes (e.g., disabilities) may bring lawsuits

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against schools or districts for injuries caused when bullying occurs that is based on race, gender, or disability.

### **Myths Associated With Bullying**

McQuade et al. (2009) list a number of myths associated with bullying. Four of the myths have been selected from McQuade et al. (2009) and listed below. The first myth states that bullying helps victims “toughen up.” According to the authors, this is not the case. Numerous research studies indicate that bullying behaviors cause tremendous emotional pain and distress for the victim. The second myth states that that bullying is a normal part of childhood development. Again, research shows that being a victim of bullying can harm the student in emotional and psychological ways that can cause continued harm into adulthood. In particular, positive self-concept development can be impaired. The third myth is that students will tell an adult when bullying becomes serious. Studies have shown that this is generally not the case and students don’t tell an adult due a fear of continued intimidation by the bully. The fourth myth is that most bullying occurs outside of school. Again, this is not the case. Research has indicated that most bullying episodes take place inside the schools and not outside (McQuade, 2009).

### **Prevention Programs**

In 2013, the Virginia Board of Education developed a model policy to address bullying in Virginia’s Public Schools. It was recommended that school divisions across the state should:

1. Initiate school-wide evidence-based anti-bullying educational programs;
2. Expand efforts to improve school climate by promoting student involvement in anti-bullying efforts while encouraging students to report incidents of bullying;
3. Work with families to inform parents about bullying prevention initiatives in the schools and how to report bullying episodes;
4. Designate a bullying prevention coordinator in each school division;
5. Adequately disseminate bullying prevention information through the school division’s web site and information dissemination outlets;
6. Conduct an annual school safety survey to collect bullying data within the school division that will help in formulating future planning decisions;
7. And, educate students about school bullying prevention programs and train faculty/staff to identify, recognize, report, investigate, handle, treat, and prevent bullying activities within the school district.

### **Discussion**

Bullying is a major problem in our schools. A number of resources are now available to teachers through government agencies that will help to eliminate bullying behaviors in athletic programs and physical education classes. It is clear that a well-planned and well-organized classroom environment that fosters discipline in a positive classroom atmosphere, developing and following classroom and school rules, and showing respect for one another are keys to success. Knowing what bullying is, how to identify it, and how to deal with it is a first step. Investigating and reporting incidents of bullying and then taking pro-active steps to communicate and eliminate it are additional essential steps. No student should have to endure the pain and suffering associated with bullying behavior. Please go to [www.stopbullying.gov](http://www.stopbullying.gov) for additional information or link to the <http://www.doe.virginia.gov/support/prevention/bullying/> for the Model Policy to Address Bullying in Virginia’s Public Schools..

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## ***Guidelines for Manuscript Submission - (Revised Spring 2010)***

The Virginia Journal is published twice yearly (Fall and Spring) by the Virginia Association for Health, Physical Education, Recreation and Dance. Deadlines for submitting materials for inclusion in the spring and fall issues are January 15th and July 15th respectively. Manuscripts should be sent to Dr. Michael Moore, TVJ editor, by email in an attached WORD document. Each e-mail attachment should not be greater than 4 MB. In submitting a manuscript, the author affirms that it has not been published or accepted for publication elsewhere, unless otherwise stated in writing.

### ***Manuscripts***

Manuscripts follow the form of the Publication Manual of the American Psychological Association and must be typed on 8 ½ by 11 inch paper. The attached manuscript must be double spaced except that direct quotations of three or more lines in length are to be single spaced and indented. Manuscripts should not exceed 10 double-spaced pages of narrative including the citation page. Pages should be numbered consecutively. The name and institution of each author are inserted on a title page but not on the narrative. There should be provided on the title page biographical information on each author. This biographic information should include name and position at time of manuscript submission.

Any research involving human subjects must have Institutional Review Board (IRB) approval before a review can take place. A PDF copy of the letter must be submitted with each manuscript. If IRB approval was not granted and TVJ editor doesn't have a copy of the approval letter, the manuscript will not be published. Please check with your institution or school for IRB details.

References should be listed at the end of the manuscript and should be arranged in alphabetical order. Each reference cited in the article must be listed, but only those cited should be included. Sources should be cited by placing the author's name and date of publication followed by a page number when appropriate in parentheses: i.e., (Cowlick & Rice, 2003). The reference should be cited following the quote or fact noted. References listed at the end of the article should contain the following information:

1. The author, editor's or compiler's name, in reverse order (surname, followed by first and middle initials).
2. The exact title. Titles of books, pamphlets, periodicals, and newspapers are underlined: titles or articles within periodicals or books are not underlined and precede the periodical or book in which they are found. Only the first word of the title is capitalized and the title is followed by a period.
3. Titles of books are followed by place: company, date of

publication. The date, volume, and page numbers follow the title of a journal. If each issue of a journal begins with page 1, include the issue number after the volume number in parentheses. Volume numbers should be italicized, issue numbers should be in parentheses and not italicized for journals. Please see below and the following web page for further examples of APA styles of various sources. <http://libguides.radford.edu/apastyle>

### ***Examples of Citations***

American Dietetic Association. (1999). Dietary guidance for healthy children aged 2 to 11 years. *Journal of the American Dietetic Association*, 99, 93-101.

Kulwicki, A., & Rice, V.H. (2003). Arab American adolescent perceptions and experiences with smoking. *Public Health Nursing*, 20, 177-183.

### ***Illustrations***

Illustrations such as pictures, graphs, and drawings are valuable additions to manuscripts. Please send these embedded within your manuscript.

### ***Reviewing and Editing***

Each article is reviewed by three members of the Editorial Board. Sometimes a guest editor is asked by the editor to review a manuscript depending upon the topic. To be accepted for publication the article must be approved by at least two of these persons. Reasons for rejecting articles include: topic is not of interest to the profession or to only a few members of the Association, topic is of interest but has already been thoroughly discussed in the literature, manuscript discussion is too general and vague, poor research techniques, the manuscript is poorly written or if human subjects were used in your research and IRB approval was not obtained and provided to TVJ Editor. In some instances a manuscript may be rejected but the author is invited to revise and resubmit it with corrections. Manuscripts accepted are subject to editing to conform to the Journal format.

### ***Final Acceptance for Printing***

After the editor has compiled the journal issue, it is sent to the printers. VAHPERD's executive director, president and presidentelect then edit *The Virginia Journal*. These three VAHPERD members are provided with a minimum of two drafts for their revision and comment. Upon their approval, the final document is printed and distributed.





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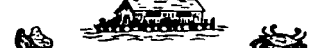
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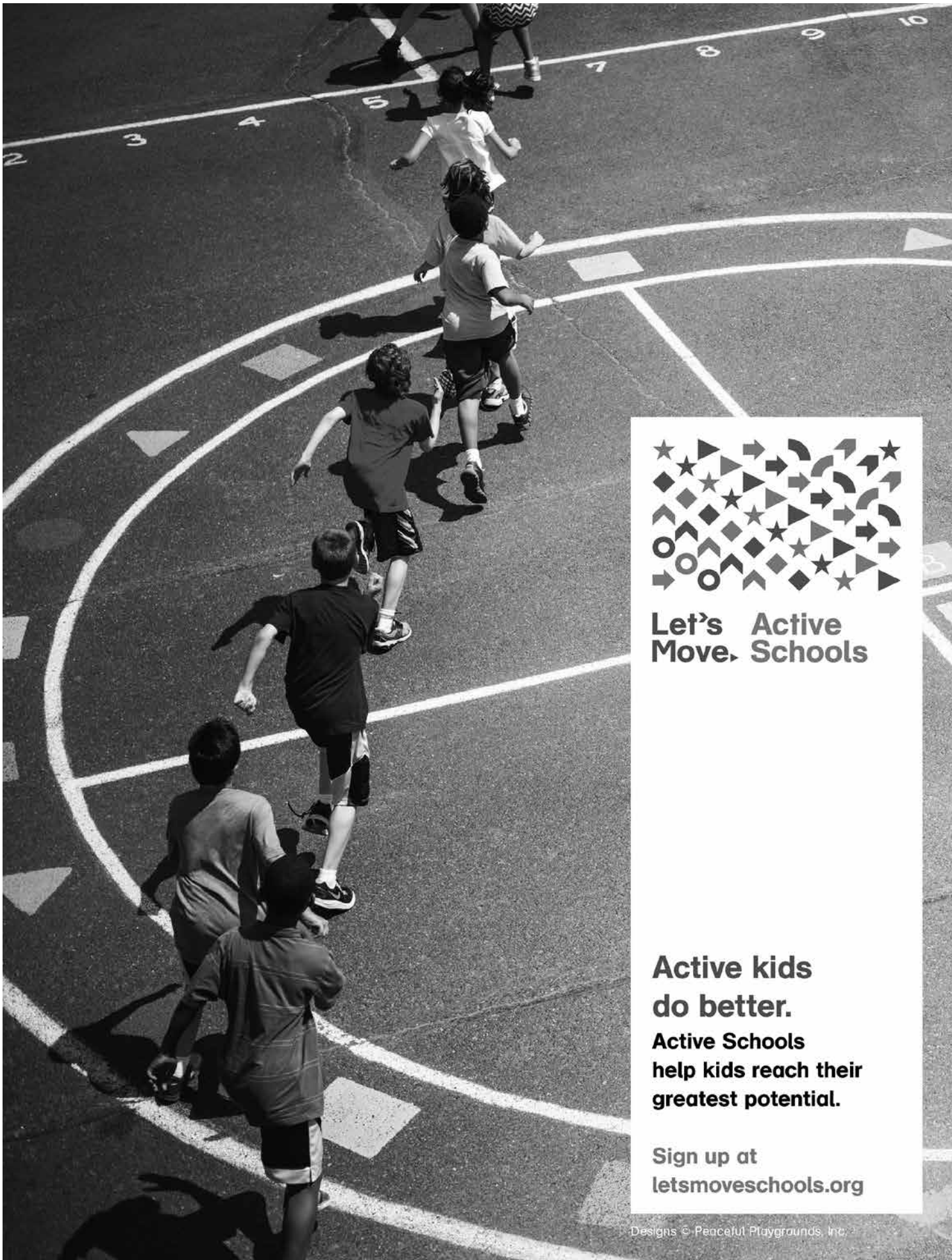
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