Future Focus

Ohio Journal of Health, Physical Education, Recreation, and Dance

OAHPERD

Spring/Summer 2015

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Future Focus is the official biannual publication of the Ohio Association for Health, Physical Education, Recreation and Dance. *Future Focus* is a refereed journal, and manuscripts are blindly reviewed by the writer's peers unless otherwise noted (e.g., columns from OAHPERD officers, continuing special sections such as "Best Practices" and "The Coaching Toolbox"). Manuscript guidelines and submission dates are detailed on the inside back cover.

Change of Address/ Incorrect Address

If you or another member of OAHPERD did not receive a copy of *Future Focus,* or if the address was incorrect, or if you have a change of address, please notify the Executive Director:

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2015 Vol. XXXVI No. 1

The Ohio Association for Health • Physical Education • Recreation • Dance

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JUMP ROPE FOR HEART NEWS HOOPS FOR HEART

OAHPERD

The Ohio Association for Health,
Physical Education, Recreation, and Dance

Cover images provided by Jim Burgess ©2015. Pataskala Football Club Extreme U-13 girls.
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President's Message

Pamela Bechtel, Bowling Green State University

Happy Spring! We are all out and about after a tough winter, ready to become active once again! OAHPERD has been involved in many exciting opportunities since my last *Future Focus* article. We had a successful convention at Kalahari and have been working on revising our constitution and by-laws and our procedures manual. Steve Mitchell and Mary LaVine represented Ohio at the SHAPE America Speak Out Day in February. Several OAHPERD members presented at the SHAPE America Convention in Seattle, WA, in March. Steve Mitchell was elected to the SHAPE Board of Directors. OAHPERD is hosting our first Summer Institute on June 19th at Wright State University. We have been quite busy these last few months!

My theme for this year is "**ADVOCATING** for our Professions, **EDUCATING** the Public, and **INFORMING** our Members." In terms of ADVOCATING for our professions, OAHPERD members continued to offer testimony against the "5 of 8 rule" the Ohio State Board of Education was considering. The State Board of Education recently approved this legislation. A positive result of this legislation was that it brought together a number of professional organizations in Ohio concerned with education of the whole child. These organizations worked together and discussed common concerns. The Fitness Integrated with Teaching (FIT) Kids Act was the focus of the Speak Out Day in Washington, D.C. and has been re-introduced in Congress. This is definitely a step in the right direction! You will be asked to contact your representatives to encourage them to work to approve this bill. OAHPERD has asked for your help in providing evidence against HB 25 dealing with the length of time sweet fundraisers may be held in schools. Every day we are teaching students, working with our clients, and presenting best practices we are ADVOCATING for our related professions.

EDUCATING the public is on-going in all of the areas represented in OAHPERD. The value of living a healthy lifestyle is key to all of us. Activity of any kind is essential today. The problems with living a sedentary lifestyle and the subsequent increased health risks are becoming more apparent each and every day as our field shares its research. We have to help educate our public on the value of our professions being proactive for healthy living. I ask each and every member to work positively to educate a non-OAHPERD member about the value of our profession and our vision: "Keeping Ohioans healthy and active for a lifetime" (OAHPERD, 2015, p.3). Let's make sure each of us is helping educate the public by using current practices and techniques appropriate in our daily work settings.

INFORMING our members starts with making you aware of SHAPE America's new initiative called "50 Million Strong by 2029." This was unveiled at the SHAPE America Convention in March. The goal is to make sure students entering schools in fall 2015 will be stronger and more active by the time they graduate in 2029. There will be more information released throughout the year regarding this program and ideas from OAHPERD. We hosted our Student Leadership Retreat at Kalahari on May 15 and May 16 to inform our future student leaders of the value of our organization. A new means of informing our members is by hosting our first Summer Institute on June 19th at Wright State University. There are great sessions planned for attendees. Registration is now open and we want to see many of you at this event. The Advocacy Committee continues to work to promote health and physical education in our schools at the legislative levels. Steve Mitchell and Kevin Lorson have done a fantastic job of representing OAHPERD and keeping us informed in this area. We are finalizing a merger with the Buckeye Healthy Schools Alliance so that the Alliance becomes a division within OAHPERD. This merger will benefit both organizations. The Ohio Academic Content Standards for Physical Education are being revised and will be piloted next year. The call for presentations at the 2015 OAHPERD State Convention is now open and I encourage you to submit an abstract for a presentation.

In closing, OAHPERD has been busy working for all of us in our various professions this year. I'd like to ask each one of you to encourage other professionals in your fields and students to become members of OAHPERD.

Continued on page 4

President Elect's Message

Kevin Lorson, Wright State University

Keep Moving

OAHPERD's mission is "to keep Ohioans healthy and active by providing lifelong learning, professional development, leadership, service and accuracy." While OAHPERD's overall mission has remained consistently focused on a healthy and active Ohio, the route to success keeps changing. These changes have challenged, motivated and pushed OAHPERD to either do more or approach the task differently. While the path to achieving our mission seems to have a few bumps, quick turns and "recalibrating" of the route, the one constant has been the drive and determination of our membership to "keep moving."

While we stay focused on our mission and adapting to challenges, we should take opportunities to take a few snap shots of how far we have come and reflect on what lies ahead. I'll use this space to share some of the recent successes and identify some of the upcoming opportunities and challenges.

Opportunities exist for OAHPERD to continue our movement towards a healthy and active Ohio through our initiatives in physical activity and health. All of us "keep moving," whether our focus is in physical activity, physical education, health, recreation or dance. Our movement continues to gain momentum as we continue to push onward to achieve our mission, but we must continue to refine our approach and strategies.

Physical Education met the initial challenge of implementing required statewide assessments and submitting data to the Ohio Department of Education. Ohio is the nation's leader in implementing standards-based assessments and using assessment data to provide quality physical education. Our upcoming challenge is the Ohio Physical Education Academic Content Standards and Physical Education Evaluation are currently undergoing a revision that will be implemented in Fall 2016. OAHPERD and its members will again be ready to partner with the Ohio Department of Education to provide professional development to implement the revised assessments effectively and efficiently.

Advocacy is another example of victories tempered with new challenges. Our advocacy efforts stopped the expansion of the Physical Education Substitution policy to include club sports in the December 2014. Our advocacy movement must keep moving in a dynamic and responsive manner to continue to push for health education standards, maintain the requirements for healthy nutritional choices in schools, and continue to fight to eliminate the physical education substitution policy. At the federal level, OAHPERD representatives have helped secure co-sponsor support for the PHYSICAL Act. Advocacy needs the power of our membership to keep OAHEPRD moving towards fuller achievement of our mission.

OAHPERD will have additional opportunities to achieve our mission by expanding our focus to include Coordinated School Health (CSH) and Comprehensive School Physical Activity Programs (CSPAP). A focus on CSH will help OAHPERD achieve its mission by improving students' health by bringing together the various services in schools to provide a coordinated and effective approach. OAHPERD will use our resources in health education; physical education; nutrition services; counseling, psychological and social services; safe school environment; health promotion for staff; and family/community involvement to have a positive impact on the health of Ohio's students. CSPAP is also another resource OAHPERD members can use for opportunities for students to be physically active for 60-minutes each day. Our students can be physically active for 60-minutes every day with quality physical education and physical activity before, during and after school. We must engage teachers, staff, families and community resources to support children in moving 60 minutes everyday. Taking a cue from both CSH and CSPAP, OAHPERD will look to maximize and coordinate its new and existing resources to achieve our mission. Look for expanded and targeted professional development opportunities for OAHPERD members in these areas.

Continued on page 4

Editor's Comments

Robert Stadulis

The current issue is a bit different than our typical issue. To be specific, neither refereed article reflects research in at least a traditional sense. The first article, by Hagele and Hodge (pages 12–19), focuses on the basic inferential statistics usually employed when conducting empirical research. The effort can be a refresher for those members who completed a statistics/research course or two in their undergraduate and/or graduate program of study and then have not used the methods discussed in the article since. The article might also serve as a resource for those who do "action research" and wish to strengthen their descriptive findings with some statistical probability support. While the examples provided are oriented to adapted physical activity, the information should be easily applied to physical education, coaching, health, recreation and dance situations. Professors might recommend the article to their students for an overview or review of statistical concepts.

Our second refereed article, by Miller and Strand, focuses upon coaches of youth sport and how they can influence the acquisition of "life skills." If you attended Brad Strand's key note address at last year's (2014) OAHPERD Convention, the topic may resonate with you. For those unable to attend his talk last December, the article should (pp. 20–25) communicate one of Dr. Strand's basic messages in his key note and subsequent session. You might also note the connection between the Miller and Strand article and Mike Sheridan's *Coaching Toolbox* offering (pages 8–11). Sheridan's focus on coaching behaviors has a strong relationship to youth sport coaches and teaching life skills.

Another interesting aspect of the two refereed articles is that each has a student who is a co-author with his professor. As noted in the announcement on page 27, students who write a single authored article are eligible to receive OAHPERD's Student Writing Award. Instructors: please consider encouraging students who write an outstanding paper in your course to submit the paper as an article to *Future Focus*.

In addition to the above highlighted contributions, our President, Pam Bechtel, calls our attention to association efforts in the past few months as well as opportunities upcoming. We welcome Kevin Lorson as President Elect and his column on "keep moving." You will be seeing and hearing much more from President Kevin in the next few years.

Enjoy your summer opportunities for fun and relaxation but don't forget to be physically active.

RES

futurefocus.res@gmail.com

President's Message, Continued

Recruiting new members will help make us an even stronger organization that continues to do the good works we have started. Bring a new member to an OAHPERD event!

Enjoy your spring and summer! See you in the fall!

Pamela Bechtel

OAPHERD (2015). *Ohio Association for Health, Physical Education, Recreation and Dance Procedures Manual draft.* p.3.

Keep Moving, Continued

I look forward to serving OAHPERD as President-Elect. I am driven to keep OAHPERD moving towards our goals, maintaining the momentum of success built by those who have and currently serve this organization. I am thankful and humbled to serve such a great organization. I look forward to celebrating victories and welcoming the new resources and allies that will help OAHPERD meet the anticipated and unanticipated challenges and opportunities. OAHPERD is energized to "keep moving" towards a healthy and physically active Ohio.

Kevin Lorson

OAHPERD Summer Institute

June 19, 2015

The Nutter Center, Wright State University

Featuring professional development sessions for Physical Education, Recreation, Adapted PE and Health Education divisions.

REGISTER ONLINE!
ohahperd.site-ym.com

Pre-Registration through June 15, 2015

Professional Member (1-, 2-, or 3-year) **& First-time Professional Member**
Pre-Reg $50 / $60 On-site

Student, Senior Student & Institutional Student
Pre-Reg $10 / $25 On-site

Retiree, Honorary Life Member
Pre-Reg $30 / $40 On-site

Non-Member
Pre-Reg $85 / $100 On-site

Other state AAHPERD or SHAPE America member
(contact OAHPERD offices to register)
Pre-Reg $50 / $60 On-site

Attendees may pay by credit card, check, or PO. Please remit payment to: OAHPERD, 17 South High Street, Sutie 200, Columbus, OH 43215.

If you are paying via PO from your school, please print out your invoice after completing your registration and give this invoice to your school (accounts payable). Your school does NOT need to send us a PO form—this invoice will serve as their official invoice.

Please note that a full refund will be given for cancellations on or before April 17, 2015. Cancellations after April 17, 2015 will receive a 50% refund.

OAHPERD will sponsor its first Summer Institute targeting health education and physical education teachers at Wright State University's Nutter Center in Dayton. All sessions focus on implementing standards-based lessons, assessments and activities. The health education sessions target developing and implementing a standards-based curriculum. The physical education sessions share ideas for teaching tactics, adventure education, adapted physical education, assessments and using assessment data. The final session of the day will allow teachers to network and share their ideas in a roundtable session.

Workshop Schedule

9:00–10:20 A.M.

Physical Education

Standard 2A: Teaching Sport Concepts & Skills, *S. Mitchell, Kent State University*

Adventure Education, *S. Sutherland, The Ohio State University*

Adapted Physical Education & ODE Assessments, *F. Connor-Kuntz, Cleveland Heights-University Heights*

Critical and Creative Thinking in Health Education, *J. Ausherman, Cleveland State University*

10:30–11:50 A.M.

Physical Education

Standard 2A: Teaching Sport Concepts & Skills, *S. Mitchell, Kent State University*

Adventure Education, *S. Sutherland, The Ohio State University*

Adapted Physical Education & ODE Assessments, *F. Connor-Kuntz, Cleveland Heights-University Heights*

Critical and Creative Thinking in Health Education, *J. Ausherman, Cleveland State University*

12:00–12:45 P.M.

Lunch

12:45-1:45 P.M.

Physical Education

Elementary Physical Education Assessments, *K. Casper, Copley-Fairlawn*

Secondary Physical Education, *TBA*

Using data to improve instruction, *R. Eldridge, Ohio Department of Education*

Health Education

Building a Shield: Equipping Students with the Tools to Handle Adversity, *K. Huelskamp, University of Toledo*

2:00-3:00 P.M.

Physical Education

Elementary Physical Education Assessments, *K. Casper, Copley-Fairlawn*

Secondary Physical Education, *TBA*

Using data to improve instruction, *R. Eldridge, Ohio Department of Education*

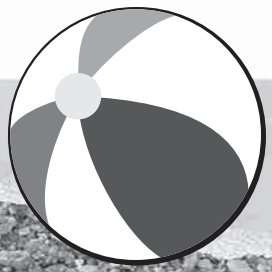
Health Education

Health Education Resources, *J. Jagger-Mescher, Wright State University*

3:00-3:30 P.M.

Physical Education Roundtables *Attendees can show and tell their exciting ideas!*

Health Education Roundtables *Attendees can show and tell their exciting ideas!*



OAHPERD Needs You!

We are seeking Jump Rope For Heart and Hoops For Heart Coordinators to present at the next Annual OAHPERD State Convention in December 2015.

Are you willing to share your local success stories and pass on great ideas that worked for you and your program and spread the love! We need you! Help inspire other JRFH/HFH Coordinators. Consider presenting December 3 or 4, 2015. If you would like to present, please fill out the proposal form on the **www.ohahperd.org** website. If you are thinking of presenting, but have some questions or possible obstacles in your way (such as gaining principal approval, etc.), please e-mail Sasha Taylor at **sasha.taylor@bss.k12.oh.us**.

Presenter guidelines are listed below:

- All presenters are required to submit a proposal at **www.ohahperd.org**
- Upon acceptance, all presenters are required to register and pay to attend the convention.
- Presenters will be notified of acceptance in July 2015.
- Presentations can be submitted as either one 45-minute-session or 2 consecutive sessions totaling 90 minutes
- OAHPERD **does not** supply presenters with laptops or projectors.
- OAHPERD **does** provide screens and access to power for presentations.

Dear Jump Rope For Heart and Hoops for Heart Coordinators,

A powerful part of participating in JRFH or HFH is that your school is joining with tens of thousands of schools across the nation that raise many millions of dollars for the American Heart Association (AHA) and the American Stroke Association each year. The mission of the AHA is "building healthier lives, free of cardiovascular diseases and stroke." You are an important part of a network of volunteers who coordinate events across the state that brings that mission to life every day in your work as health and physical education teachers. In doing so, you also are following the OAHPERD mission of "keeping Ohioans healthy and active for a lifetime." You are making a difference in the lives of your students, as well as their families and your communities, by educating on the importance of living a healthy and active life.

On behalf of OAHPERD, I would like to thank you for all of your time, energy, effort and passion that you give to these two great programs of JRFH and HFH.

Did you know? … In the 2013–14 school year, 1,172 schools in Ohio completed a Jump Rope For Heart or Hoops For Heart event, combining to raise $3,319,860.62.

Did you know? … In the 2014–15 school year, there are currently 1,388 schools in Ohio registered to complete a JRFH or HFH event, and we are on pace to raise more funds than any other year in the 36-year history of JRFH & HFH.

This is amazing! Thank you, thank you, thank you!!!

If you have a unique idea that really works for your school or any ideas specific or in general, to improve a part of JRFH or HFH on a state or national level, please share your ideas with me. I can be reached at **sasha.taylor@bss.k12.oh.us** and would be happy to send them on to the National Joint Projects Committee that works on annual updates for JRFH & HFH through a Shape American and American Heart Association partnership. We are continually working to improve each year and can only do it with your input.

Sincerely,
Sasha Taylor, OAHPERD State Jump Rope For Heart Coordinator

American Heart Association®
life is why™

JUMP ROPE FOR HEART℠

HOOPS® FOR HEART

WE'RE WORKING TO MAKE KIDS HEALTHIER

Jump Rope For Heart and Hoops For Heart are sponsored by the American Heart Association and SHAPE America-Society of Health and Physical Educators. These events engage elementary and middle school students with jumping rope or playing basketball while empowering them to improve their health and help other kids with heart-health issues. Both programs are great ways to satisfy the National Standards for Physical Education and the National Standards for Health Education.

During Jump Rope For Heart and Hoops For Heart Events:

- Kids learn the value of community service and become empowered to contribute to their community's welfare.
- Children join together in helping other kids with special hearts.
- Students learn how to develop heart-healthy habits while being physically active.
- Participants learn jump rope and basketball skills they can use for the rest of their lives.
- Kids raise funds for research and outreach programs that can save lives.

HOW IT WORKS...

Jump Rope For Heart and Hoops For Heart events are conducted in schools by physical education instructors, coaches or teachers and can be scheduled whenever it's convenient — during physical education class, lunch or before or after school. Once you register, you'll receive an event kit with everything you need to conduct a successful Jump Rope For Heart or Hoops For Heart event:

1. Step-by-step instructions on scheduling, promoting and conducting the event.
2. Educational modules for heart-healthy curriculum to support heart awareness with the event.
3. Tips for fundraising. Participants ask friends and family for donations and receive thank-you gifts based on the dollars they raise. Our online tool makes raising money safe, easy and fun for families and schools.
4. Training and support from an experienced American Heart Association staff person.
5. Teachers receive opportunities for professional development at the state and national level.

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SHAPE America Society of Health and Physical Educators

health. moves. minds.

SHAPE America is a proud program partner of Jump Rope For Heart and Hoops For Heart.

Depending on the dollars raised, your school will be eligible for gift certificates for free P.E. equipment.

Event Raises	U.S. Games Gift Certificate Value
$1,500 to 2,999	$100
$3,000 to 4,999	$200
$5,000 to 7,499	$300
$7,500 to 9,999	$400
$10,000 to 14,999	$500
$15,000 to 19,999	$800
$20,000 to 24,999	$1,000
$25,000 to $29,999	$1,300

Schools raising more than $30,000 can earn even more in U.S. Games Certificates.

Updating Your Coaching Toolbox:

Bridging the Gap Between Coaching Research and Practice

What is this column all about?

This column is the 13th in a series of articles in *Future Focus* written for coaches by a coach. The goal of this column is to provide information to coaches about recent research that is related to coaching in a user-friendly format. With this in mind, the author will briefly review a recent research article from a professional journal, critique it, and offer practical applications for coaches to use in their everyday coaching. It is the author's intent to encourage a realistic bridging of coaching science to coaching practice through discussions of realistic applications of research. This column will be written with coaches as the intended audience with the following assumptions:

1. Some coaches are interested in applying recent research from coaching science to their coaching.
2. Most coaches do not have easy access to professional journals that provide scholarly research on coaching science, nor do many coaches have time to read, understand, and digest articles in these publications.
3. Many of the scientific articles are written in a language that is appropriate for scholarly (academic) publications, but many of the writings are difficult to understand, thus making the application of the results to coaching practice difficult.

"Bridging the Gap between Coaching Research and Practice" is intended to offer coaches access to recent research in an easy-to-use set-up so that coaches may apply this knowledge to their coaching. If coaches also learn how to dissect and analyze research from reading this column, then this would be beneficial. Questions, comments, or suggestions about current and/or future articles and topics are welcomed at **msheridan@tvschools.org**.

Over-coaching, Under-coaching and Getting it Just Right: Balancing our Coaching Behaviors

We know the important role that coaches play in their efforts to positively influence their athletes' performances. Expert coaches understand the delicate balance that is needed between offering praise, corrections, and scolding athletes when needed. Most skilled coaches know how to "push the right buttons," providing a pat on the back for a discouraged athlete or delivering strongly worded reprimands when needed. Research tells us that effective coaches help athletes deal with crisis situations, help athletes learn how to make total commitment to succeed, and assist with implementing clear performance plans (Greenleaf, Gould, & Dieffenbach, 2001). By contrast, ineffective coaches have been found to "over-coach"; they do not keep things simple for athletes and have unrealistic expectations that produce conflict between athletes and coaches (Greenleaf et al., 2001). Therefore it seems clear that coaches can help athletes improve or, by contrast, coaches may inadvertently hinder players' progress toward their goals.

Much of the research that has been conducted to assess quality coaching has discovered that effective coaches: (a) provide clearer training plans; (b) develop a vision for success; (c) create advance plans for managing distractions that might occur during performance and; (d) tend to avoid over-coaching (Allen & Ritchie, in press). If this is true, then why do there seem to be so many media reports and anecdotal observations of coaches "over-coaching"? What is "over-coaching"? How can a coach know if he or she is "over-coaching" and how can this be avoided or changed? This article will examine some of these questions, then recent research on the topic will be reviewed and practical applications for coaches to apply to their coaching practice will be suggested.

Coaches often find themselves performing in high level performance competitions that could have a positive or negative effect on their professional career (depending upon the outcome). Achieving success in district, regional and state championships can launch coaches' careers by helping them secure a promotion at the same school or perhaps moving to a more lucrative position at another school. By contrast, if their teams do not meet expectations while they are performing on-stage in tournament play, the coaches' job security may be threatened. Pressure that coaches feel to "perform for the crowd" can mutate into "over-coaching." Many spectators (fans, media, parents, administrators, etc.) mistakenly perceive that "effective coaching" includes coaches standing and yelling instructions at their team, correcting mistakes during play and calling out plays every time that their team possesses the ball. Public and media perceptions of coaching behavior expect that, during competition, coaches will be actively involved in most every possession and most every aspect of athletes' performance. This type of coaching behavior is rarely effective, and can be considered "over-coaching" (Allen & Ritchie, in press).

It seems (anecdotally) that there are far fewer coaches who sit quietly and observe their team's performance, allow players to make mistakes without interrupting play and offer instruction during breaks in play (time outs, injuries, halftime or quarter breaks). Yet we know that expert coaches spend the majority of their time during competitions engaged in "silent observation" (Erickson & Gilbert, 2013). In fact, if you devote some time to watching coaches' actions in the professional sports (e.g., NBA, MLB, NFL and NHL) viewers will find that coaches are rarely seen micro-managing their players during the game. This is true despite the attention that the media, administrators, fans, and parents give to the more boisterous styles of coaching where coaches are overly active during play, excessively demonstrative while their players perform and who often interrupt play to attempt to correct mistakes. In other words, tactics associated with over-coaching are mistakenly celebrated by the general public as being qualities of effective coaching. Yet, coaches at the highest levels of sport rarely engage in "over-coaching."

Perhaps lower level coaches (youth, high, school, college), who are involved in high level performance competitions, feel pressure to be overly involved with their teams during play so that they meet the expectations of parents, administrators, media, and fans. However, research shows that expert coaches do not over-coach, are not overly-involved in every possession nor are they entangled in every aspect of an athlete's performance during competitions (Allen & Ritchie, in press). Furthermore, effective coaches create an atmosphere where athletes can feel free to take risks and fail. Coaches who over-coach do not create environments where athletes feel comfortable taking risks and failing. In fact, the opposite is probably true: over-coaching likely leads to athletes playing "not to lose" or performing to avoid making mistakes and failing. Still, there is much anecdotal evidence available from media reports which show coaches "over-coaching" from the sidelines while their athletes attempt to manage the game, compete against their opponent and cope with the other distractions associated with public performance (officials, spectators, media, parents, etc.)

Effective coaches create an atmosphere where athletes can feel free to take risks and fail.

There has been scant research completed on how coaches behave and perform during competition. Some research shows that coaches are not only attempting to affect their athletes' performance but coaches are in fact performing themselves (Giges, Petitpas, & Vernacchia, 2004) Yet, the majority of the research published on coaching behavior has occurred in practice situations with youth and collegiate coaches. Therefore, we know a lot about instructional strategies, feedback, and organizational tactics that coaches use in practice. However, it has been found that coaches behave differently in practices than they do during games. For example, Smith and Cushion (2006) discovered that, compared to coaching in practices, coaches demonstrated lower frequency of instruction, and higher occurrence of silence during games. In fact, these authors learned that these behaviors were deliberate coaching strategies. Therefore it could be inferred that some coaches believe that practice is designed primarily for instruction whereas game coaching is normally about management and allowing the athletes to perform what they learned in practice.

It could be said that coaches in performance situations behave more like "orchestrators" (Jones & Wallace, 2005). "Central features of coaching as orchestration include, steering rather than controlling, structure with flexibility, and close, often unobtrusive observation" (Allen

& Ritchie, in press). That is, some coaches attempt to steer their athletes' performance rather than control it. Coaches in Allen and Ritchie's research were found to keep the athlete as the central focus where the coach attempted to encourage their athletes to lead the process for their performance, improvement and development. These coaches were working with more "experienced" athletes. Therefore, it is possible that athletes' experience and maturity has an effect on how much coaches are able to empower them in their own training and performance. Still, it is clear that these coaches were committed to avoiding over-coaching and allowed the athletes to take the lead in their own development and performance. The following article summary discusses this research in more detail followed by suggesting some practical applications for coaches.

Article Review

Allen, J. & Ritchie, D. (in press). Let them get on with it: 'Coaches' perceptions of their roles and coaching practices during Olympic and Paralympic games. *International Sport Coaching Journal*.

The authors were interested in studying the perceptions of track and field coaches who have coached and helped develop Olympic and Paralympic medalists. The authors sought to gain a better understanding of coaches' perceptions of their roles and coaching practices during competition at major events. Additionally, the authors were interested in learning about coaching as 'orchestration' during major events. The authors interviewed eight Olympic Track and Field coaches (21–51 years of coaching experience, M = 30.25, age range 46–72) who had attended up to 10 Olympic or Paralympic Games and had a combined 30 Olympic appearances. The participants who were interviewed could clearly be classified as "expert" coaches who possessed many years of quality experience coaching athletes at the highest levels of sport. The authors discovered that the coaches attempted to create an athlete-focused supportive environment through preparation and planning, observation, analysis and intervention, athlete psychological preparation, coach psychological preparation, and management. The results implied that the coaching process during major events was athlete-led with the coaches adopting a supportive and facilitative role including managing the wider performance environment. Furthermore, the authors discovered that coaches served a role more closely related to one that could be described as an 'orchestrator' instead of an more traditional authoritarian style approach.

Practical applications for coaching

How do we achieve balance in our coaching? If it is true that expert coaches are engaged in silent observation for more than 50% of their coaching time (Erickson & Gilbert, 2013), then how do coaches aspire to achieve that kind of balance? As important, should coaches achieve to aspire that kind of balance in their coaching? Based upon Erickson and Gilbert's review, it could be implied that coaches who over-coach spend more than 50% of their time in correction, instruction and management. It seems that the first step in changing coaching behavior would be to conduct a self-assessment of one's own coaching conduct. While there are many complex coaching behavior assessment systems that have been published, completing a simple behavioral chart could provide a coach with useful knowledge about his or her own behaviors during competitions. For example, a coach could use the following chart (Figure 1) to review a videotape of himself or herself coaching and then record the amount of time spent engaged in the behaviors observed (if no audio were available with the videotape, one cannot differentiate between instruction and management; if this is the case, then it is suggested that the coach reduce the categories to simply "silent observation" and "actively coaching").

The coach should collect data for at least two or three games so that trends in behavior can be established. Then the coach would need to compute some simple mathematical percentages that would reveal how much time he or she engaged in each activity. Following this calculation, the coach could roughly determine how much time he or she devoted to each of these behaviors. This type of self-assessment can be very revealing.

Game #	Amount of time involved in instruction	Amount of time involved in management	Amount of time involved
1			
2			
3			
TOTAL			
Percentage of time observed[1]			

Figure 1 Coaching Behavior Chart

[1] Amount of time involved in each behavior / Total amount of time observed

Coaches who find that they are over-involved in their coaching (or "actively coaching" at a much higher rate than silent observation) might consequently set some behavioral goals for change. For example, a coach who finds that he or she is engaged in active coaching behaviors 75% of the time (and therefore only engaged in silent observation for 25 % of the time) could self-set a goal to be more frequently involved in silent observation. A good goal for their coach would be to reduce the next games' active coaching behaviors so that more balance is achieved. If a coach could achieve a 50-50 balance between active coaching behaviors and silent observation, then this could help improve their athletes' performances and could lead to reduced stress on the coach.

The actual process of reducing overly active coaching behavers can be difficult. Coaches would first have to believe in the value of silent observation and would need to understand the importance of allowing their players to make errors and to "play through mistakes." Self-monitoring one's own coaching behavior is a step that many expert coaches have learned to adopt. To increase silent observation and reduce overly active coaching behaviors during games, coaches might consider using the following behavioral management self- talk strategy:

- **STOP**
- **LOOK**
- **LISTEN**

While this seems very simplistic, it can be a very effective behavioral self-monitoring system to adopt. For example, when a coach feels the urge to react to a player's mistake, consider the first step: **STOP;** before saying anything that might interrupt play. It is okay to have silent thoughts. Make a mental note of your thought, have an assistant write it down and, if it is essential to correct the mistake (especially if it is an error related to attitude or effort), address it later during a time out or break in play. Then move on to **LOOK:** what other parts of the environment may have contributed the player's error? Was the player in a hurry? Was the athlete unprepared for what he or she faced (e.g., a surprise defensive trap)? Were there external distractions with which the athlete did not cope (officials, fans, parents)? Looking and silently observing is one of the most powerful behaviors that coaches can engage in (regardless of what crowds believe). Then complete the final step: **LISTEN.** Instead of interrupting the athlete or scolding them in public, listen to what is said by the athlete and others around him or her. If the athlete says nothing, then ask him or her a non-judgmental question which places the coach in a position of a listener (tip: avoid sarcastic or leading questions like, "What the heck were you thinking out there?"). One of the most important ways that coaches can show respect to their athletes is to listen to them. You will achieve so much more using STOP: LOOK: LISTEN, than you will by scolding, overreacting and over-coaching.

I have always believed that we ought to listen twice as often as we talk. We learn so much more through listening than we do through saying the first thing that comes to our mind. An important part of listening is to stop before you speak and consider how you can listen without assuming that you know what is happening with your athlete. STOP, LOOK and LISTEN was a tactic that we learned in kindergarten. Still it can be a masterful strategy to apply to our coaching so that we can help our athletes reach their dreams, maximize their play and become better self-monitors of our own coaching performance.

Readers are invited to email comments and/or questions about this article to **msheridan@tvschools.org**.

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Refereed Article

Basic Statistical Applications: A Guide for Emerging Professionals in Adapted Physical Activity

By Justin A. Haegele and Samuel R. Hodge

This paper serves as a user-friendly resource for emerging new kinesiology faculty as well as advanced-level undergraduate and graduate students who have interests in conducting, analyzing and disseminating research of high quality involving individuals with and without disabilities. The purpose of this article therefore is to provide readers with information essential to utilizing basic data analysis strategies commonly used in quantitative studies conducted in adapted physical activity.

Keywords: Data Analysis; Adapted Physical Activity; Quantitative Methods

In the quantitative research paradigm, data analysis involves the application of one or more statistical techniques which allow researchers to test a hypothesis or answer a research question (Gay, Mills, & Airasian, 2006). Emerging professionals, particularly new faculty as well as advanced-level undergraduate and graduate students who have interests in research involving individuals with disabilities, should understand basic strategies for analyzing research data. The purpose of this article is to provide readers with information essential to utilizing basic data analysis strategies commonly used in quantitative studies in adapted physical activity. Specifically, the statistical applications discussed are: (a) correlational analysis, (b) dependent and independent *t*-tests, (c) simple or single-factor analysis of variance (ANOVA) tests, (d) factorial ANOVA procedures, and (e) effect size. This paper serves as a user-friendly resource for using these strategies more completely.

Correlational Analysis

The purpose of *correlational research* is to determine whether a relationship exists between two or more variables (Fraenkel, Wallen, & Hyun, 2012). A relationship between variables means that changes in one variable are met with predictable changes in another variable (or several other variables). This is also known as *covariance* (Field, 2009). A *correlation,* or relationship, is quantified using a *coefficient of correlation* (*r*), which represents the value of the relationship between two variables (Thomas, Nelson, & Silverman 2005). The coefficient of correlation is also considered a standardization of covariance (Field, 2009). This value can range from either 0 to 1.00 or from –1.00 to 0. Values ranging from 0 to +1.00 are called positive correlations and indicate due to their association that as one variable increases the other will also increase. Conversely, values ranging from –1.00 to 0 are referred to as negative correlations, which mean that as one variable increases the other decreases. For example, Castelli, Hillman, Buck and Erwin (2007) used correlations to explore the relationship between physical fitness and academic achievement in third and fifth grade students. The study's results revealed a positive relationship between fitness testing and academic achievement scores, meaning that as fitness scores increased, so did academic achievement scores. On the other hand, body mass index (BMI) scores had an inverse relationship (or negative correlation) with academic achievement, meaning that as BMI increased, academic achievement decreased.

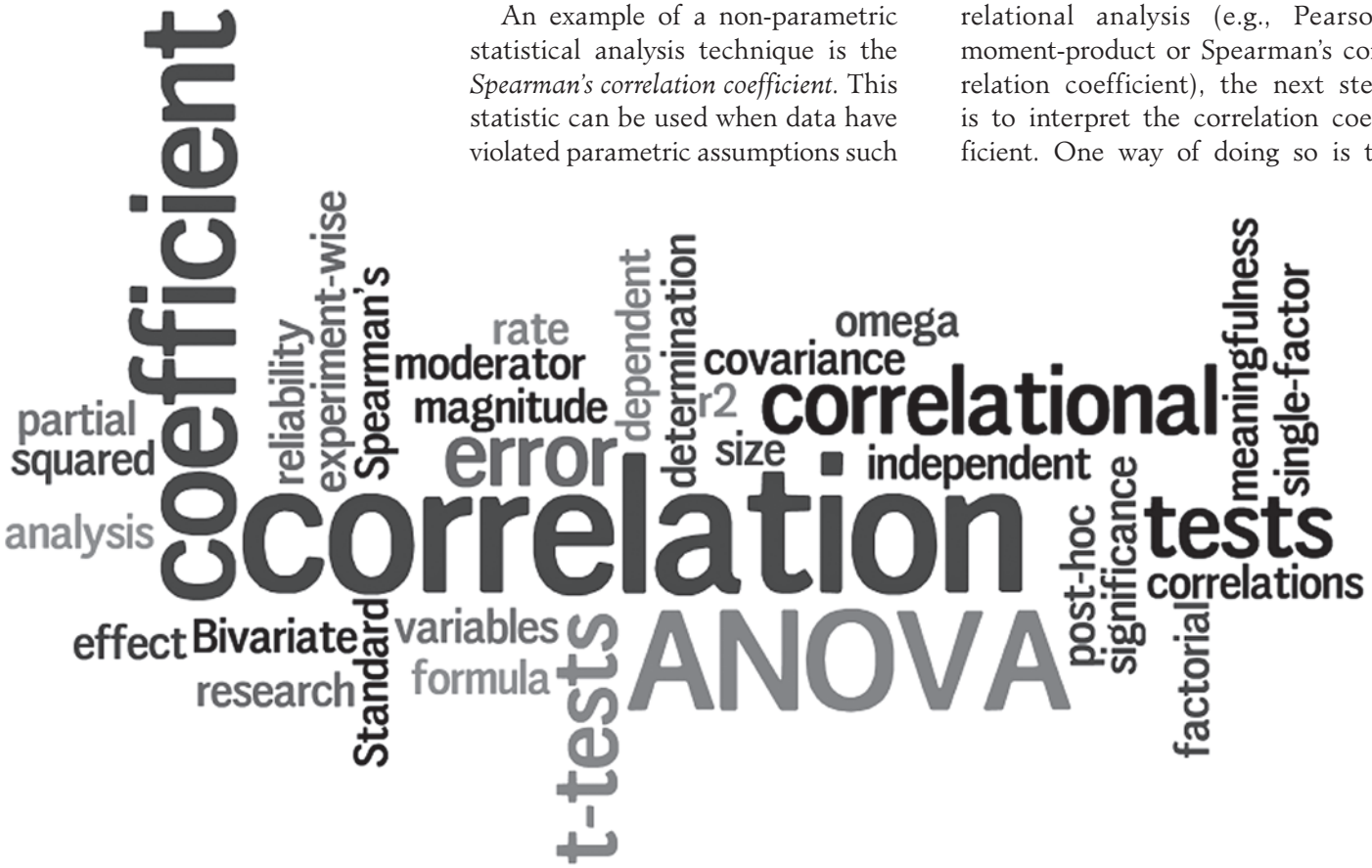
There are two main types of correlations; bivariate and partial. *Bivariate correlations* are correlations between two variables (Field, 2009). On the other hand, *partial correlations* look to determine the relationship between two variables while controlling the effects of one or more additional variables (Field, 2009). For the purposes of this article, we focus on bivariate correlations and discuss one example of a parametric correlation procedure

and one example of a non-parametric correlation procedure. Parametric techniques are those that are appropriate when the data represent either interval or ratio data of measurement and other specific assumptions are met (Fraenkel et al., 2012). When assumptions are not met, or when data are ordinal or nominal scale, non-parametric techniques are then appropriate.

While there are many different types of parametric correlation coefficients, one of the most commonly used is the Pearson Product-Moment Correlation (Fraenkel et al., 2012; Thomas et al., 2005). This correlation is appropriate when both variables are expressed in terms of interval and/or ratio data (Field, 2009; Fraenkel et al., 2012). Interval data orders scores from high to low and establishes a uniform unit within the scale so that any equal distance between two scores is of equal magnitude (Fraenkel et al., 2012). In addition to characteristics of interval data, ratio data also has an absolute zero in the scale. Pearson product-moment correlations include one criterion (or dependent variable) and one predictor variable (or independent variable; Thomas et al., 2005). For example, Hwang, Wu, Chen, Cheng, and Chen (2014) used Pearson product-moment correlation to compare sleep time with body mass index (BMI) in an effort to determine correlates of BMI and risk factors for being overweight among preschoolers with motor delays. The Pearson product-moment correlation assumes that the best way to describe a relationship is by a straight line (Fraenkel et al., 2012; Thomas et al., 2005). When this is not true, the Pearson product-moment correlation would not be the right statistical tool choice and researchers would want to consider non-parametric statistical analyses.

An example of a non-parametric statistical analysis technique is the *Spearman's correlation coefficient*. This statistic can be used when data have violated parametric assumptions such as non-normally distributed data or data of an ordinal or a nominal scale (Field, 2009). Ordinal scales are those which rank individuals in terms of the degree to which they possess a characteristic of interest, whereas nominal data classifies elements in two or more categories without reference to order or magnitude (Fraenkel et al., 2012).This statistical analysis works by first ranking data, then applying Pearson's product-moment correlation to it (Field, 2009). For example, Kozub and Oh (2004) utilized the Spearman's correlation coefficient to determine if relationships existed between bouts of moderate-to-vigorous physical activity (MVPA) and demographic variables (i.e., age, level of visual impairment) of adolescents with visual impairments. The study's results revealed age to have an inverse relationship with MVPA and level of visual impairment to not have a relationship with MVPA.

After performing the chosen correlational analysis (e.g., Pearson moment-product or Spearman's correlation coefficient), the next step is to interpret the correlation coefficient. One way of doing so is to



discuss its *reliability,* or *significance.* By discussing the significance of the coefficient, researchers are asking whether or not it represents a consistently measurable relationship. This means that if the study was repeated, the same relationship would be present (Thomas et al., 2005). The desired coefficient has to do with the degrees of freedom of the study (i.e., number of participants minus one) and the predetermined level of significance (e.g., .05, .01, .001). Most research textbooks include a table for determining significance of coefficients (Thomas et al., 2005). When a researcher uses a statistical package to analyze data, the program/software typically provides the significance level, also known as the alpha level, without the need of a table. The level of significance (i.e., alpha level) is the probability value that is used to define the very unlikely sample outcomes if the null hypothesis is true (Gravetter & Wallnau, 2004). While discussing the significance of a coefficient, there are a few things to remember. First, very low correlation coefficients can still be significant if the sample size is large enough. Second, testing at a .01 level is more stringent than testing at a .05 level (Thomas et al., 2005). When data result in a .05 significance level, researchers accept a claim as being true because they are 95% certain that the results did not occur because of chance. Testing at a .01 significance level is more stringent, because researchers must obtain 99% certainty that the results did not occur because of chance in order to accept the claim as being true.

A second way of interpreting the correlation coefficient is *magnitude.* The magnitude of the number represents the strength of the correlation. A correlation coefficient of 0.0 represents no known relationship between the two variables. On the other hand, a correlation coefficient of 1.0 (whether +/–) represents a perfectly consistent relationship between variables (Gravetter & Wallnau, 2004). If this relationship were to be represented on a scatterplot, it would include all data points organized in a straight line. Any intermediate values between one and zero represent the degree to which variables are associated with each other (Gravetter & Wallnau, 2004).

Another way of interpreting correlation coefficients is by considering the *meaningfulness* of the data. The method most commonly used to determine the meaningfulness of correlation coefficients is the *coefficient of determination* (r^2). The coefficient of determination provides the proportion of the variance of one variable that is attributed to the other variable (Thomas et al., 2005). Coefficients of determination are usually expressed as a percentage of variation rather than a number squared. This means that if $r = .90$, then $r^2 = .90^2$, which equates to a coefficient of determination of .81 or 81%. A coefficient of determination of .81 means that 81% of the variance of one variable (*X*) is associated with the other (*Y*). This equation can also show unexplained variance in variables. Considering the example above, if 81% of the variation in variable *X* is associated with variation in the variable *Y*, then 19% (1–.81) of the variation is unexplained. In their study, Kozub and Oh (2004) found participants' visual impairment level did not correlate with their MVPA participation ($r = .21$, $p = .19$). In this example, the coefficient of determination would equal r^2, or 4%, which would suggest only four percent of the participants' MVPA participation was explained by the degree of their visual impairment. On the other hand, age did correlate with MVPA participation ($r = –.75$). This statistic suggests that 56% ($r^2 = –.75^2$) of the participants' MVPA participation was correlated with their age. This was also an inverse relationship, which means that as students grew older, their MVPA participation decreased (Kozub & Oh, 2004).

It is important to keep in mind interpretations of correlation coefficients can be complicated as the decision of whether a number is acceptable or not has to do with the purpose of the study (Thomas et al., 2005). A moderately high correlation (e.g., .70) may seem acceptable for some relationships (e.g., between eating healthy and being fit), it may not be acceptable for others (e.g., inter-observer reliability). This means it is important for researchers to understand what correlation coefficient is necessary for data to be reliable and meaningful for their specific study prior to interpreting the data.

The *t*-Test (Dependent and Independent)

Correlational analysis is focused on searching for relationships between variables. However, researchers may also want to look at differences between groups of participants. The *t*-test is a set of inferential statistics that can be used to test for these differences (Field, 2009). A *t*-test is a parametric statistical technique which is used to determine if the difference between the means of two samples are significantly different at a selected probability level (Fraenkel et al., 2012; Gay et al., 2006). All *t*-tests share two statistical assumptions. First, the sampling distribution must be normally distributed. Second, data must be measured in at least the interval level.

The procedure of each type of *t*-test is similar. Two samples of data are collected and means are calculated for each sample. If the data

come from the same population, it would be expected that the means are rather similar (Gay et al., 2006). The *t*-test then compares the difference between the observed means with the difference which would be expected by chance (Fraenkel et al., 2012; Gay et al., 2006). In the *t*-test equation, the expected difference by chance is also called the standard error. *Standard error* is the standard deviation (i.e., typical distance from the mean) of sample means and is a measure of how likely a sample is to be representative of the population (Field, 2009). This statistic is a function of both sample size and group variance (Gay et al., 2006). Smaller sample sizes and greater variation are associated with greater random differences between groups, where larger sample sizes and less variation are associated with lesser random differences. The *t*-test determines whether the observed difference is sufficiently larger than the difference that is expected from chance (Gay et al., 2006). If the difference between the means of the samples which are collected is larger than what would be expected from the standard error, one can assume that either (a) there is no effect and the sample means in the population tend to fluctuate often or (b) the two samples come from different populations (Field, 2009).

After the mean differences between the samples are divided by the standard error, what remains is a *t*-value. The *t*-tests produce a value of *t*, which is checked against a statistical table by the researcher's statistical program/software to determine the level of significance obtained. Similar to correlational research, a significance level of .05[1] is typically the goal in educational research including adapted physical education and disabilities studies. If this threshold is reached, the researcher can reject the null hypothesis, supporting the research hypothesis and suggesting that a real difference is found (Fraenkel et al., 2012). When the null hypothesis is found to be false, confidence is gained that the two sample means differ because of the experimental manipulation imposed on them (Field, 2009). For example, Sullivan and Glidden (2014) utilized independent *t*-tests when evaluating changes in attitudes of college-aged individuals toward those with disabilities using unified sport. In this study, the .05 significance level was reached when testing between pre- and post-tests of the intervention group, allowing the researchers to reject the null hypothesis and support their research hypothesis that an intervention implemented in the context of a unified swimming program can result in more positive attitudes among persons without disabilities toward individuals with intellectual and/or developmental disabilities (Sullivan & Glidden, 2014).

> It is important for researchers to understand what correlation coefficient is necessary for data to be reliable and meaningful for their specific study prior to interpreting the data.

The *t*-tests come in a few varieties, each with a unique set of characteristics. While there are several types of *t*-tests, two of the more common are the *independent* t-*test* and *dependent* t-*test*. The *independent* t-*test* is the most frequently used test to determine whether two groups differ from each other (Thomas et al., 2005). This is done by determining whether the sample means of two groups differ reliably from each other. This test is used when there are two conditions and there are different participants in each condition (Field, 2009). In addition to the assumptions explained above which are shared by all *t*-tests, the independent *t*-test has two additional assumptions. The variances in the populations must be roughly equal and the scores must be independent, meaning they come from different participants (Field, 2009).

Editor's Notes

[1] When employing statistical software (e.g., SPSS), the output usually presents more specific significance levels (e.g., .025, .004). If the .05 significance level has been pre-selected, then all that matters is that the obtained *t*-test significance value is equal or beyond .05 (i.e., ≤ .05). Some researchers elect to report the specific value obtained and interpret low values (e.g., .001) as of greater importance than higher, but still significant, values (e.g., .05). This is judged to be inappropriate as a pre-selected significance level represents an "all-or-none" commitment; all that matters in accepting the research hypothesis is reaching a probability of .05 or less (see Thomas et al., 2005, for a discussion of this).

Independent *t*-tests deal with different participants involved in different conditions. Comparison scores are not different only because of experimental manipulation but also because of other sources of variance such as participant characteristics (Field, 2009). Independent *t*-tests seek out differences between overall means of the two samples and compare them to expected differences between the means of the two populations that each sample comes from (Field, 2009). For example, an independent *t*-test was used to determine differences in physical activity levels between individuals who acquired disabilities in comparison to those with congenital disabilities (Saebu & Sorensen, 2011). Saebu and Sorensen (2011) found individuals with acquired disabilities to be significantly more physically active than those with congenital disabilities.

Unlike independent *t*-tests, *dependent* t-*tests* are used when the two groups of scores are related in some manner (Thomas et al., 2005). The dependent *t*-test is also referred to as a repeated measures design and can also represent a comparison between participants who have been matched on a variable or variables related to the dependent measure in the study (called a "matched pairs design"). Repeated measures is when one group of participants is tested two times on the same variable. In this case, the researcher is interested in the change between the two tests (i.e., a pre-/post-test). Dependent *t*-tests look at differences between pairs of scores from the same participants, so individual differences between participants are not a concern. Any significant difference between the scores should reflect only the effects of experimental manipulation (Field, 2009). For example, Ahmadi, Hasan, and Hosin (2012) utilized a dependent *t*-test to determine the effects of a six week training program on balance of students with intellectual disabilities. This study found significant differences between pre- and post-training program scores in several balance items as a result of the training program (Ahmadi et al., 2012).

Simple Analysis of Variance (ANOVA)

A *simple* or *single-factor* ANOVA is a common parametric test of significance used when researchers want to find out whether there are significant differences between two or more groups (Fraenkel et al., 2012). For example, an ANOVA has been used to examine the effects of an adapted physical activity program on the physical conditioning of elderly women (Alburquerque-Sendin, Barbeio-Mariano, Brandao-Santana, Rebelatto, & Rebelatto, 2012). An ANOVA is similar to (and sometimes referred to as an extension of) an independent *t*-test that is appropriate for use with *t* multiple groups. One criterion is that the groups must represent levels of the same independent variable (Thomas et al., 2005). Other assumptions of the ANOVA include: (a) the population from which samples are drawn are normally distributed, (b) the samples are independent from one another, and (c) groups have approximately equal variances.

The concept underlying ANOVA is total variance of scores can be divided between two sources, the variance between the groups and the variance within the groups (Gay et al., 2006). Rather than create a *t* value, ANOVAs create an *F* ratio, which is then checked against a table to determine if it is statistically significant (Fraenkel et al., 2012). The *F* ratio is determined by dividing the variance between groups by the variance within groups. In this way, ANOVA calculations take into consideration both within and between group variations. In short, the ANOVA test uses all of the available information from all groups at the same time. In contrast, the *t*-test does not make use of all available information about the population from which the samples were drawn (Vincent, 1995); however, the numerator of the *t*-computation, the mean difference, is like the between group variation in ANOVA and the standard error similar to the within group variation in ANOVA. Vincent (1995) explained that in the *t*-test, "the estimate of the standard error of the difference between means is based on data from two groups only" (p. 148). However when data from three or more groups are analyzed, "information about the population from three or more samples is available that should be used in the analysis, yet *t* considers only two samples at a time" (Vincent, 1995, p. 148). Again, however, the ANOVA test uses all of the available information from all groups simultaneously.

It is assumed randomly formed groups of participants are chosen and are essentially the same at the beginning of the study (Gay et al., 2006). The ANOVA determines whether the variance between groups is different than the variance within groups by more than what would be expected from chance. If the between group variance is sufficiently larger than the within group variance, then the null hypothesis is rejected and there is support for there being differences between groups. On the other hand, if the between groups variance is not sufficiently larger than the variance within groups, the null hypothesis is not rejected and there is no support for the hypothesis.

One may ask why researchers do not simply use multiple *t*-tests to compare more than two groups. The reason for this is it would violate

an assumption concerning the established alpha level (Thomas et al., 2005). By using each group in more than one comparison, the researcher increases the chances of making a Type 1 error (Thomas et al., 2005). A Type 1 error is the rejection by the researcher of a null hypothesis that is actually true. This phenomenon is also known as increasing the *experiment-wise error rate* (Thomas et al., 2005). Experiment-wise error rate is the probability that one or more of the significance tests result in a Type 1 error. Because ANOVAs compare all of the groups at the same time, the alpha level is not affected.

While the initial ANOVA will determine whether or not there are significant differences between or among groups of means, it does not show where or whether all three groups differ from one another. To determine this, there are several follow-up tests that can be used while keeping the experiment-wise error rate down. The Scheffe, Tukey, Newman-Keuls, Duncan, and Multiple Comparison of Best (MCB) are each *post-hoc tests* that identify which pairs of groups differ from one another (Thomas et al., 2005). Another avenue to determine which groups within an ANOVA differ is by using planned comparisons, which are planned prior to the experiment (Thomas et al., 2005).

After determining whether results are significant, researchers commonly determine the meaningfulness of their results when using an ANOVA. This includes determining what percentage of the change in the groups was accounted for by the introduced treatment or independent variable (Thomas et al., 2005). The *omega squared formula* is a common way of showing the strength of relationships. This statistic takes into consideration the *F* ratio, number of groups, and total number of participants which can provide an estimate of total variance accounted for. This statistic is commonly reported with the ANOVA results in empirically based research articles.

TABLE • 1

2 x 2 Factorial ANOVA Model: Gender and Age Relative to Activity Participation

	Males	Females	Total Means
MS Aged	M = 75	M = 70	M = 72.5
HS Aged	M = 65	M = 30	M = 47.5
Total Means	M = 70	M = 50	

Note. HS Aged = High School Aged, MS Aged = Middle School Aged

Factorial ANOVA

ANOVAs and *t*-tests are used when researchers want to compare two or more levels of one independent variable. However, a *factorial ANOVA* would be used in cases where a researcher wants to test more than one independent variable (or factor). While it is possible for factorial ANOVAs to include any number of factors or levels of factors, it is uncommon to see any with more than three or four in a study's data analysis (Thomas et al., 2005). The factorial ANOVA provides a separate *F* ratio for each independent variable and each interaction (Gay et al., 2006). An interaction can be between an independent variable and one or more other variables, also called *moderator variables* (Fraenkel, et al., 2012). These variables may include treatment variables (e.g., an intervention) or participants' attributes (e.g., BMI, disability). There are several statistical assumptions that come with the factorial ANOVA. They include (a) normal distribution of dependent variable, (b) homogeneity across variance of groups, and (c) independence of scores in each group.

The simplest form of a factorial ANOVA uses two independent variables and two levels of each variable, also known as a 2 × 2 design. In this design, there are two main effects and one interaction effect (Thomas et al., 2005). A main effect in a factorial ANOVA is a test of each independent variable when the other is controlled (Thomas et al., 2005). Factorial ANOVAs are usually explained using a model, such as the one included in Table 1. In this example, Table 1 presents a hypothetical study which seeks to understand the effects of gender on the daily minutes of physical activity participation of individuals with visual impairments across middle school and high school ages. A main effect on the physical activity of participants with visual impairments across gender can be measured by comparing the means of the columns. The second main effect, for mean physical activity across age, as shown in Table 1, could be measured by comparing the means of the rows. In studies of this nature, though, the researcher's main interest is typically in the interaction effect (Thomas et al. 2005). An interaction effect occurs between two factors when the effect of one factor (e.g., gender) depends on the levels of the second factor (e.g., age).

In a 2 × 2 design, variance is divided into three parts: (a) the true variance of the first independent variable,

(b) the true variance of the second independent variable, and (c) the true variance of the interaction between the first and second independent variable. Each of these variances is then divided by error variance to determine the three *F* ratios of the ANOVA (Thomas et al., 2005). If the *F* ratio is significant for the independent variable, it shows that one group is significantly different than the other (similar to a simple ANOVA). If the *F* ratio is significant for the interaction effect, it means the change in one variable is dependent on the change in the other variable. In the example provided above, it would mean that physical activity depends on the age and gender of the participants. When *F* ratios for interaction effects are significant, they are typically followed by a post hoc comparison to determine where the differences lie, and a plot that visually displays the results (see Figure 1). Further it is uncommon to find follow-up information on main effects when interaction effects are found to be significant (Thomas et al., 2005). In our example, while overall (the main effect) activity is greater for males, this is only evident at the high school level.

Hodge and Jansma (1999) provide an example of the utilization of a factorial ANOVA to determine if the number of weeks (i.e., Weeks 1, 10, and 15) within an introductory adapted physical education course with practicum experience and the practicum experience location (i.e., off- or on- campus) significantly impacted the attitudes of physical education majors toward teaching children with disabilities. This study would be considered a 3 × 2 design, because there were two independent variables, one of which had three levels (i.e., number of weeks) and one of which has two levels (i.e., practicum experience location). In this example,

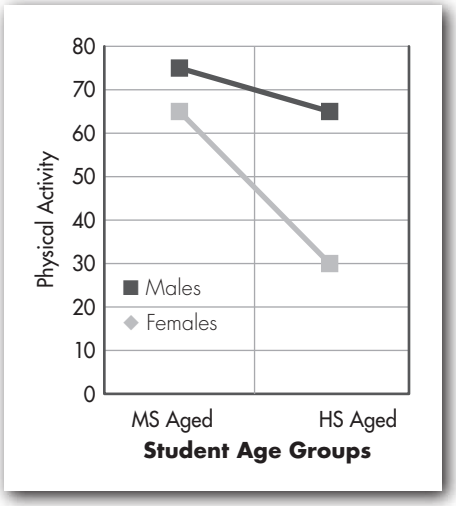


Figure 1. Graph showing data from Table 1 showing where there is an interaction between gender and age of individuals with visual impairments.

Note: MS aged = Middle School Aged, HS Aged = High School Aged.

testing across *weeks* is analyzed using a repeated measures ANOVA structure and the advantage of this structure is the participants serve as their own control. That is the total variability for repeated measures on the same groups measured repeatedly across weeks in this case is expected to be less than if the scores came from different groups (Vincent, 1995).

After determining the significance of the differences of the main and interaction effect, it is important to determine the meaningfulness of the results. This is accomplished, similar to simple ANOVAs, by conducting the omega squared statistics for each variation source in the design. The omega squared statistic represents the percentage of variance accounted for by each component of the ANOVA model (Thomas et al., 2005).

Effect Size

Effect size is a method of calculating the magnitude or meaningfulness of the difference between the means of two groups (Fraenkel et al., 2012). The term *effect size* is derived from literature on meta-analyses, but in recent years researchers have followed the growing trend of reporting effect sizes for specific treatments under investigation (Parker & Gansneder, 2005). The formula used to calculate effect size varies depending on the statistical analysis used. In the previous section of the paper, techniques for determining the meaningfulness of results were shared in the form of the omega squared formula. In addition to that formula, there are several other measures of effect size. One of the most popular effect size calculations is "Cohen's *d*" (or *Delta*). Cohen's *d* is obtained by dividing the difference between means of two groups by the standard deviation of the comparison group (Fraenkel et al., 2012). Most effect size calculations take into account the size of the difference between means regardless of its statistical significance (Fraenkel et al., 2012).

While this statistic is helpful in assessing the magnitude of a difference in means, it does not determine how large the difference must be for it to be important. The researcher must take into consideration the objective of the study. With that being said, most researchers consider .20 as a low effect size, .50 as a moderate effect size, and .80 would be considered a large effect size (Thomas et al., 2005). Effect size is being more commonly reported in research-based peer review articles and is emphasized by several prominent journals as an index that must be included by researchers including the *Adapted Physical Activity Quarterly* (Yun & Ulrich, 2002); and the *Journal of Teaching in Physical Education;* and *Exceptional Children* (McBride & Xiang, 2009). In addition to providing a measure of meaningfulness for individual studies, reporting effect

sizes allows researchers and research consumers to compare and contrast treatment results across settings, research designs, and statistical applications (McBride & Xiang, 2009). Having a standardized value to compare across studies can have beneficial implications for developing best practices. This way, research consumers can compare each study without having an expertise in each design.

Summary and Implications

It is essential for emerging professionals, particularly senior-level undergraduate and graduate students in kinesiology who have an interest in adapted physical activity, to understand the basic strategies for analyzing data in order to conduct and disseminate research of high quality in this arena. In this tutorial, we provide readers with basic information for understanding data analysis strategies used in the quantitative paradigm. This information has included key aspects of several data analysis strategies. In addition, we have provided relevant examples of the utilization of these strategies from the adapted physical activity literature. This article should help the reader better understand basic concepts and principles of analyzing data within the quantitative research methodology for the conduct of research adapted physical activity.

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Refereed Article

The Role of Youth Sport Coaches in Developing Life Skills

By Jarad S. Miller and Brad Strand

For many, the main goal of youth sport places an emphasis on winning, whereas for others, a highly desired goal is to influence the development of life skills (Cummings, Smoll, Smith & Grossbard, 2007; Meisterjahn & Dieffenbach, 2008; Strong, 1992). However, with the latter goal, coaches may have questions about the "how" of influencing the development of life skills. This paper presents a framework to evidence the relation of a learning construct for the development of life skills and youth sport. Tying Bandura's (1977) social learning theory to the influence of the coach on developing life skills provides a foundation to examine how life skills are learned in order to better influence coaches in their role. This social learning theory has three main influences on the development of life skills. The various influences of the social learning theory to development of life skills and how coaches can utilize this to their best advantage when teaching life skills to their athletes will be presented.

Key words: Life skill, Coaching, Youth sports

Sport related activities and the contexts in which they are delivered must be purpose-driven towards teaching youth knowledge that transcends the playing arena and follows them into adulthood (Harrist & Witt, 2012). Harrist and Witt took successful youth basketball coaches and utilized them as key informants to identify the desired goals of youth sports. The authors found that the coaches acknowledged three major domains of desired goals: 1) player improvement, 2) development of life skills, and 3) enjoying the playing experience.

Player improvement, in terms of skill development, can be measured (Strand & Wilson, 1993), and enjoyment of the playing experience can simply be asked or observed. But how does one know that development of life skills is occurring? One may also pursue the question of whether it is possible for youth coaches to really influence life-long skills for their athletes. The simple answer to the latter is, "Yes"; anyone can influence the development of life skills, especially a youth sports coach who spends many hours a week influencing the actions and decisions of youth (Gould & Carson, 2008; Lerner et al., 2005). In fact, research has shown that the goals of fostering life skills and the belief that coaches can influence youth athletes has been demonstrated (Gould, Collins, Lauer & Chung, 2006). However, unless a coach deliberately intends to teach these skills and follows a plan to implement and practice these skills, the development of life skills will not "just" happen.

If in fact a major intended goal is to affect youth development of life skills, it is imperative to evidence the relation of a learning construct to development of life skills in youth sport and examine how life skills are learned to better influence coaches in their role. For this paper, social learning theory will be applied to the development of life skills through youth sports participation.

Fostering Life Skills through Sport

Youth Sport Programs

Youth sport programs must be developed to further personal growth. Papacharisis, Goudas, Danish, & Theodorakis (2005) stated that coaches must emphasize the valuable skills and attitudes learned during sport participation and how youth can apply them to daily life. These skills and attitudes are called life skills (Goudas, Dermitzaki, Leondari, & Danish, 2006) and are defined as the abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life (World Health Organization, 1999). These life skills can be social/behavioral

(e.g., communicating effectively), emotional (e.g., managing stress), cognitive (e.g., making effective decision), or physical (e.g., taking the right posture) (Danish & Donohoe, 1995; Mangrulker, Whitman & Posner, 2001).

Various sport related programs such as SUPER (Sports United to Promote Education and Recreation), CHAMPS (Cooperative, Healthy, Active, Motivated and Positive Students), First Tee, and Teaching Personal and Social Responsibility have been developed with the specific intent of developing life skills through sport participation (Brunelle, Danish, & Forneris, 2007; Hellison, 2003; Weiss, 2006). Each of these programs typically include sport skill development with the addition of life skills such as goal setting, problem solving, performing under pressure, meeting expectations, teamwork, responsibility, self-confidence, and positive thinking. The interventions typically include discussions, group learning, and written worksheets. In fact, Papacharisis, Goudas, Danish and Theodorakis (2005) demonstrated that the school-based sport SUPER program resulted in greater life skill knowledge, better performance of sport skills, and higher self-beliefs for personal goal setting, problem solving, and positive thinking.

Social Learning Theory

Many of the skills that are learned in sport are easily transferable to other life domains, but how are they learned? One of the most recognized learning theories is Bandura's (1977) approach to understanding human learning though the social learning theory. The social learning theory has two profound influences on the development of life skills.

Providing Coping Methods and Skills

One of the important developmental influences is the necessity of providing children with methods or skills for coping with aspects of their social lives, including stress reduction, self-control, and decision making skills (Bandura, 1977). It is essential for coaches to include these practices into the sport environment if developing life skills is truly a central component of youth sports. A number of sports coaches may already practice this while unaware of their influence. For example, those who have participated in sports have more than likely encountered a time in that sport when they were stressed. Maybe it was the stress of making the right play (decision making) or attempting not to cry or erupt with anger and frustration in front of their teammates (self-control). It is the coach's responsibility as a model to intervene in such circumstances and reinforce methods for coping with those situations. The coach may give examples such as clasping a fist instead of letting out anger amongst teammates, or taking two deep breaths to relax the mind to remember the correct play before execution. As a coach and role model, the key determinant for developing those life skills is to be able to instill those methods so the youths can utilize them throughout life.

One such framework for developing life skills through sport and physical activity is known as Positive Youth Development (PYD). PYD is a strength-based approach to child development based on the assumption that all youth have the potential for positive developmental change (Lerner, Brown & Kier, 2005) and typically includes the Five Cs of competence, confidence, character, connection, and caring (Eccles & Gootman, 2002; Jones, Dunn, Holt, Sullivan, & Bloom, 2011). Holt and Neely (2011) reported that various frameworks of PYD have been adopted with varying degrees of success. They report that some of the key issues that require consideration are the roles of coaches, parents, and peers in creating a social context in sport settings that provides ideal conditions for the promotion of PYD. Weiss and Wiese-Bjornstal (2009) concluded that an essential part of promoting positive youth development through physical activity is to have supportive relationships with adults and peers along with opportunities to learn, social, emotional, and behavioral life skills.

Replication of Natural Processes

Bandura (1977) proposed that the second profound social learning theory influence on the development of life skills is that to be effective, teaching life skills needs to replicate the natural processes by which children learn behavior (modeling, observation, and social interaction). Most of the behaviors that people display are learned, either deliberately or inadvertently, through the influence of example (Bandura, 1977). There may be no better example of learning through observation than Bandura, Ross and Ross's (1961), "Transmission of Aggression through Imitation of Aggressive Models" study. This study clearly demonstrated that children learn and imitate behaviors they have observed in other people. The children observed an adult acting violently toward a doll, and when the children were later allowed to play with the doll, they began to imitate the aggressive actions they had previously observed. Children do not only learn by being rewarded or punished themselves, but also by watching somebody be rewarded or punished. Undoubtedly, there are times in a coach's career where aggression and frustration may get the better of them. It must always be remembered that the athletes will observe the coach's behavior and imitate those actions. Even if the coach's action is not directly targeted at an individual,

an action as simple as throwing a hat or handbook on the floor can be viewed as an aggressive behavior that the child may believe is okay. Positive actions and behaviors should always be modeled and reinforced.

Conversely, at the heart of this paper, coaches must also be aware that children's behavior and ability to acquire positive life skills are also directly reinforced, or modified, by the consequences of their actions and the responses to their behaviors (Bandura, 1997). The coach's ability to express or control their own emotions is important in sport, but one aspect that is rarely ever discussed in a sport context is the coach's ability to also understand, interpret, and respond to the emotions of others. Further discussion of emotions will be addressed via two areas: emotional intelligence and self-efficacy.

Emotional Intelligence Psychologists Salovey and Mayer (1990) referred to this ability as emotional intelligence. Emotional intelligence deals with the accuracy in which individuals perceive emotions, the ability to reason with emotions, and the ability to understand emotion and the ability to manage emotions (Salovey & Mayer, 1990). Because children learn by observation, coaches must be aware of how they express their emotions and how to understand and respond to the emotions of their athletes. Coaches have the unique opportunity to influence the feelings of others to enhance others' moods and even motivate others charismatically. Instead of aggressive action or punishment for fault, coaches must better understand the emotions of their athletes and respond in a more appropriate manner. For example, what coaches can do is better understand the emotions of others and be supportive in their responses with positive reinforcement. In teaching life skills, coaches can provide a reinforcement (e.g., behavior specific praise) following the learner's completion of the desired skill/behavior in order to 'strengthen' that skill/behavior.

Chan and Mallett (2011) stated that for a coach or leader, low emotional intelligence might contribute to poor interpersonal skills and the inability to develop a trustworthy and inspiring relationship with their athletes. O'Neil (2011) supports this premise stating that, "Coaches that do not have strong relationships with their athletes will be less effective in motivating and encouraging their best performances" (p. 329). Hence, emotional intelligence seems invaluable for the high-performance coach as it contributes to effective leadership (Humphrey, 2002) and generates positive boosts (Chan & Mallett, 2011).

Self-Efficacy One of the final proposals of the social learning theory is that self-efficacy, the confidence in one's ability to perform appropriate behaviors, is important to learning and maintaining behaviors, especially in the face of social pressure to behave differently (Bandura, 1977). A mindset is a mental attitude that determines how you will interpret and respond to situations (**http://wordnetweb.princeton.edu/perl/webwn?s=mindset**). An optimal mindset to instill in athletes at a young age is best portrayed in the famous 1930's children's book The Little Engine that Could. That "I think I can, I think I can, I think I can" attitude should consistently be reinforced. Dweck (2006) described two mindsets: one, a fixed mindset in which intelligence is a fixed trait, and second, a growth mindset in with intelligence is a quality that can be changed and developed. A growth mindset believes that putting a lot of effort into learning and working hard is a key to success and that one must capitalize on mistakes and confront deficiencies.

A question one might ask is where do mindsets come from? In many cases the words that teachers or coaches use with their students or athletes tells them what their teachers and coaches believe and value. Dweck (2006) has shown that when teachers praised students for their intelligence they selected easier tasks when given a choice and lied about their scores in an effort to look "smart." Conversely, students who were praised for effort chose more challenging tasks and showed higher levels of. engagement and achievement.

All coaches should strive to instill in their athletes a growth mindset and a positive attitude of being able to cope with adversity and to see themselves as capable with the ability to persevere through adversity. To foster these traits one needs to praise effort, struggle, and select difficult tasks and learn, improve, and persist in the face of setbacks (Dweck, 2006). Within sport, youth athletes can learn adaptive ways of competing and cooperating with others and learn from success and failure as this is a time when children form many important attitudes about achievement, authority, and persistence in the face of adversity (Smith & Smoll, 1997). Self-efficacy beliefs provide children with the foundation for motivation, well-being, and personal accomplishment in all areas of life (Pajares, 2005). Unless children believe that their actions will produce the results they desire, they have little incentive to act or to persevere in the face of difficulties that inevitably ensue (Pajares, 2005). Camire and Trudel (2013) found that high school sports can facilitate positive development of athletes. However, to do so,

coaches must continually implement strategies that help athlete's maintain motivation.

Coach Training Youth sport coaches should take advantage of their opportunities to instill self-efficacy beliefs upon children and use their sport programs as a platform for this effort. However, without leadership training it is unlikely that life skills will be taught in any systematic way (Petitpas, Cornelius, Van Raalte, & Jones, 2005). Work by Falcão, Bloom and Gilbert (2012) revealed that a coach training program designed to promote youth development outcomes was received positively by coaches and resulted in an increase in knowledge and understanding of their players.

Similarily, Camiré, Forneris, Trudel and Bernard (2011) provided a number of strategies that exceptional coaches implemented in their coaching practice to promote positive development. Strategies included: 1) carefully develop your coaching philosophy, 2) develop meaningful relationships with athletes, 3) intentionally plan developmental strategies in your coaching practice, 4) do not just talk about life skills, make your athletes practice life skills, and 5) teach your athletes how life skills transfer to non-sport settings. Strand (2013) described a coaching practice in which the team rules that a youth baseball team adopted were used to teach character and citizenship by helping the athletes understand and practice the team rules on the field, in their classrooms, with their family, and in their communities.

Conclusion

The theoretical constructs above provide a guide for what coaches should be aware when teaching children life skills in sport. As stated previously, if one of the main goals is to develop positive behavioral life skills in sport than these are a few examples of how that transpires through a learning model. Using Bandura's (1977) theory based approach as a guide will not only provide coaches with better awareness and understanding of how their athletes will learn life skills, but will also call attention for increased awareness of their own actions and behavior and how coaches can positively influence their athlete's development of life skills.

This paper presented the various applications of the social learning theory to the development of life skills and how coaches can utilize this to their best advantage when teaching life skills to their athletes. Attention has also been directed to the implementation of life skills programs in a sport context (Papacharisis et al. 2005) by creating ways for coaches of sport programs to be proactive and help their athletes gain knowledge about life skills. Programs such as "CHAMPS" and "SUPER" provide a foundation for how to implement a life skills program into a sport context, which researchers have identified as very encouraging with respective results seen in both programs for positive development of life skills (Papacharisis et al. 2005).

Youth sports coaches may want to take this a step further and look for ways of analyzing the development of life skills in their sport setting through the use of either the social learning model or at least some of the various aspects of the social learning model represented in other life skills measurements. This may involve analyzing both coaches and athletes. In fact, Vierimaa, Erickson, Côté, and Gilbert (2012) have presented a method for measuring the development of life skills by observing and analyzing coaches. Their measurement tool is comprised of existing instruments and techniques that have previously been used and validated. The group of questionnaires in their tool combines to measure the 4Cs (competence, confidence, connection, character) of positive youth development.

Youth sport must be about more than just winning and losing! It must

also focus on helping young children become adults who display the values of character, integrity, and honesty, to name a few. It is our belief that the implementation of life skills that are taught, reinforced, and modeled throughout practices and games will impact youngsters in a positive fashion long after they leave the playing fields.

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GRANT $ AVAILABLE!

Research grant monies are available to the OAHPERD membership. Each year, $3,000 is available for member use. Applications for research grants may be obtained by contacting Garry Bowyer, Chair of the Research and Grants Committee. Grants must be submitted to Garry by September 15 of the year. Don't let this OAHPERD membership service pass you by. Start thinking about and writing your research grants now!

Contact: Garry Bowyer
4805 Kilkerry Drive
Middletown, OH 45042
bowyerg@muohio.edu

OAHPERD Pays Substitutes

OAHPERD will pay for substitutes so that Board members may attend required meetings during the year. In order to take advantage of this offer, send the following to the OAHPERD Executive Director:

1. A letter from the school administrator stating that the school district will not pay for professional release days.
2. An invoice from the school district indicating the correct amount to be remitted.
3. A completed OAHPERD Voucher (vouchers can be obtained from the Executive Director or OAHPERD Treasurer).

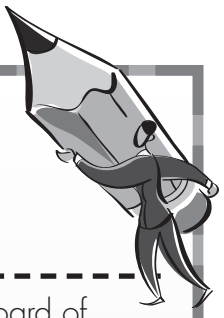
OAHPERD will send a check directly to the school district. We hope that this will encourage a better rate of participation by our officers in OAHPERD matters.

Letters, invoices, and vouchers should be mailed to the OAHPERD Executive Director:

Karen Holt
OAHPERD Executive Director
17 South High Street, Suite 200
Columbus, OH 43215 P: 614-228-4715
E: karen@assnoffices.com F: 614-221-1989

OAHPERD

Student Writing Award



Each year the Editorial Board of OAHPERD considers *Future Focus* articles submitted by graduate and undergraduate students for annual OAHPERD Student Writing Awards. Each award consists of a check for $100 and a waiver of membership dues for the year. An award may be given to one undergraduate student and one graduate student each year, but only if submitted articles meet the criteria listed here.

1. Submitted articles must meet *Future Focus* standards of quality.
2. Submitted articles should follow *Future Focus* guidelines for authors.
3. Articles may be on any subject related to the concerns of Health, Physical Education, Recreation, and Dance.
4. Only single-author articles will be considered.
5. At the time of submission, the author of the submitted article must be a member of OAHPERD.
6. Articles considered for the award must not have been previously published and must not be concurrently submitted for publication elsewhere.
7. Articles must be submitted on or before July 31 to be considered for an award to be given at the following December's convention.

OAHPERD Scholar

The Ohio Association for Health, Physical Education, Recreation, and Dance is accepting credentials from all candidates who qualify for the "OAHPERD Scholar" award. The OAHPERD Scholar designation will recognize OAHPERD's research leaders by honoring their achievement in HPERD-related scholarship disseminated through OAHPERD. The OAHPERD Scholar designation is intended to (a) be one of distinction within OAHPERD and Scholars' own academic communities, and (b) encourage high standards of research and other forms of scholarship among OAHPERD's members.

There is no voting process associated with this scholarly recognition; there is simply a qualification process. Members qualify as OAHPERD scholars upon attaining a certain scholarly record. **Minimum criteria** (both A & B below) must be met:

A. Publications: All OAHPERD Scholars must have published at least 5 refereed articles in the OAHPERD journal, *Future Focus*.

B. Presentations: All OAHPERD Scholars must have made 5 presentations at the annual OAHPERD convention.

Announcement of newly recognized OAHPERD Scholars will take place at the annual OAHPERD awards ceremonies.

Credentials/Materials Required:

1. List Name, Rank and/or Title, Professional Affiliation, Research Areas/ Interests, Address, Phone and Fax Numbers, and e-mail address.
2. List publications in APA format and attach a copy of the *Future Focus* "Table of Contents" page for each publication.
3. List presentations in APA format and, if available, attach a copy of the OAHPERD Convention Program page containing name and presentation title for each presentation.
4. Mail all materials to the current *Future Focus* Editor no later than **October 1** of the application year.

Current *Future Focus* Editor:
Robert Stadulis, College of Education, Health & Human Services, Kent State Univ., Kent, OH 44242

Membership Form
(Effective Date 2014–2015)

Online Membership Registration is available at **www.ohahperd.org**

❑ New Member ❑ Renewal OAHPERD Member (_____ Years)

Company Name (For Corporate Membership only)

Last Name (or "Referred by" OAHPERD Member—Corp. Mbrship only)

First Name (or Contact Person for Corporate Membership)

Preferred Mailing Address

City

State Zip

( ) ( )
Home Telephone Work Telephone

School/Agency/College

Levels (K–6, 7–9, etc.)

Position

E-mail Address

Corporate Website

❑ Scholarship Gift $_____ ❑ Memorial Gift $_____

Make Check Payable To: **OAHPERD**

Mail To: OAHPERD,
17 South High St., Ste. 200, Columbus, OH 43215

Questions? Call **614-221-1900** or **OAHPERD@AssnOffices.com**

Professional Interest
Rank from (1–3)

_____ Adult Development
_____ Dance
_____ Health
_____ Higher Education
_____ Physical Education
_____ Recreation
_____ Sports Sciences
_____ Student Division

Payment

❑ Personal Check
❑ O.E.A. Payroll Deduction
❑ American Heart Association
❑ Honorary Life Member

Membership Type

❑ **1 Year CORPORATE**	$550
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❑ 1 Year Professional	$50
❑ 2 Year Professional	$95
❑ 3 Year Professional	$140
❑ 1 Year Student	$25
❑ 1 Year Sr. Student	$40*
❑ 1 Year Institution Student	$20**
❑ 1 Year Institution	$200
❑ 1 Year Retired	$25

**Senior student two-year membership option includes one year professional membership*

***Students—receive a $5 discount if your institution is a member of OAHPERD. Please verify membership before mailing reduced fee.*

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Signature: _____

❑ Send information on OAHPERD services for ethnic minorities, individuals with disabilities and women. (Checking this box is strictly voluntary)

Guidelines for Authors

Manuscripts

Each manuscript should be formatted for 8½ by 11-inch paper, with 1-inch margins on all sides, using **Microsoft Word for PC, Times-Roman style and 12 point font.** All copy must be double-spaced except direct quotations of three or more lines, which are to be single-spaced and indented. Style should conform to the American Psychological Association's (APA) *Style Manuals* (either 5th or 6th Editions). Manuscripts can be up to 25 pages in length, including references. Pages must be numbered consecutively with a running head.

Organization

Provide an abstract, short introduction, body, and short conclusion to your manuscript. Research articles should use the standard format: Introduction/Review of Literature (can be integrated within the Introduction), Methods, Results, and Discussion-Conclusions. Authors should provide subheads and tertiary heads throughout the manuscript for easy readability and organization. The author's name or related information should not appear on any manuscript pages.

Cover Sheet

On a cover sheet, please provide the following:

- Title of manuscript.
- The name, position, mailing address, telephone number, and email address for all authors.
- Short biography of about 30–35 words that states the present professional position, area(s) of specialization, and research interests **for all authors.**
- Date of submission.

The cover sheet will not be included when sent to reviewers as manuscripts are blind reviewed.

References

All articles should contain references. For writing text citations, follow APA style. Note that references should now include a *DOI* notation (if using the 6th Edition). Reference section listings should be recent, brief, and presented in alphabetical order. Each reference cited in the article must be listed, and only those cited should be included. Sources should be documented in the body copy by inserting the surname of the author(s) and the date of the published work inside parentheses directly following the reference.

Illustrations and Photos

Future Focus welcomes any photographs, tables, charts, diagrams, and art as illustrations for your manuscript. Each graphic should be numbered and referenced in the manuscript. Extensive statistical information should be reported in tables, but data included in the tables should not be duplicated in the text. Captions and sources for data presented in the graphic should be included in the manuscript. Photographs may be black and white or color, and should be **hi-res digital photos in jpeg format** (300 dpi or ~1800 × 1200 pixels are preferred). Photos embedded within the text of the manuscript must also be supplied as separate files.

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Reviewing and Editing

Each article is reviewed by the editor and submitted for blind review to three or more Editorial Board members. Articles usually require some revisions by the author(s). Authors for articles not accepted may be invited to revise and resubmit. Accepted articles are subject to editorial changes to: improve clarity, conform to style, correct spelling and grammar, and fit the space allotted to the article. **Manuscript submission implies author acceptance of this agreement.**

Deadlines

Manuscripts are reviewed on a rolling basis when received. To be eligable to appear in the Fall/Winter issue of *Future Focus,* the manuscript should be received by July 31. Manuscript deadline for the Spring/Summer issue is Jan. 31. An electronic version of the manuscript is required and should be sent, along with illustrations and/or photos, as an email attachment to the editor at **futurefocus.res@gmail.com.** Non-electronic inquiries can be sent to:

Robert Stadulis, *Future Focus* Editor
Exercise Science & Sport Studies
College of Education, Health & Human Services
Kent State University
Kent, OH 44242

Articles for *Newsline,* OAHPERD's newsletter, should be submitted by December 15 for the Spring issue and by June 15 for the Fall issue. Address all *Newsline* articles to:

Karen Holt
Executive Director, OAHPERD
Email: Karen@assnoffices.com
or
17 South High St., Ste. 200
Columbus, OH 43215

Ohio Association for Health, Physical Education, Recreation and Dance

Karen Holt, Executive Director
17 South High St., Ste. 200
Columbus, OH 43215

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