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IN THIS ISSUE

REFEREED PAPERS

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LAHPERD Journal

FALL 2016

VOLUME 80 | NUMBER 1

REFEREED PAPERS

- Participation Styles of Senior Adults in Fitness Classes 1
YuChun Chen, Louisiana Tech University
- Healthier Schools: Improving Indoor Air Quality and Environmental Health 10
Corinne Cormier and Millie Naquin, Southeastern Louisiana University
- Reconsidering Gender Differences in Hip Muscle Activation throughout a One-mile Run 14
Abby Reynolds, Katie Lyman, Bryan Christensen, and Adam Marx, North Dakota State University
Thomas Hanson, Minnesota State University Moorhead
- Opportunity vs. Obligation: How to Help Prevent Athlete Burnout 19
Brad Strand and Noah Couser, North Dakota State University
- An Investigation into the Relationship among Stress, Sleep, and Academic Performance in
College Athletes 22
Max Whitsell and Millie Naquin, Southeastern Louisiana University

SOUTHERN DISTRICT CONFERENCE INFO

- SHAPE America Southern District Conference Highlights..... 27
Charity Bryan, President

ADS

AWARDS' CRITERIA

JOURNAL SUBMISSION GUIDELINES

MINI-GRANT APPLICATION

Help us name the LAHPERD Journal!

To make the Journal more recognizable in the HPERD disciplines, we are seeking suggestions to rename it. The new title should be concise and include keywords that are inclusive of the HPERD disciplines.

Do you have any suggestions? Please email them to ddenson@mcneese.edu. We value your input!

REFEREED PAPERS

PARTICIPATION STYLES OF SENIOR ADULTS IN FITNESS CLASSES

YuChun Chen
Louisiana Tech University

Abstract

Previous research has described the participation styles of children, youth and young adults in the settings of school physical education, free-gym sessions, university exercise classes, summer camps and out-of-school organized sports. This study described the participation styles of women and men enrolled in an adult fitness program that offered floor/chair exercise, water aerobics and bowling classes. Primary participants were 90 female and 37 male senior adults (SAs) who regularly attended a ten-week fitness program. Secondary participants were three course instructors and eight practicum undergraduate students who served as co-instructors. Data were collected through nonparticipant observation, informal discussions, unstructured questionnaires, one focus group interview, and entrance surveys. Data analyzed using the standard interpretive methods revealed six participation styles. The *sticklers*, *adapters* and *enthusiasts* were the physically active groups who treasured the time spent with the instructors and would do all the exercises to the best of their abilities. The *busybodies* and *chatterboxes*, on the other hand, took the full advantage on the social aspect of the program that they enjoyed socializing with other SAs just as much as, or even more than, performing the exercises in class. The *freestylers* used the class as the time of the day for being physically active with minimal interactions with the instructors and other SAs. Details of each participation style were discussed.

Keywords: participation styles, senior adults, fitness, physically active, social benefit

Over the past three decades, several attempts have been made to examine participation styles of

different age groups in a variety of physical activity settings. Griffin (1984) started this line of research in a mixed-gender middle school physical education, where she identified six participation styles among the girls. *Athletes* were highly skilled girls who played competitively and vigorously during the game, even with their male counterparts. *JV players* were slightly less skilled and motivated than the athletes but appeared to enjoy the activities most of the time. *Cheerleaders*, who accepted their low-skilled status, did not mind giving up their playing time and had a blast on the sideline cheering for their teammates. *Femme fatales'* priority was to get the attention of the boys from their physical appearance, so they showed little interests in physical education even though some of them had the skills to engage in the activities and games. With the intention to avoid visibility in physical education, *lost souls* kept a low profile and rarely spoke to anybody in class whereas *system beaters* always had legitimate reasons to be excused from participating in class.

The male version of athletes, according to Griffin (1985), was *machos* with the exception of an arrogant attitude toward their peers during activities. *Junior machos* acted very similarly as the machos. The three differences between the two were the junior machos being physically smaller, less skilled and one level lower in the social status than the machos. *Nice guys* were well-skilled boys who cared about the feelings of others in class and often included girls and lower-skilled boys in the activities and games. The last two styles among the boys were *invisible players* who had the skills to “be involved in games without really participating” (p. 105) and *wimps* who dressed and acted differently in an obvious way that made them a target to get picked on, unfortunately, both by their peers and teachers.

When the setting switched to more of a student-centered social environment, Pope and O’Sullivan (2003) discovered “Darwinism” among a group of high school students in free-gym sessions where they learned how to “survive or thrive in this ecology” (p. 316). While *bullies* occupied the space with their show-offs and trash-talks, *contestants* were there to play serious games and could care less

about the surroundings. *Jousters* were low-skilled boys whose intension was to disrupt gameplay and pick on others for their own entertainment. Also having limited skills and opportunities to play, *benchies* would sit quietly on the side but often spent the entire lunch hour waiting for their turns to play. *Posers* and *venerators* were boys and girls who were confident with their physical appearance and would come into the gym to be seen. Finally, there were *hangers* who showed up with no particular reasons and used the gym as a place to socialize or read a book.

In addition to the examination of adolescents in secondary school settings, there were scholars who were interested in the participation styles of young adults in university-level exercise classes. In Bain's (1985) "Fitness and Weight Control" course, there were *serious runners* and *serious walkers* who were self-motivated and took full advantage of the class engaging in the activities the best way they could. *Social interactors* and *absentees*, on the other hand, were students who either perceived the class as a time for social interactions or failed to attend the class regularly and consequently dropped the class at the end. Similar to the way Bain (1985) divided the serious and casual groups, Bennett (2000) categorized the Generation X (Coupland, 1991) in two "Weight Training" classes into the *sweatin'* and *slackin'* participation styles, with *ex-athletes* and *sidekicks* in the former category and *socializers*, *manipulators*, *underachievers*, and *minimalists* in the latter.

More recently, two studies extended the literature beyond the boundaries of traditional pedagogy. Using adventure education over week-long summer camps, Zmudy, Curtner-Smith, and Steffen (2009) found *go-getters* and *explorers* who were both skillful and adventurous with the exception that the former group sometimes did things to attract attention of others. *Limelight seekers* and *fear conquerors* would participate in activities and normally reacted to situations dramatically, but the latter required a lot more encouragement and motivation to attempt a task. *Chickens*, *light hikers* and *ground supporters* appeared to be nervous about the activities due to a lack of skills and self-confidence or generally were

not interested in the challenges. Lastly, there were *rough housers* and *mini-rough housers* who enjoyed horseplay more than the adventurous activities most of the time.

Another recent research on participation styles was conducted on children in an out-of-school soccer league (Neels & Curtner-Smith, 2012). Among those aged from 8 to 12 years, *MVPs* were well-skilled "self-starters" who listened to instructions carefully, always followed directions, and demonstrated competence in skills and strategies during gameplay. *Ball hogs* were well-skilled and competitive boys who, unlike the MVPs, failed to include others during practice and gameplay. *Chest thumpers* were less skilled but just as competitive as the two previously mentioned groups. They became frustrated with their teammates very easily, especially when the teammates' performance did not meet up with their own expectations. Rather than keeping to themselves and being satisfied in the back like the *pawns*, *overreactors* would look totally dejected or become emotionally victorious in response to how their team performed on the field. There were also *free spirits* and *entertainers* who could care less about learning soccer skills, yet seemed to be quite joyful being out there.

Up-to-date research on participation styles has been done with children, youth and young adults in school physical education, free-gym sessions, university exercise classes, summer camps, and out-of-school organized sports. There is a missing puzzle piece in regard to the older generation. Therefore, the purpose of the present study was to describe the participation styles of women and men enrolled in one adult fitness program.

Methods

Participants

The primary participants in this study were 90 female (70.9%) and 37 male (29.1%) senior adults (SAs) who regularly attended one adult fitness program at a university in the southeastern region of the United States in the winter of 2013-14. The age of the SAs ranged from 50 to 94 years, and the

mean was 69.85 years ($SD = 9.078$). One hundred and ten of the SAs were Caucasian (86.6%), 16 were African American (12.6%), and one was Asian (0.8%). At the time of the data being collected, 91 of the SAs were married (71.7%), 10 were divorced (7.9%), 22 were widowed (17.3%), and four were never married (3.1%). In addition, 23 of the SAs had been enrolled in the adult fitness program for more than 15 years (18.1%), 13 for 10-15 years (10.2%), 29 for 5-10 years (22.8%), and 62 for less than 5 years (48.8%).

The secondary participants in the study included three course instructors and eight co-instructors. All three course instructors were full-time faculty members in the department that offered the adult fitness program. Patrice¹ and Frances, Caucasian females in their mid-50s and late-40s, had taught adult fitness and health-related courses in the department for 12 and 11 years, respectively. Maria, a Hispanic female in her early-40s, had taught health-related and personal training courses in the same department for six years and had four years of teaching experience in the adult fitness program. The eight co-instructors were four Caucasian female, three Caucasian male and one African American male undergraduate seniors enrolled in the practicum course, which was required in the health promotion degree program at the department.

Setting

The adult fitness program offered three chair/floor exercise classes at 7, 8 and 9, two water aerobics classes at 7 and 8, one bowling class at 8 a.m. on Monday, Wednesday, and Friday mornings, and one after 5 p.m. fitness class on Monday, Tuesday, and Thursday afternoons for a total of 10 weeks in the winter of 2013-14. Frances was responsible for the 45-minute chair/floor exercise and after 5 p.m. fitness classes, while Patrice and Maria were in charge of the hour-long water aerobics and bowling classes, respectively. For the first 2 weeks, the course instructors led the classes while the co-instructors learned the exercises, routines and expectations on the side. From the third week on, the co-instructors took the lead and taught the rest of the classes with the assistance and supervision of the course instructors. This study was

approved by the university institutional review board. All participants read and signed the consent forms in congruence with the policies on human subjects in research.

Data Collection

Four qualitative techniques and one quantitative technique were used to collect data for this study. The primary data source was the extensive field notes taken from *non-participant observation*. The researcher rotated between the chair/floor exercise and the water aerobics classes at 7 a.m., switched between the water aerobics and the bowling classes at 8 a.m., and observed the after 5 p.m. fitness class on Tuesdays and Thursdays while a trained research assistant observed the chair/floor exercise classes at 8 a.m. and 9 a.m. twice a week. Throughout the course of the study, *informal discussions* with the instructors, co-instructors, and SAs were carried out before and/or after classes. Conversations in regard to the performance, behavior and perceptions of the SAs toward the program were recorded as soon after the end of each discussion as possible. Toward the end of the 10 weeks, each co-instructor was provided with an *unstructured questionnaire* as a formal venue to indicate their perceptions on the SAs' participation styles. Follow-up questions with individual co-instructor were carried out through email correspondence. Moreover, a semi-structured *focus group interview* (Patton, 1990) with the course instructors was conducted at the end of the program. The interview was audio recorded and transcribed verbatim. The questionnaire and the formal interview focused on establishing a consensus between the observers (i.e., researcher and research assistant) and the instructors (i.e., course instructors and co-instructors) on the emerging participation styles as well as the descriptions of each style. The course instructors were also asked to identify each SA's participation style during the formal interview. Lastly, the researcher was granted the access to the entrance surveys that the SAs filled out when they signed up for the program. The purpose of this *document analysis* was to identify the demographics of the primary participants in the present study.

Data Analysis

Qualitative data were analyzed using the standard interpretive methods of analytic induction and constant comparison in three phases (Goetz & LeCompte, 1984). First, the field notes, discussion records, questionnaire responses and interview transcript were carefully read by the researcher. During phase two of the analysis procedure, data revealing the performance and behavior of the SAs were coded and categorized into different participation styles. For the third and last phase, relatively small codes and categories were collapsed into overarching themes, during which the six participation styles were finalized. Credibility and trustworthiness of the styles were secured through the use of triangulation, a thorough search for negative and discrepant cases (Goetz & LeCompte, 1984) and member checking. For quantitative data, each SA's gender, age, ethnicity, marital status and years in the program were entered and analyzed using the SPSS software. Descriptive statistics, including minimum, maximum, mean, standard deviation and frequencies, were generated to present the distributions of each characteristic.

Findings

Unlike previous research conducted in the settings that heavily focused on the skill development of the participants (Griffin, 1984, 1985; Neels & Curtner-Smith, 2012), the design of the adult fitness program was, first, to help SAs improve and maintain their abilities to perform functional activities of daily living such as walking, reaching up, and balancing. Using different equipment such as dumbbells, medicine balls, stability trainers, kickboards, and aquatic barbells, and noodles, the instructors in the chair/floor exercise, water aerobics, and after 5 p.m. fitness classes physically demonstrated each exercise with verbal prompts. Enrichment and remediation were also implemented to present different levels of intensity. In every class, upbeat music was always played in the background. One instructor, Frances, stated that several SAs' doctors told them to "keep doing what they're doing because either their bone density has improved or their blood pressure is

better" when they went in to get their medical forms signed. Gail who had attended the program for 8 years claimed:

I don't have the arthritis I used to have. The water is great, you know, the resistance. I didn't know how my upper strength was until I worked on the ceiling. I thought I was gonna be sore the next day but I didn't. We are in charge of our health. You either use them or lose them, right?

Just as important as the physical benefit, the social aspect was another selling point of the program. The classes provided the SAs with the opportunities to meet new people and make friends, especially for those who looked for companionship. A lot of the SAs spent time outside of class; they invited each other over for meals, sent each other Christmas cards, and babysat each other's grandchildren. The program played a major role in their lives as several former SAs had mentioned it in their obituaries, and the course instructors had given eulogies at their funerals. The social aspect was so strong that the instructors believed that teaching skills and correcting forms were not a top priority on their job description. Two of the instructors, for example, indicated:

I've been teaching the bowling class for the past four years. For the first two years, I tried to correct their approach and release, but I realized that one of them has knee problem so she does not approach. Things like that, they have [physical] limitations, but it [i.e., the incorrect form] works. Like Mrs. Elda, she has the highest score [i.e., 204 points] even though her form isn't correct or as pretty. (Focus group interview, February 20, 2014)

As much as this class is about staying active, it is the social aspect that keeps them coming back. If you take away the social aspect, you may lose a majority of the people and that would only hurt the program itself. (Unstructured questionnaire, February 17, 2014)

Based on the performance and behavior of the SAs, their attitude toward the physical activities, and their interactions with others, six participation

styles were identified: *sticklers*, *adapters*, *enthusiasts*, *busybodies*, *chatterboxes*, and *freestylers*.

Sticklers

The sticklers were 38 female and eight male SAs who came to class on time, followed instructions exactly as demonstrated, made sure of doing all exercises correctly, and left the class soon after it was over. They were able to keep up with the momentum and the speed that the instructors were leading. They were such good followers that Patrice jokingly commented that “if you scratch your nose, they’ll scratch their nose with you” (Focus group interview, February 20, 2014). Those highly motivated SAs paid great attention to details and valued the physical benefits more than anyone else in the program. Getting a hard workout in appeared to be the mission for the day.

Lidia comes in three minutes before the class starts. She quickly walks a lap around the gym and goes to her normal spot. She does every single exercise on the beat; high kicks, hard punches and deep lunges to name a few. When the class is over, she is all sweaty from the hard workout she just accomplished. (Field notes, December 13, 2013)

The sticklers were normally in the front row and stayed focused throughout the class. They hardly interacted with anybody during class period. They knew the exercises and routines so well that they could teach the class themselves. Since they knew the materials so well, the sticklers were more critical to the co-instructors than other SAs of different participation styles. The following data extracts illustrate the sticklers’ interactions with others and the constructive criticism toward the co-instructors.

Amber is doing the exercises like she always does. Greg comes in late, slowly moves next to her and starts talking to her. She looks and smiles at him once in a while, but is not really paying attention on him. Judy, who stands in front of them, turns around and cuts him a look because he is getting loud. A few minutes later,

the exercise becomes a traveling movement. Amber and Judy move on while Greg floats around waiting for them to come back. (Field notes, January 10, 2014)

The co-instructors, Cody and Amanda, are teaching without the course instructor today. They run out of exercises 21 minutes into the class. Mary, who had attended the program for 12 years, jumps in and leads the class. When Cody and Amanda thank her for the support at the end, Mary suggests them to write down a “cheat sheet” with all the exercises on it. (Field notes, December 18, 2013)

Adapters

The adapters consisted of 15 women and 11 men with physical limitations due to temporary or permanent health issues. They tried to keep up with the rhythm that the instructors demonstrated for the first two or three classes but realized it was too exhausting, so they modified the exercises in a way that was easier for them such as lifting lighter dumbbells or holding on the wall for balancing on the kickboard. They had to make those modifications in order to perform the exercises without further damaging their bodies. They still attempted every exercise but in a slower pace or not as many repetitions. Because they were aware of their ability, offbeat movements did not seem to bother them. They got fatigue rather easily so taking breaks in between exercises were sometimes observed. They would also purposefully skip an exercise or two because their doctors or physical therapists told them not to work on particular muscles.

Instead of traveling to the left and to the right, Ian jogs in place while pushing the kickboard up and down in the water as the instructors demonstrate. For the same exercise, Opera, who has a flotation belt on today, does not push the kickboard as deep as others and only travels to either direction to a certain extent. (Field notes, January 27, 2014)

Jimmy has his chair, dumbbells and stability trainer set up before the class begins. As usual,

he starts the upper body exercises with the dumbbells. Halfway through the class, he puts them down and finishes up without weights. For the balancing exercises, he stands close to his chair and holds on to it as needed. (Field notes, January 6, 2014)

The adapters normally stayed toward the front row, just close enough for them to see the demonstrations. Like the sticklers, the adapters also valued the physical benefits of the program. Even with their limited ability, they still wanted to get something out of the participation. Their focus came from the consciousness of not further damaging their bodies, so minimal interactions with other SAs were also observed. If someone was to talk to them first, they would engage in short conversations. They had more interactions with the instructors in regard to their health issues and proper modifications for being active in and out of class.

Maria asks Elda why she gets here so early today. Elda replies with a laugh that she did not go to the water class this morning. She is afraid of getting into the water because of her cold. She can feel the stiffness because she hasn't gone to the water class. Maria then tells her to take it easy today. (Field notes, February 3, 2014)

Enthusiasts

Fourteen women and six men with relatively high interests in exercise comprised the enthusiasts. Arriving at the facility early or staying after class to do additional physical activities was a regular pattern of the enthusiasts. In class, they challenged themselves by, for example, adding more weights, doing extra repetitions, or implementing high-impact exercises on top of the original ones. They did more than the instructors demonstrated, but how they executed the extensions did not necessarily help them work more on the intended muscles or muscle groups the instructors had in mind. Examples of typical enthusiast behavior and one of the inappropriate extensions are illustrated in the following data excerpts:

When asked to “take three laps as fast as you can”, Ginger jogs as big of a loop as possible, Joe runs with two dumbbells in hand, and Larry races with one of the co-instructors while everyone else walks in different paces. When Joe is done with his three laps, he finds his wife and walks with her. (Field notes, February 7, 2014)

Using water resistance to build muscles, Patrice demonstrates an upper-body exercise where her arms with aquatic barbells in hand are straight out to the side, push down into the water until they touch her thighs, and then lift up to shoulder height for one repetition. Robert adds a jumping-up-and-down motion to the exercise, but has his arms lift up above his head until they meet and back down to the side. (Field notes, December 18, 2013)

The enthusiasts usually stayed in the back or on the side of the general space, where they could have more room to complete their exercise. They wore proper clothing and sneakers for participating in physical activities while others might come in button-ups, jeans and sandals. Their investment in the adult fitness program also included name-brand athletic apparel and footwear, yoga mats, and water shoes. Same as the sticklers and adapters, the enthusiasts were not very social. Their interactions with others were limited to salutations such as “good morning”, “hello”, “see you later” and “thank you” before or after class.

Larry, who came in a suit and leather shoes, has changed into his wicking tee shirt, wind pants and running shoes. He smiles and waves at the instructors when he passes them. In class, he takes bigger personal space than others because he consistently extends his movements from the high energy in his body system. (Field notes, January 22, 2014)

Busybodies

Fourteen women and four men were busybodies who juggled between exercises and friends. They engaged in minimal participation, not due to physical limitations like the adapters, but because

they were too busy talking to keep up with the instructors. They sometimes did extra repetitions, not due to devoted interests like the enthusiasts, but because they were not aware that the class had moved on to the next exercise. They spent more time socializing with other busybodies than doing the actual exercises. They were believed to have the ability to do the exercises well, but their focus was on the social aspect of the program. Moreover, they were easily distracted by the environment such as the background music, temperature of the water, other SAs, and people or vehicles that passed the gym. Typical performance and behavior of the busybodies are shown in the following data extracts:

Gracie and Joan are sitting next to each other, like they always do. They are talking to each other from the beginning of the class. The conversation does not affect their performance at first, but their movements start to become slower and slower, and then stop. A few seconds later, they look up and catch up with whatever exercise the class is doing. This cycle repeats numerous times throughout the class period. (Filed notes, January 15, 2014)

Somebody drove up in a Maserati, they went “What is that? A Maserati?” . . . This group of men by the window [would be] looking out and I thought, “Well, it’s either a pretty girl, somebody fell down, or . . . I can’t remember what the other thing was, but you know, just anything gets them off track. (Focus group interview, February 20, 2014)

Each pair or group of the busybodies had their own designated spots scattered around the floor, in the water and in the bowling alley. The busybodies mainly interacted with other busybodies in class. They not only talked to but made fun of each other in a joking manner. Some of them were chattier than others, depending on who was there. They would skip a class if they knew ahead of the time that their friends would not be there that day. As far as interactions with the instructors, they would ask questions to clarify movements or complain about the intensity of the exercises when it got too hard for them to keep up. The following field note

passages describe the interesting chemistry between the busybodies:

When Teresa is ready to bowl, Karl coughs loudly to distract her. He does the same thing to Donna as well. When the coughing does not work, Karl makes silly faces to make them laugh, which does not work either. At the end of the game, Donna points at the screen and looks at Karl, “I beat you!” They both laugh. (Field notes, February 3, 2014)

Gina is sitting on her chair waiting for the class to start. When Tracy walks, Gina gets really excited to see her so she gets up, makes to her way and gives her a hug. The two ladies sit side by side. They chat on and off while doing exercises. Tracy has to leave the class early. After Tracy leaves, Gina does a few exercises halfhearted. A couple minutes later, she packs up her key and leaves the gym. (Field notes, February 12, 2014)

Chatterboxes

The chatterboxes were one woman and four men who took the full advantage of the social aspect of the program and had very little intention to improve their physical fitness. It would be abnormal to see the chatterboxes participating in one exercise for its entire duration, which was no more than a minute. It was difficult to assess their performance since limited evidence was recorded to verify their ability. The five chatterboxes were all in the water aerobics classes, and their behavior was very much the same as the busybodies. Both groups of SAs were believed to be in the same category for their social needs; Frances said, “. . .they [i.e., busybodies] are on land, so they can be seen, so they have to do something” (Focus group interview, February 20, 2014). In other words, “on-land busybodies” were equivalent to “in-water chatterboxes.” The following field note description portrays the fitness-unrelated performance of one chatterbox:

Ed moves around looking for conversations. He makes his first stop next to Brent, a busybody. They are in a face-to-face position with Ed’s

back to the instructors. Brent shuffles to the left when the exercise becomes a traveling movement. Ed stands there and is now interrupting Rico who comes in for lap swim. When Rico goes on to his lap swim, Ed stops Patrice on the side of the pool. They talk for a while until she has to go on and restart the background music. (Field notes, January 6, 2014)

The chatterboxes did not stay in one spot; they moved about to find somebody to talk to. They would talk to anyone who would listen, so the receiving end did not have to be somebody who was socially in need. However, conversations could be lasting forever when a chatterbox found another chatterbox or a busybody. When they secured a listener, they would be in their own zone, chitchatting about their families, weekends, or basically anything else. They could be heard talking before, during and after class. They enjoyed talking so much that moving the mouth was the only exercise they did in class, which could be a hard habit to break because the opportunity to socialize with other SAs was promoted in this adult fitness program. Examples of how chatterboxes interacted with other SAs were presented in the following field notes:

For some strange reason, Ed is the only chatterbox at the 8 o'clock class today. He is having a difficult time keeping up a conversation since whoever he has been trying to talk with is either a stickler or an adapter, who once in a while gives him a nod or a response such as "oh yeah" and "really?" (Field notes, December 18, 2013)

A group of chatterboxes is now huddling together in the middle of the pool. They are talking so loud that I can hear them from the side of the pool. They are so intensively engaged in their conversations that the rest of the class has to move around them during the traveling exercises. (Field notes, January 10, 2014)

Freestylers

Eight female and four male SAs were categorized as freestylers, who could be further classified into two types according to their daily attendance. The first type of freestylers attended and stayed the entire class period but did not follow the instructors at all. They were oblivious to the instructors because the class was either not challenging enough or too hard to keep up. They were committed to the time of the day as a motivation to maintain or improve their physical fitness. The second type came and left the facility as they wished as long as they got their workout in, which could be lap swim or weight lifting. Both types of the freestylers constantly moved their bodies but the exercise demonstrations did not matter to them.

Sherry comes in a little early; just has enough time to get herself situated before the class starts. Throughout the class, she dances with the music. When it is an upbeat song, she jumps and turns with arms swinging everywhere. When the song goes slower, she takes steps or shuffles to different directions. She enjoys herself in the very back of the class; nothing seems to bother her at the moment. (Field notes, January 10, 2014)

Rico starts his lap swim at 8:07. He takes breaks between laps, depending on how he feels. Becky and Sharon come in for the same reason a few minutes later. They kick four lanes on the kickboards while visiting before they start swimming laps. Meanwhile, Fred waves from the glass window in the gym upstairs that is connected to the pool area. They all leave the facility before the class is over. (Field notes, January 22, 2014)

The freestylers usually had their own space where they could get their own routines done. Like the enthusiasts, they would say "hi" or "bye" to the instructors when eye contacts were made on the way out. They also enjoyed being physical active with the exception of utilizing the instructors as a reference. Their social interactions were mainly with other freestylers, if not to themselves.

Occasionally, they would be caught up with the chatterboxes who successfully found their listeners:

Ariel and Celia stay in the deeper side of the pool; one kicking to stay afloat and another is also trying to keep her head above the water with two aquatic barbells in hand. They are talking to each other. Ed is moving about during a side-to-side traveling exercise. He walks to grab a kickboard and slowly moves his way to the ladies. The three talk for a long time while Ed simply leans on the kickboard and the ladies keep themselves busy by changing their exercises every so often. (Field notes, December 18, 2013)

Discussion and Conclusions

The first conclusion to be drawn from the present study is that the SAs attended the fitness classes appeared to have a variety of participation styles. The physically active groups (i.e., the sticklers, adapters and enthusiasts) mirror the “serious” and “sweatin’” participants in the previous research (Bain, 1985; Bennett, 2000). Bain’s (1985) *social interactors* and Bennett’s (2000) *socializers* can also be found in the shadows of the busybodies and chatterboxes. The line that separates the socializing groups from the physically active groups is the time they spent in socializing with others is either equivalent to or greater than the time they spent in the actual exercises. As for the freestylers, the fact that their behavior and attitude toward physical activities are not as consistent as the rest of the SAs in different participation styles makes them a unique category.

Another conclusion that should be highlighted is that, regardless of their participation styles, all SAs appeared to have a positive experience toward the adult fitness program. The majority of the SAs receives the physical benefits from actively participating in either the instructor-demonstrated exercises or self-determined routines. The rest of the SAs finds a level of the companionship they are willing to be engaged in.

The practical implication of the study, unlike those identified in the previous research, is to make instructors and professionals in the allied health or a

related field aware that a successful fitness program designed to cater older generations should not only help attendees improve or maintain their ability to perform functional activities of daily living but provide a social environment where they can meet new people and make friends with common interests. Using the knowledge of each participation style defined in this adult fitness program to improve an existing program or to design a new one can also help recruit potential SAs in the community.

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Footnotes

¹The names of the instructors and senior adults in this study were fictitious.

HEALTHIER SCHOOLS: IMPROVING INDOOR AIR QUALITY AND ENVIRONMENTAL HEALTH

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Health and learning are closely linked. In order to function academically optimally, children need to be at their best health. In turn, their education will affect their health outcomes as adults; higher levels of education are positively correlated with health and longevity (Association for Supervision and Curriculum Development [ASCD], 2014). The Whole School, Whole Community, Whole Child initiative (WSCC) by the ASCD and Centers for Disease Control (CDC) is a model for how education must focus on long-term development and well-being of the student, not just academic achievement (ASCD, 2014).

The WSCC model contains ten components, one of which is physical environment. The physical environment of a school is defined as its buildings, the contents of these buildings, and the surrounding property. This definition encompasses “biological and chemical agents in the air, water, or soil as well as those purposefully brought into the school (e.g., pollution, mold, hazardous materials, pesticides, and cleaning agents)” (CDC, 2015, p. 1). Children are especially vulnerable to chemical and biological pollutants. Teachers can take steps in their classrooms to create a healthier physical environment through simple changes, such as educating students on environmental health, reducing chemical use, and making clean water available.

The United States National Center for Healthy Housing (NCHH) has seven principles for keeping a home healthy. The agency advises keeping your home dry, clean, pest-free, safe, contaminant-free, ventilated, and well-maintained (NCHH, 2008).

These principles must be practiced not just in homes but also in classrooms since children spend most of their day at school. Following these principles can reduce what is known as “sick building syndrome” (SBS). SBS is a combination of symptoms caused by poor indoor air quality. Health effects can include headache, coughing, fatigue, allergies, asthma, nausea, and sensitivity to odors. SBS has many possible sources, making each problem difficult to pinpoint (American Federation of Teachers, n.d.). Therefore, preventative measures are the best means of protecting students’ health.

Teachers have an obligation to be concerned about students’ personal health and safety. Environmental health is an area of health education that teachers can explore; they can teach students ways to create healthier home and school environments to optimize their own health. Ferguson et al. (2014) conducted a pilot training of K-12 teachers in which the educators were taught about environmental health topics, specifically integrated pest management (IPM) and chemical use reduction. This curriculum emphasized choosing products and engaging in behaviors that are safer for the environment and personal health. The researchers found that although teachers had pre-existing knowledge about pesticides’ harmful effects, asthma triggers, and the dangers of formaldehyde and carbon monoxide, they had not received formal education on these topics.

According to Ferguson et al. (2014), IPM is “maintaining a clean, dry, and sealed home and storing and using pesticides, when necessary, in a safe and appropriate manner” (p. 2). Since we spend so much time indoors, indoor air quality is an important aspect of health. The fecal remains of insects and rodents cause irritation and allergies in humans. Pest feces in the home can cause asthma, a respiratory disorder that has become increasingly prevalent in the U.S., rising from 7.3% to 8.4% between 2001 and 2010 (CDC, 2012). Asthma rates have also increased in other developed countries as well (Sherriff, Farrow, Golding, & Henderson, 2005). Regular cleaning can prevent and control pests, but it is important to ensure that cleaning products are not equally as harmful to human health.

The first step in IPM is identifying the sources of food and water that are attracting pests, and removing them. Schools can do this by restricting eating in the classroom and hallways, moving dumpsters away from school buildings, sealing cracks, and repairing leaks. The next step is adopting a pest-removal regimen that is safe for non-pest animals, causes minimal environmental damage, and is cost-effective. This includes setting traps and baits before resorting to pesticide use. If pesticides must be used, choose the type that is created for doorways and crevices, not ones intended for broad application. The Environmental Protection Agency (EPA) (2016) recommended that teachers do not bring pesticides to their classrooms or spray during school hours. Ideally, schools would hire a licensed IPM professional and keep records of any pesticide applications.

Boric acid, refined from the mineral borax, is a relatively safe pesticide for treating insects, as well as for molds and weeds. It comes in the form of powder, pellets, tablets, or liquid, and is safe for indoor use. Although it is toxic when ingested by pests, it has mild effects on humans and is safe for the environment. It can, however, be dangerous if consumed in large amounts, or if it gets in eyes or lungs (National Pesticide Information Center, 2013). In a classroom, the powder form can be lightly sprinkled and swept into cracks and crevices to deter pests.

Chemical use reduction is also important, since many chemicals used for cleaning, hygiene, and projects are not tested for safety and pose health hazards. For example, naphthalene is a carcinogen, irritant, and hormone disruptor that is common in pesticides and deodorants. Several studies have monitored the amount of volatile organic compounds (VOCs) in classrooms. VOCs are emitted during maintenance projects like painting, carpeting, and caulking. They can react with other chemicals in the air and create compounds that irritate the eyes and respiratory system (Singer, Destailats, Hodgson, & Nazaroff, 2006). Therefore, these projects should be limited to summer months when children are not present.

Singer et al. (2006) investigated the indoor pollution caused by air fresheners and cleaning products, specifically the amount of glycol ethers and terpenoids emitted. Terpenes, often used in scented products, can have a chemical reaction with low-level ozone that create harmful compounds, such as formaldehyde. Some practices can lessen exposure to harmful chemicals, such as: diluting the cleaning product, removing the product and cleaning rag immediately after use, and ventilating the room. However, it is better to avoid these chemicals altogether. Singer et al. concluded that when indoor ozone levels are elevated, there is a higher health risk in using air fresheners and many common cleaning products.

Making your own cleaning products is a safe and inexpensive way to improve indoor air quality. Instead of air fresheners, which are an irritant and allergen, sprinkle or set out baking soda to absorb odors. Placing a dish of vinegar or a cotton ball soaked in pure vanilla extract will have the same effect. Teachers can create an all-purpose cleaner for classroom surfaces by mixing a quart of warm water with one teaspoon of free-and-clear detergent, one teaspoon of Borax, and a small amount of lemon juice or vinegar. An even simpler alternative is mixing a quart of warm water with half a cup of vinegar (Idaho Department of Health and Welfare, n.d.). These solutions can be stored in a marked spray bottle for convenient use.

A few drops of essential oil can be added to homemade solutions for more effective disinfection of doorknobs, desks, and other classroom surfaces. Prabuseenivasan, Jayakumar, and Ignacimuthu (2006) conducted a study on 21 different essential oils. They found 19 of the 21 to have antimicrobial properties. Cinnamon, lime, and clove killed both gram-negative and gram-positive bacteria, with cinnamon being the most effective. Geranium, lemon, lime, orange, and rosemary were highly effective against certain bacterial strains. Essential oils can also serve as air fresheners, and are much safer than wall plug-ins or candles, which usually contain harmful chemicals.

Keeping schools dry is imperative to prevent mold. Mold growth occurs when furniture, walls, or

ceilings stay damp for over 48 hours. Leaks, high humidity, or flooding can lead to mold problems in a school. If there is enough mold in a building to be visible or cause odors, it can be detrimental to health. Symptoms of mold exposure include the following: itchy, watery eyes; sneezing; congestion; sore throat; cough; headache; fatigue; skin irritation; and light sensitivity. Certain species of mold produce toxins that can cause more severe symptoms, such as nausea and diarrhea. Children are vulnerable to mold, especially those with asthma or allergies (California Department of Public Health, 2001).

The California Department of Public Health (2001) recommends taking steps right away to prevent mold when a school building is affected by water or moisture. Teachers can bring portable fans and run them (as well as air vents) for 24 hours, or as long as necessary to dry the classroom. Although it may seem like a good idea, closing the room and running the heater will actually encourage mold growth. Pull up carpet edges to improve ventilation; remove carpet altogether if it is too damp to dry within 48 hours or if it already has mold growth.

To help kill mold and remove smells, combine two teaspoons of tea tree oil with water in a spray bottle and mist the affected surfaces. If a building is flooded, it is best to contact a professional to handle the situation and fix the source of the leak. Since it is the mold's microscopic spores and fragments that make us sick, disinfecting visible mold alone will not solve the problem. The EPA (2016) has developed specific guidelines for mold management, including how to remove mold in mild cases, and when to call a professional.

Maintaining older classrooms, which may contain lead-based paint, is another important aspect of school environmental health. Schools built before 1978 are likely to contain lead-based paint. If this paint chips or flakes off, lead may be inhaled by students and affect their nervous systems, resulting in learning problems, irritability, developmental delays, and gastrointestinal distress (Mayo Clinic, 2014). Teachers and staff must therefore avoid any activities or maintenance projects that would result in chipping of the paint. Such projects should be

done by professionals during summer months when schools are not in session (State of Connecticut Department of Public Health, n.d.).

Other miscellaneous sources of chemical exposure could be affecting students. Heating, ventilation, and air conditioning (HVAC) systems draw in outdoor air, which may be polluted depending on the location of the vents. Vents should be at least 20 feet from a cooling tower or standing water, and 25 feet from exhaust outlets. Chemistry classrooms should have hoods anywhere VOCs are being handled. Even printers and copy machines emit solvents and ozone, and should be kept in a ventilated area (American Federation of Teachers, n.d.).

Another aspect of the school environment that teachers should consider is the availability of clean water for the children. Students cannot perform their best if they are even slightly dehydrated. However, many schools do not have clean water fountains. Many students choose soft drinks instead of water at lunch and breakfast. In the 2012-2013 school year, a research initiative called Bridging the Gap investigated water accessibility in schools; it found that only 9% of school districts required free water to be offered with school meals, and only 10% required water availability campus-wide throughout the day (CDC, 2014).

There is much that can be done at the state and district levels to change this, but individual teachers can also make a difference. The CDC recommends offering pitchers or coolers of clean water in the classroom or places where clean water fountains are not nearby. Teachers can also allow students to bring their own water bottles and drink throughout class. Teachers can also serve as role models by drinking water themselves, as opposed to having a soft drink or coffee. A social marketing campaign could also be effective; teachers can place flyers reminding students to drink water in their classrooms and throughout the school to increase their brain power and academic achievement (CDC, 2014).

The authors recommend the following for teachers to improve the environmental health of your students and your school:

- Restrict eating in the classroom and hallways.
- Set traps and baits to control pests before using pesticides.
- If pesticides must be used, choose a non-toxic active ingredient, such as borax.
- Do not apply pesticides or use chemical cleaning products when children are present.
- Do not store cleaning products and pesticides in classrooms.
- Create your own cleaning products and air fresheners using simple, non-toxic ingredients like baking soda, vinegar, and essential oils.
- Prevent mold growth by keeping rooms dry; run fans to control humidity. Mist a tea tree oil solution on small areas affected by mold.
- In the event of a flood or leak that makes walls, furnishing, or carpets damp for over 48 hours, contact maintenance personnel.
- Avoid activities that would cause flaking of paint in buildings constructed before 1978.
- Move dumpsters away from school buildings, seal cracks, and repair leaks.
- Seek continuing education in the topic of environmental health.
- Keep pitchers or coolers of clean water in the classroom for student access.
- Encourage students to drink water throughout the day.
- If you, your students, and co-workers suffer from symptoms of SBS, approach management about having the buildings inspected.
- Ensure that copy machines and printers are placed in a well-ventilated area.
- Schedule maintenance projects during the summer.

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RECONSIDERING GENDER DIFFERENCES IN HIP MUSCLE ACTIVATION THROUGHOUT A ONE-MILE RUN

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Abstract

As competitive and recreational running has increased in popularity, the risk and rate of injuries has become a source of concern for coaches. Often times running advice, based on arbitrary beliefs, is offered to runners without consideration of evidence. The purpose of this study was to consider hip muscle activation by surface electromyography in recreational runners throughout a one-mile run in order to provide coaches with a more complete understanding of the gender differences. Thirty recreational runners (15 males, 15 females; age 30.9 ±8.9 years; height: 173±7.5 cm; mass: 70.3±12.1 kg) completed the research protocol. Muscle activation measured by surface EMG of the Rectus femoris, Tensor fascia latae, Gluteus medius, and Gluteus maximus were collected while participants ran for one mile. Data were collected for 0.05 miles at each of the following increments: 0.20-0.25 (first), 0.45-0.50 (second), 0.70-0.75 (third), and 0.95-1.0 miles (fourth). Results from data analysis revealed runners exhibited a decrease in hip muscle activation in all four muscles. Females activated the Gluteus maximus ($p<0.001$), Rectus femoris ($p<0.001$) and Tensor fascia latae ($p=0.014$) at a greater capacity than male participants. These findings indicate that in as little as a one-mile run, recreational runners' hip muscles fatigue. In addition, it is interesting to note that females activated more of the Rectus femoris and Gluteus maximus muscles during running gait. Because very little research exists on the activation of hip musculature throughout a specified distance, these results can assist coaches make informed coaching decisions as they relate to muscle activation.



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Jiji Jonas
Physical Education Consultant
Louisiana AHPERD

Keywords: Running, hip muscle activation, gender differences

coaches with a better understanding of gender differences.

Introduction

Running has become an increasingly popular activity for people of all ages (Van Mechelen, 1992). Due to the prevalence of recreational running activities, an increase in running related injuries has been reported. A recent systematic review reported between 19.4% and 79.3% of runners experience a lower extremity, running-related injury each year (Van Gent et al., 2007). Although the injury incidence rates have remained constant over the years, more people are participating in the sport; therefore, the gross number of injuries has increased over time (Macera et al., 1989; Van Gent, 2007; Wen, 2007).

There are numerous variables which contribute to the incidence rate of running-related injuries. Past research has examined a variety of known variables, both intrinsic and extrinsic, which contribute to the rate of running related injury (Guidetti, Rivellini, & Figura, 1996; Smoliga et al., 2010; Van Gent et al., 2007). Intrinsic factors include variables such as age, gender, and anatomical alignment. Extrinsic factors include number of miles run per week, pace of daily runs, and running surface. Although there are common trends reported in the literature, inconsistencies in reporting methods, such as definitions of runner and/or running related injury, have left coaches and runners alike questioning injuries related to running, which ultimately effect performance.

Due to the repetitive nature of running, it is hypothesized that lower extremity running related injuries may occur because of weakness in more proximal aspects of the kinetic chain, such as hip musculature (Frederickson et al., 2000). Limited research of a prospective approach has been conducted to analyze hip muscle activation and its correlation with a broad scope of lower extremity running related injuries, such as patellofemoral pain (Ireland et al., 2003; Finnoff et al., 2011). Therefore, the purpose of the current study was to analyze dynamic hip muscle activation in a group of healthy, recreational runners in order to provide

Methods

Participants

This study was approved by an institutional review board (IRB) at a research institution. Thirty recreational runners (15 males, 15 females) were recruited from local running groups in mid-sized United States cities. For the purpose of this study, runners were classified as recreational based on the following criteria: run an average of at least 10 miles a week for the past three months (Hreljac, 2005; Niemuth et al., 2005); not currently competing on a team at the high school, college, or professional level; nor competing for a team in a marathon or distance running race. Exclusion criteria included rheumatoid arthritis and/or nerve conduction health history including but not limited to Amyotrophic Lateral Sclerosis (ALS, Lou Gehrig's Disease), Multiple Sclerosis (MS), or Parkinson's Disease. Participants were also excluded from this study if they had a current lower extremity injury or injury within the three months prior to data collection.

Procedures

Upon arrival to a laboratory at a research institution, participants were asked to read and sign an IRB-approved informed consent. Participants also completed the Health History Questionnaire (Premier Performance, Inc., Decatur, GA) and American College of Sports Medicine's Physical Activity Readiness Questionnaire (PAR-Q) form (Indianapolis, IN). Demographic information including age, gender, height and weight were also recorded.

Surface electrode placement was determined by finding the mid-point between the origin and insertion of the Rectus femoris, Tensor fasciae latae, Gluteus medius, and Gluteus maximus. Areas of electrode placement were cleansed with 70% isopropyl alcohol pads, shaved and abraded when necessary, and cleansed again with the alcohol preparation pads. Two 40-millimeter, self-adhesive

silver/silver-chloride bipolar surface electrodes were placed approximately two centimeters apart. Wires from a portable transmitter were connected to the electrodes, and accurate electrode placement was confirmed by real-time visual inspection of the EMG signal during manual muscle testing (MMT).

Following Manual Muscle Tests in order to confirm electrode placement, participants completed a five-minute running warm-up at a self-determined pace. The warm-up was not included in data collection or analysis. Participants were then asked to run at a pace similar to their daily training pace on a Trackmaster TMX425C treadmill (Full Vision, Inc., Newton, KS) for one mile at a zero percent incline. At each quarter (1/4) mile increment, EMG data was collected for a distance of 0.05 miles (Biopac Systems, Inc.; Version 4.1; Goleta, CA). Data were collected at the following intervals: 0.20-0.25, 0.45-0.50, 0.70-0.75, and 0.95-1.00 miles.

Analysis

Following specific procedures and protocols for collecting surface EMG analysis of four muscles for 30 participants, mean frequency patterns using the cycle detector were reported as raw data in Volts. All raw data were quantified and converted to Root Mean Square (RMS) with the option from the Biopac System (Version 4.1). Dynamic hip activity was analyzed for changes over the four data collection periods throughout the one-mile testing period. Repeated measures ANOVA tests were conducted with gender as a between-subject factor. Post hoc comparisons of average muscle contractions at the four time measurements were made with Tukey’s honestly significant difference (HSD) test.

Results

Demographic data of all thirty participants is presented in Table 1. Gender differences for the Rectus femoris were statistically significant ($F[1, 115]=11.41, p<.001, \eta_p=.051$) with females consistently activating anterior hip muscles more than males (Figures 1 & 2). The repeated measures factor for difference in Rectus Femoris activation between each distance was not statistically significant ($F[3, 115]=2.06, p=.109$).

The within-subjects factor was statistically significant overall for the Tensor fascia latae ($F[3, 115]=2.533, p=.060, \eta_p=.062$). Tukey’s HSD showed significant differences between the first and fourth observations ($p=.061$) with hip muscle activation decreasing throughout the mile. Differences in amount of Tensor fascia latae activation were strongly significant between genders ($F[1, 115]=6.193, p=.014, \eta_p=.051$) with females activating the muscle at a higher capacity (Figures 1 & 2).

The within-subjects factor was also significant for the Gluteus medius ($F[3, 115]=2.573, p=.058, \eta_p=.063$). Tukey’s HSD revealed a statistically significant difference between the first and fourth observations ($p=.056$). Again, a downward trend was observed in muscle activation. Gender differences were not statistically significant ($F[1, 115]=0.859, p=.356$) (Figures 1 & 2).

Gender difference in the Gluteus maximus was statistically significant ($F[1, 115]=14.51, p<.001, \eta_p=.112$) with females activating the Gluteus maximus more than males. The within-subjects factor was also statistically significant in the overall ANOVA ($F[3, 115]=4.47, p=.005, \eta_p=.104$). Gluteus maximus observations were statistically

Table 1

Participant Demographics (Mean and SD)

		Age	Height	Weight
<u>Gender</u>	<u>n</u>	<u>(years)</u>	<u>(cm)</u>	<u>(kg)</u>
Males	15	30.27±9.00	177.47±5.45	77.81±10.23
Females	15	31.47±8.72	168.53±6.44	62.88±8.72
Total	30	30.87±8.88	173.00±7.45	70.35±12.09

significantly different in two cases according to post hoc HSD tests: between the first and third observations ($p=.015$) and the first and fourth observations ($p=.0074$) (Figures 1 & 2).

Discussion

The purpose of this study was to analyze recreational runners' hip muscle activation throughout a one-mile run.

Analysis of all four hip muscles revealed a marked decrease in activation. This study did not

analyze joint kinematics; therefore, it is outside the scope of this study to determine the exact cause of decrease in muscle activation during the one-mile run. Regardless of the cause, coaches should be cognizant of the decrease in muscle activation from the start of a specified distance. Observational gait analysis should be conducted over time rather than during a single point.

Females activated the Rectus femoris, Gluteus maximus, and Tensor fasciae latae at significantly higher level than males. These findings are consistent

with those of Wilson et al. (2012) who reported that females ran with 53% greater average Gluteus maximus activation compared to males in as little as

a 20 meter run. Results reported by Chumanov et al. (2008) were comparable with females having a greater peak Gluteus maximus activation than males at a variety of paces and inclines. The greater incidence rate of running-related injury in female runners has been attributed to earlier fatigue due to greater Gluteus maximus activation while running (Chumanov et al., 2008; Wilson et al., 2012).

However, the current study provides new research which may refute previously held beliefs about Gluteus maximus activation in females. Future research should include additional muscles, such as the hamstrings, Gastrocnemius, and Soleus, in order to isolate muscle activation deficiencies specific to females.

The limitations of this research study may affect the power of the results. Although we used evidence-based methods for surface EMG (Rainoldi, Melchiorri, & Caruso, 2004), the reliability and precision of EMG during running is unknown. In addition, this project analyzed hip

muscle activation in recreational runners. Runners currently competing on a high school or collegiate cross country or track and field team could have different results because of the mileage run per week. However, coaches should

consider the results of this study as new evidence of gender-related differences.

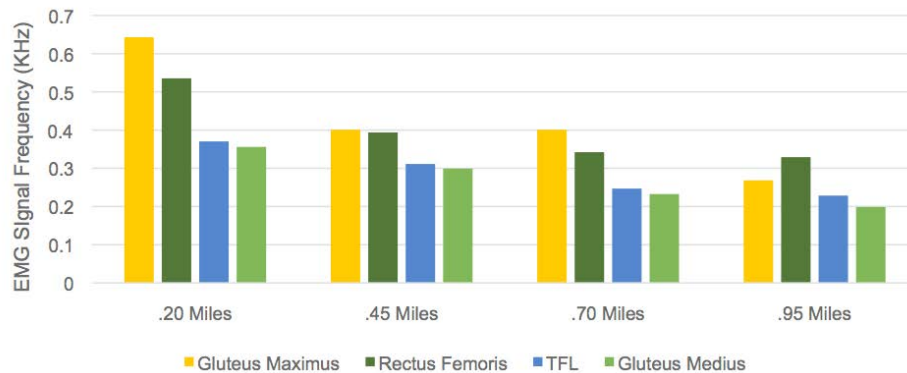


Figure 1. Mean female hip muscle activation throughout a one-mile run.

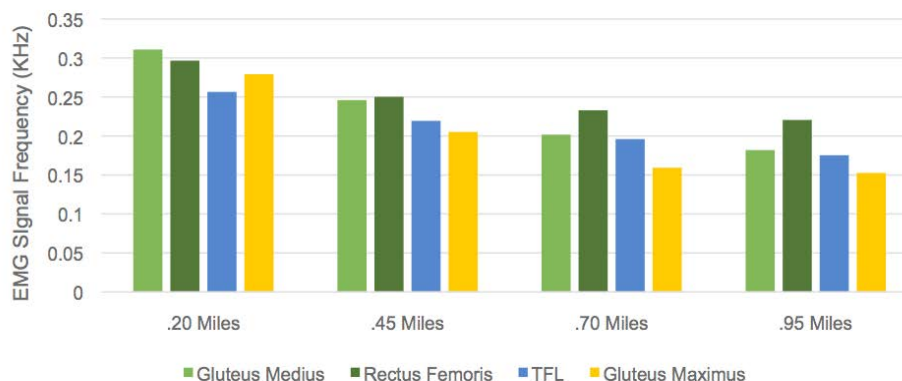


Figure 2. Mean male hip muscle activation throughout a one-mile run.

Based on the results of this study, in conjunction with previous research, it is evident that hip muscle activity plays a role in the variations of running gait throughout a one-mile run. When coaches are observing gait analysis in their athletes, they should consider the difference between the beginning and end of a prescribed distance prior to making coaching recommendations. In addition, should athletes report chronic pain or injuries, coaches should consider referring him or her to an expert who can analyze hip muscle activity during dynamic activity. The results of this study contradict previously held beliefs that there is a drastic difference in Gluteus maximus muscle activation between genders. Because no to little research reports on the activation of hip musculature throughout a specified distance, these results can assist coaches when considering activities for practice or strength and conditioning sessions (Snyder et al., 2009).

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OPPORTUNITY VS. OBLIGATION: HOW TO HELP PREVENT ATHLETE BURNOUT

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In an age where athletic achievement has been elevated above even the noblest of lifelong accomplishments, it is no surprise that parents and coaches spare no expense in attempting to raise the next first round draft pick (Farry, 2008). Competative youth leagues are starting earlier and earlier (Friedman, 2013), year-round sports programs are now the norm (Matz, 2014), early specialization of sport is expected and often pushed (Baker, 2003), and personal trainers are working with children just a few years out of their Pampers (Tong, 2013). Strength training schedules (Dahab & McCambridge, 2009), talent development programs (Gray & Plucker, 2010), and hours of deliberate practice (Helsen, Starkes, & Hodges, 1998) are being shoved down the throats of young athletes by their driven and dedicated parents and coaches. Yet, athlete burnout, overtraining, and overuse injuries are rising at an equally astronomical rate (Brenner, 2007).

Despite research and articles on athlete motivation (Reinboth & Duda, 2004), intrinsic and extrinsic factors (Vallerand, & Rousseau, 2001), burnout theories (Goodger, Gorely, Lavallee, & Harwood, 2007), mental toughness (Etnier, 2009), and positive coaching strategies (Gilbert, Gilbert, & Morawski, 2007), there remains a gap in the desired outcome parents, coaches, and teachers want to see in youth sports programs and what is actually happening in our culture (Farrey, 2008). This race to the top is producing detrimental affects on the longevity and the perceived enjoyment of an athlete's career as many youngster drop out of organized sport at a young age (Johnson, 2012). Many athletes are calling it quits before their full potential is realized due to the high pressure environment created for athletes at such a young age (Baker, 2003).

What is the answer to this delima? The answer lies within a tiny yet monumental shift. Not a shift

in training regimines, not a shift in carbohydrate or electrolyte levels, but a shift of attitude. From a position of obligation, to a position of opportunity.

If one has ever held any type of career in athletics, regardless of how short-lived, most likely, memories of the days on the playground are not too far out of reach (Ballard, 2013). Days before coaches, before two-a-days, before strength training programs, playbooks, referees, and talent scouts. The days where competition was derived from the sheer enjoyment of the game, and the thrill of personal development and accomplishment. The days of stuffing pockets with granola bars and fruits snacks so the game could play straight through dinner into the fading light, when youngsters played until they could not play anymore, not because they had to, but because they wanted to. These good-ol-days are a complete contrast to days where hours and hours are invested in the gym, not out of a love for the sport, but for a fear of being cut, a fear of failure, a fear of not getting that Division I scholarship, or simply because of a sense of obligation (Farrey, 2008).

Herein lies the problem with the culture of sports today: how can we possibly revive and rekindle the reckless passion and spark that once was the driving force for time spent in athletic competition? How can we shift mentalities of athletes from a position of "I have to," to a place of, "I want to," or "I get to?" The remainder of this paper provides solutions to the problems that have been created in youth sports, and to discuss tactics for improving athlete motivation and attitude through strategic shifts in teaching and coaching.

Creating an Atmosphere of Choice

One does not have to work with young children or students for very long to know and understand that they do not like to be told what to do. One of the quickest ways to elicit a tantrum or a negative attitude is to provide a child with orders rather than choices. Even if the choice is between two unfavorable options, it is still viewed as a choice. The same type of rationale can be easily applied to the classroom or to the ballfield. If the overall goal of youth sport programs is to create lifelong athletes

who enjoy the benefits of sport and physical activity, they need to be provided choices from the earliest of ages (Lipsky, 2013). One of the best predictors of burnout in students and athletes is not too much or too little practice, it is not too much or too little time spent on the activity, it is the feeling of powerlessness or a lack of control over what one is doing (Kohn, 1993).

Research has shown that even the most elite athletes in their field demonstrated the practice of early diversification of sport from a young age (Baker, 2003). The ability to sample a wide variety of sport and activity from a young age not only better develops holistic motor skills, it promotes confidence in a wide variety of activities, and enhances the feeling of ownership within an individual's athletic endeavors (Cote, Lidor, & Hackfort, 2009; Hensch, 2013). In a world where coaches are fighting desperately for athletes to specialize in one specific sport, this notion of early diversification is not always well received. However, despite the discrepancy in these two ideologies, early specialization is believed to be one of the main contributors to athlete burnout (Baker, 2003).

Athletes need to feel like they have a choice, a say, some form of power within their future and their career. Whether they are five or fifteen, whether they are destined for Olympic glory, or peewees, cultivating a climate of choice will only increase the longevity of their athletic opportunities chosen (Martens, 2012). Few things promote depression and burnout more reliably than a distinct feeling of helplessness and lack of control (Kohn, 2003). A 12-year-old being shuffled from early morning practice to afternoon practice, to travel team games, to tournament play while being over-coached on the field as well as on the car ride home, does not possess an overwhelming sense of control over his or her life or athletic opportunity. Athletes are told what to practice, how to practice, how to play, and even how to interact with other players on their team and opposing teams. Coaching strategies and parenting models remove the creative freedom of the young athlete, and instead, place a structured system around them with a set of rules, procedures, and schedules to follow. This methodology may

stem from a play of pure motives and intentions, however it has the distinct ability to illicit a reaction of repulsion within the young athlete over years and years of repetition.

Developing Passion through Deliberate Play

When one thinks back to his or her earliest memories of sports, most likely they will find themselves playing street hockey with a garbage can for a goal, or touch football on a weedy dirt patch down the road. Enjoyment of sport and activity began as a result of deliberate play, a term used to describe forms of sporting activities that provide immediate gratification, are intrinsically motivated, and are designed to provide maximal enjoyment (Cote, 1999). There was no coach present, no periodized training schedule, and rarely any parent supervision. Rules were loosely defined or made up, teams were small and unorganized, and elements of the game were often fantastical or made up. This playground passion developed so pure, so innocent, so unadulterated. The sad reality is that so many times this developed passion is what got so many into youth sports to begin with. The days playing wiffle ball with buddies turned into pitching machine, then coach pitch, and then little league. Introduce the ever enticing fame of the televised Little League World Series on ESPN, and the days of deliberate play become reduced to structured practice, drills, and strength training plans.

Allowing opportunities where the game includes minimal equipment, and experimentation with rules, team sizes, or tactics, allows for the creative freedom that once dominated our sports world to be realized yet again. Strategic implementation of deliberate play promotes creativity and decision making skills in team sport athletes, and athletes exposed to deliberate play in general spend more time involved in activity than those only exposed to more structured practice (Sagas, 2013). There is no need to tear down the soccer nets and replace them with Rubbermade tubs. We do not need to abandon all forms of organized sport and return to the playground, however, instituting opportunities for deliberate play can help revitalize the harmonious passion which peaked interest to begin with. It is this

passion that will keep athletes in the sport for much longer than any coach's praise, accolade, or personal success. In a research study with elite youth soccer players in the UK, evidence was found establishing a negative relationship between harmonious passion of activity and latent athlete burnout (Curran, 2011). Investing in the unaltered passion for sport and activity will pay dividends in the longevity of an athlete's lifelong career.

Conclusion

Resurrecting the enjoyment of youth sports in a culture that has been created through the race to the top is a collaborative effort. Parents, coaches, teachers, and school administrators will need to cooperate in ensuring that the climate of athletics created is one that fosters passion, enjoyment and creativity, rather than obligation, powerlessness, and burnout. Through providing a variety and diversity of options and activities, young athletes can explore different passions through the power of making the choice to participate. This subtle shift from a place of obligation to a position to opportunity is crucial to the health and the vitality of an athlete's career. Adults looking to create and instill a place for deliberate play can help to deepen the passionate pursuit of sport and activity, and help replace the sense of duty with a sense of pleasure. Ultimately at the end of the day, our youth sports programs should be designed to promote lifelong enjoyment of physical activity, and should strive to develop healthy athletes by instituting some of these strategic shifts in our approach to teaching and coaching.

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AN INVESTIGATION INTO THE RELATIONSHIP AMONG STRESS, SLEEP, AND ACADEMIC PERFORMANCE IN COLLEGE ATHLETES

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Abstract

Participation in collegiate sports can both create stress as well as reduce stress, or do both. This study examined the relationship between selected health behavior variables (sleep and perceived stress) and academic performance in Division I college athletes. Forty-five percent (out of 289) athletes completed an online survey with more females responding than males. Most athletes (61%) felt that participation in athletics increased stress levels. Females reported significantly higher levels of perceived stress as measured by the Perceived Stress Scale (PSS) than males. Athletes indicated that they received less sleep on weekdays than on weekends. Increasing sleep time among athletes and providing stress management strategies may improve their athletic performance.

Introduction

College athletics can be considered a vital part of the higher education system in the United States. The association between academics and athletics is unique to the college environment (Despres, Brady, & McGowan, 2008). Intercollegiate athletics can provide publicity to schools and can bring a sense of pride to the students and faculty, as well as the community. Whether for celebration or controversy, student-athletes hold a socially prominent place on college campuses (Comeaux & Harrison, 2011).

Student-athletes may experience higher levels of stress than non-athletes due to the dual demands of academics and athletics (Wilson & Pritchard, 2005). Having this type of pressure placed on them, athletes may have a somewhat altered sense of reality that can lead to several problems. With the majority of their criticisms being placed on their athletic performance, student-athletes may develop stunted social, personal, and career development as well as a hindered identity development due to

expectations that may be unrealistic regarding their athletic potential (Despres et al., 2008). To maintain the high standards that are placed on them, college athletes have the burden of balancing their school work with an extensive training regimen including practice, weight training, and conditioning.

While trying to maintain this crucial balance, student-athletes may lose sight of one very important part of their health, sleep. Many college students experience a variety of sleep problems that may have a significant impact on their academic performance, mood, and health. Sleep problems in student-athletes can come from both biological and social factors that they may deal with on a daily basis (Gaultney, 2010). Sleep variables can be an indicator of academic performance in college students. Some sleep variables that have been studied include the following: total sleep time (TST), waking up after sleep onset (WASO), bedtime, wake time, number of awakenings (NWAK), sleep efficiency, and the amount of time between final awakening time and getting out of bed (TWAK) (Taylor, Vathauer, Bramoweth, Ruggero, & Roane, 2013). Student-athletes may be more susceptible to these sleep variables due to intense training schedules (i.e. early morning practices or weight sessions and getting home late from competitions). Coaches should always be aware of the sleep status of their athletes. Traveling, a variety of sleep environments, and anxiety from competition can all affect the sleep of athletes (Blumert et al., 2007). A study done by Gaultney (2010) showed that 27% of college students may be at risk for at least one type of sleeping disorder with the most common being insomnia and narcolepsy. Along with the effects sleep has on a student-athlete's academic grades, athletic performance can also be impacted. An extension of sleep has been shown to positively affect athletes' reaction time, daytime sleepiness and mood (Mah, Mah, Kezirian, & Dement, 2011).

Student-athletes experience a variety of stressors each day including academics, finances, physical and mental health, body satisfaction, and social situations. Relating to academics, male student-athletes are more likely to determine their academic major based primarily on athletic

eligibility as compared to females. However, 85% of student-athletes selected their major based on other reasons (Kulics, Kornspan & Kretovics, 2015). The stress of being a student-athlete may be both negative and positive; these athletes may be able to reassess their situations in a positive way. They may have periods of extreme stress that can be mitigated over time (Kimball & Freysinger, 2003).

Although stress may be more significant for certain athletes, the ability to cope with certain stressors can be a factor in academic performance. Failing to cope with stressors can cause negative effects on psychosocial factors such as concentration and focus (Anshel, Williams & Williams, 2000). Complete avoidance of stress in student-athletes may be close to impossible; therefore, teaching them strategies to manage and cope with their stress is imperative.

Methods

Participants

The subjects in this study were Division I athletes from a university in southern Louisiana. Participants were recruited via an emailed survey; participation was voluntary. The survey was sent to 289 student-athletes (165 males and 124 females); a total of 130 student-athletes participated with a response rate of 45%. The response rate for male student-athletes was 35% and 58% for female student-athletes.

All respondents were over the age of 18 and ranged in grade classification from freshman to graduate students. Respondents included 27 freshman, 33 sophomores, 35 juniors, 33 seniors and two graduate students. Fifty-eight of the respondents were male and 72 were female. The average age of participants was 20 years. The amount of current credit hours the student-athletes were enrolled in ranged from 6 to 21 with a mean of 14.9. The mean grade point average (GPA) for all respondents was 3.0. Those players in tennis (3.8) and golf (3.5) had the highest GPAs while softball (2.6) and football (2.8) players had the lowest GPAs.

Procedure

The survey consisted of several sections. One section, the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983), was used to determine the perceived stress levels of the student-athletes. The PSS is a 14-item scale with five response categories (never, almost never, sometimes, fairly often, very often). Scores of the seven positive items on the scale (items 4, 5, 6, 7, 9, 10, and 13) were reverse scored before summing all 14 items for a total score. Higher scores on this scale indicated higher levels of perceived stress. The PSS was originally validated using three samples, with a coefficient alpha reliability for these samples of .84, .85, and .86. Test-retest correlation on two time intervals equaled .85 (Cohen et al., 1983). These statistics indicate that the Perceived Stress Scale has adequate test-retest and internal reliability.

Additional survey questions gathered information regarding number of hours spent sleeping, practicing, and in study hall or studying elsewhere. Other questions included college major, current number of enrolled credit hours, and how often the student-athlete consulted a healthcare professional in the past month. After its development, an expert in the field reviewed the survey for content and face validity, and offered suggestions. With minor revisions, all questions were entered into Survey Monkey, a survey program.

Before administering the survey, the study was approved by the University's Internal Review Board. The survey link was emailed to all student athletes (N=289) once a week for three consecutive weeks to increase response rate. After responses were gathered the researchers obtained the respondents' GPA by using each participant's student identification number (W number) that they provided when answering the survey. All survey information was kept confidential.

Research Questions

Several research questions were used to guide data analyses including the following:

- Will a difference exist in perceived stress between males and females?
- Will a difference exist between males and females in the number of hours slept?
- How does an increase in perceived stress relate to student-athletes' GPAs?
- How does amount of sleep relate to perceived stress?
- How does participation in certain sports relate to perceived stress?

Analysis

Statistical Package for Social Sciences (SPSS) was used to calculate PSS scores and to analyze the data. A t-test was run to determine possible differences in PSS by gender and sleep. A Chi-square analysis was conducted for gender by sleep. Before data were analyzed on sleep, they were collapsed into two categories with one category being less than seven hours and the other category being seven or more hours of sleep. Analysis of variance (ANOVA) tests were performed for PSS by sport and by hours slept (all levels of the variable). Tukey post hoc tests were conducted to determine differences in the means from the ANOVA analyses. Finally, a correlation was run between PSS and GPA.

Findings

Time Spent in Athletics and Academics

Of the respondents, 11% (n=14) reported they had no off days during their playing season. In addition, 57% (n=74) reported they spent at least two hours in study hall per week. Table 1 displays total number of hours spent practicing daily during season and out of season.

Health Behaviors of Athletes

Student-athletes tended to get more sleep on weekend nights than they did on week nights. Forty-three percent (n=39) of student-athletes were not receiving enough sleep (6 or less hours) on weekdays; 15% (n=19) of the athletes were not receiving the recommended amount of sleep on weekends. By gender, 61% of males (n=35)

compared to 53% (n=38) of females received seven or more hours of sleep on a school night; 88% (n=51) of males and 83% (n=60) of females received seven or more hours of sleep on a weekend.

Students were also asked information about their access to healthcare. For example, 29% (n=35) of student-athletes had seen a doctor in the past month for general medical issues. Almost two-thirds, 61% (n=72), knew how to access the University Counseling Center (UCC) while only 12% (n=14) had actually utilized its services.

Perceived Stress

Many student-athletes thought that involvement in athletics increased their stress levels. Sixty-one percent (n=74) of athletes felt that athletics increased their stress while only 3% (n=3) felt that it decreased their stress. Some athletes did feel that being involved in athletics both increased and decreased their stress at certain times, 33% (n=40), while only 3% (n=4) of the respondents were not sure how athletics affected their levels of stress.

Table 1

Time Spent Practicing Daily

Time Spent Practicing	In Season		Out of Season	
	n	%	n	%
2 or less	15	11.5	40	30.8
3	45	34.6	42	32.3
4	45	34.6	26	20
5	12	9.2	11	8.5
6 or more	13	10	11	8.5

There was a significant difference in perceived levels of stress by gender as measured by the PSS ($t(119)=-2.3, p=.025$). Males had a mean score of 38.3 and females 41.3 on the PSS, with a standard deviation of 6 and 7.8 respectively. Female student-athletes had higher levels of perceived stress. Of the male respondents, seniors tended to have less perceived stress than underclassmen, although this was not significantly different. Further, there were no significant differences in perceived stress by sport, all categories of sleep, and days off during season.

GPA and PSS scores had a negative correlation of -0.164 ($p=0.072$). Thus, there was a trend indicating those with higher GPAs had lower levels of perceived stress. Although not significant, students who received less sleep scored higher on the PSS.

Discussion

In this study, student-athletes received less sleep on each week night than on weekend nights. This may be impacted by the combination of athletic and academic responsibilities that they must balance on a weekday. This assumption has support from research conducted by Sargent et al. (2014) who found that the amount of sleep athletes receive is dictated by their training schedules. This research also suggested that on days when lack of sleep is inevitable, such as early morning starts, measures should be taken to lessen fatigue (i.e. strategic naps).

Most of these students were spending 2-3 hours a day practicing their sports which may have impacted their GPA and stress levels. There was a trend for those with higher GPAs to have lower levels of perceived stress. These results are consistent with research conducted by Taylor et al. (2013) who found that sleep variables were significant predictors of academic performance in college athletes. When most students are spending this much time with practice, weight training, and conditioning, it leaves little time for studying and homework except at night.

Student-athletes should be encouraged to get more sleep during the week. Making coaches more aware of problems that are significantly associated with sleep deprivation may help coaches encourage more sleep time for their athletes. Coaches may also be interested in performance enhancement

associated with more sleep. With more sleep in their schedules, Mah et al. (2011) found significant increases in several areas of performance in college basketball players, including reaction time.

Most of the respondents felt that athletics increased the stress in their daily lives. Females had higher perceived stress than males. Universities which provide stress management classes for athletes may benefit their academic and athletic performance.

Limitations

One of the main limitations of this study was a low response rate (45%). This may have influenced the study's results. Studies should be duplicated in several different universities so that more data can be acquired.

Another limitation of this study was that it was a convenience sample. In future studies, subjects could be randomized or the survey could be sent to specific groups in season or out of season to determine possible differences. All of the data in this study were self-reported. Finally, some athletes may have experienced different perceptions of certain questions (i.e. off days) possibly affecting the accuracy of the answers.

Conclusion

Through this study, researchers did find some trends in student-athletes' health behaviors with regard to sleep and stress. Student-athletes expressed that being involved in athletics increased their overall stress. These students received more sleep per night on weekends than they did on week nights. Female student-athletes had higher perceived stress as determined by the PSS than males.

In the future, more research should focus on these topics. Researchers in several different institutions could work together to increase the total number of participants in such studies. This may help researchers obtain data from student-athletes who compete on different levels with different resources.

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SOUTHERN DISTRICT CONFERENCE INFO

SHAPE AMERICA SOUTHERN DISTRICT CONFERENCE HIGHLIGHTS

Charity Bryan
President

The SHAPE America Southern District is excited to co-host the 2017 conference with the Louisiana AHPERD in Baton Rouge, Louisiana. Our 2017 conference theme is “We are Family!” If you know anything at all about Southern District, you know that we are indeed a huge family of professionals, friends and colleagues from across our 13 states. Think of the January 2017 conference as one big family reunion!



Charity Bryan
*Southern District
President*

Over 200 program proposals were reviewed for the upcoming conference and [several pre-conference workshops](#) will also take place. Jim Deline, Physical Education Teacher at Highland Park Elementary in Austin, Texas, will present a pre-conference workshop as well as breakout session. Other pre-conference workshops include “Advocacy that Works,” “Social Media: What’s the Newest and Latest?,” and “Implementing a Health or Physical Education Program Effectively.”

The General Session speaker will be Dr. Robert Murray from The Ohio State University. Dr. Murray will deliver his remarks on “Nutrition, Activity, the Brain, and Learning.” New research has shown that the key factors that shape brain development in childhood are: quality nutrition, regular physical activity, social play, exploration, and emotional support. This session will examine what we know about the role of each in building and maintaining the brain to promote optimal learning. Dr. Murray will also speak on “The Crucial Role of Recess” in a breakout session.

Our Scholar Lecture will be delivered by Dr. Xiaofen Keating from the University of Texas. There are also sessions scheduled for our Future Professionals, including the annual SuperStars Competition. “Louisiana Night” will feature a buffet dinner and Mardi Gras party for all conference goers. Let the good times roll with your friends and family!

I look forward to welcoming you to Southern District at the Crowne Plaza in Baton Rouge, January 9-12, 2017, for our SHAPE America Southern District/Louisiana AHPERD conference. And, as always, remember, *We are Family!*



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America®**

southern district
conference 2017
January 9-12 • Baton Rouge, LA



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**COLLEGE OF EDUCATIONAL, PROFESSIONAL AND GRADUATE STUDIES
DEPARTMENT OF KINESIOLOGY, SPORT & LEISURE STUDIES (KSLs)**

**CELEBRATING 65 YEARS AS A DEPARTMENT
1950-51 TO 2015-16**



Mission. The Department of KSLs embraces the Mission of the College of Educational, Professional and Graduate Studies and Grambling State University. The Department's mission entails a commitment to academic excellence, quality assurance and accreditation of degree programs, as well as preparation of competent, skilled professionals in kinesiology and leisure studies at the undergraduate level, and sports administration at the graduate level.

Philosophy. The Department of KSLs provides an environment that encourages, supports and nurtures student learning in the classroom, external settings and entry to professional arenas. The faculty are effective facilitators of learning who serve as role models, advisors and mentors; challenging majors *to be the best that they can be*.



Undergraduate Programs

B.S., Kinesiology degree with Concentrations in:

- Pedagogy
- Health Promotion
- Sport Management

B. S., Leisure Studies degree with Concentrations in:

- General Recreation
- Therapeutic Recreation

Graduate Program

M.S., Sports Administration (SPA)

For More Information Contact:

Department of Kinesiology, Sport & Leisure Studies
GSU Box 4244, Fredrick C. Hobdy Assembly Center – Ste 148
Grambling, LA 71245
Tel: (318) 274-2294 - Fax: (318) 274-3346 – www.gram.edu





College of
Human Sciences & Education
School of Kinesiology

Graduate Programs

The LSU Department of Kinesiology Graduate Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in four areas of specialization:

- Exercise physiology is focused on the genetic, biochemical, and clinical evaluation of physiological alterations to exercise training and detraining in both human and animal models. This focus is centered on modifications in the muscular, cardio respiratory, and immune systems from an aging, disease, or peak performance perspective.
 - Coordinator: Arnold Nelson anelso@lsu.edu
- Motor behavior research focuses on the learning and performance of coordinated movement, with particular interest in topics such as variables influencing effective and efficient skill learning, gait and balance control, sensorimotor integration for whole body and fine motor coordination, and musculoskeletal system rehabilitation.
 - Coordinator: Jan Hondzinski jhondz1@lsu.edu
- Pedagogy/psychological sciences research investigates factors that influence teaching, learning, and behavior choices in a broad range of physical activity settings, including physical education, health education, and exercise programs.
 - Coordinator: Melinda Solmon msolmo1@lsu.edu
- Sport Management research focuses on the social construction and organization of sport and sport organizations, centering on management, sociological, and organizational perspectives.

LOVE PURPLE
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Contact Information:

School of Kinesiology
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Exercise Science: Advanced study in exercise science focusing on exercise physiology, motor behavior, and sport & exercise psychology.

Health Studies: Develop skills and competencies in both theory and practice as a health educator, and for the Certified Health Education Specialist (CHES) Exam.

Health Promotion & Exercise Science: Combines health education skills and competencies with graduate study of exercise physiology and fitness testing.

Kinesiology: Involves focused study in selected disciplines. Students choose emphasis areas from adapted physical education, exercise physiology, motor behavior, sport management, and sport & exercise psychology.

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- 🔥 Teachers
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- 🔥 Exercise Specialists
- 🔥 Sport Managers
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- 🔥 Program Directors
- 🔥 Health Educators
- 🔥 Physical Therapists

Undergraduate Programs (Bachelor of Science)

Education Professions

Courtney Hebert

chuck@mcneese.edu

Exercise Science

Dr. Robert Voight, Coordinator

rvoight@mcneese.edu

Sports Medicine

Chad Chaisson, Program Director

cchaisson@mcneese.edu

Sport and Wellness Management

Dr. Mike VanGossen

mvangossen@mcneese.edu

Graduate Programs (Master of Science)

Dr. Robert Voight, Director

rvoight@mcneese.edu

- 🔥 Exercise Physiology
- 🔥 Health Promotion
- 🔥 Nutrition and Wellness

For More Information:

Contact Dr. Mike Soileau, Department Head, Health and Human Performance

McNeese State University, Box 91855, Lake Charles, LA 70609 msoileau@mcneese.edu 337-475-5375

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Master of Science in Kinesiology

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- Exercise and Sport Science
- Health Promotion, Recreation and Sport Management

For more information contact:

University of Louisiana at Lafayette
School of Kinesiology
225 Cajundome Blvd.
Lafayette, LA 70506
(337) 482-6615
<http://kinesiology.louisiana.edu/>

DEGREES IN KINESIOLOGY

B.S. in Science with concentrations in:

Fitness and Sports Industry

The Fitness and Sports Industry (FASI) concentration prepares students to enter the fields of fitness and sport industry or pursue advanced studies in athletic administration, sports administration, or fitness management. A successful recipient in this concentration may further their career by earning a minor in business administration. The sport and fitness industry is rapidly expanding. As it continues to grow, the need for qualified employees continues to increase.

Exercise Science/Pre-Physical Therapy

While the Exercise Science/Pre-Physical Therapy concentration prepares students for the application process to professional physical therapy programs, it will also prepare students for careers in the applied and clinical preventive settings, including, but not limited to cardiac rehabilitation, hospital-based wellness programs, community fitness centers, or university and corporate wellness programs. Students intending to pursue entry into a physical therapy program will be required to take additional hours and make substitutions as recommended by their academic advisor.

Exercise Science

The Exercise Science concentration prepares students for careers in the applied and clinical preventive settings, including, but not limited to cardiac rehabilitation, hospital-based wellness programs, community fitness centers, or university and corporate wellness programs, as well as entry into graduate exercise science programs. A successful recipient in this concentration may further their career by earning professional certifications from individual vendors and associations, such as Personal Training or Strength Conditioning.

Teacher Certification (K-12)

The Health and Physical Education Certification (HPEC) concentration prepares students to teach K-12 health and physical education by providing coursework and experiences in the area of health and physical education. Students must earn a "C" or better in all coursework applied toward teacher certification.

(photo - participants in the ULM Mile, coordinated by the Dept. of Kinesiology)



M.S. in Exercise Science with concentrations in:

Clinical Exercise Physiology

Students will gain the professional skills to design, implement and supervise exercise programming for those with chronic diseases and/or physical conditions. Learn how to assess the results of outcomes related to exercise services. Professionals in this field work in a variety of settings: hospitals, outpatient clinics, physician offices, university laboratories or hospital-based research facilities. A CAAHEP certified program.

Applied Exercise Science

This concentration has a significant science focus on anatomy, physiology, biochemistry, and biomechanics of human movement, and applications to exercise and therapeutic rehabilitation. Students learn to specialize in performance research, rehabilitative therapies, and related analytical methods and procedures in applied exercise and therapeutic rehabilitation.

Sport, Fitness, and Recreation Management (Courses Available Online)

This concentration is designed to appeal to those who wish to work in the business of sport, fitness and recreation, but not as an instructor or coach. The careers available in the field of sport, fitness and recreation management are diverse and growing. Opportunities include program or facility directors, marketing and promotions, corporate sales, sporting goods, community programs, athletic directors and business managers, and sport or recreation management. Combined with the worldwide growth and influence of sports on society, new opportunities continue to be created in a variety of settings.

CAREERS IN KINESIOLOGY

Graduates who work in the Kinesiology field find careers in:

- Personal or Athletic Training
- Sport, Fitness or Recreation Management
- Cardiac Rehabilitation
- Health and Physical Education (P.E. Teaching and Coaching)
- Physical Therapy (after completing Physical Therapy school)



Many health and fitness specialists are researching complex issues such as:
 Childhood Obesity
 Cardiovascular Disease
 Adult Onset Diabetes, and more.

LAHPERD AWARDS' CRITERIA

For more information, contact the Executive Director, Awards Committee Chairperson, or specific award chairpersons identified.

Honor Award

1. The candidate's contribution should have been made within the field of health education, physical education, recreation and dance.
2. The candidate should have rendered at least five years of meritorious service to the health education, physical education, recreation, or dance education professions in the state.
3. The candidate shall be one of high moral character whose contributions have most fully expressed the spirit of service which this award represents.
4. The candidate should have made a contribution to LAHPERD.
5. Any LAHPERD member who resides within the state may nominate a candidate by submitting the name and vita to the nomination chairperson.
6. To be considered for the current year, all nominations must be in the hands of the chairperson by August 1.
7. The committee member who sponsors a candidate shall be responsible for forwarding five copies of a complete, accurate biographical sketch to the chairperson.
8. The biographical sketch shall be topically organized, legible, and current.
9. To be considered for the current year, all biographical sketches must be submitted to the chairperson by August 1.
10. Insofar as possible, candidates shall not be advised that they are being considered for the award.
11. Submit nominations to Yvonne Calvin at calviny@gram.edu.

Outstanding University/College Senior Major Award

1. The candidate shall be a full-time student of the university/college from which the nomination is made.
2. The candidate shall have attended the nominating university a minimum of two years.
3. The candidate shall be a member of LAHPERD at the time of the nomination.
4. The candidate shall have an overall grade point average of 3.0 or greater.
5. Any university/college faculty member in health, physical education, recreation, or dance, or a supervising teacher may nominate a candidate by sending the name and a biographical sketch to the chairperson. The supporting information should include date, grade point average, honors and awards, membership(s) in professional organization(s), and a statement from the nominator as to why the student is worthy of the award.
6. All nominations must be submitted to the chairperson by August 1.
7. The person sponsoring the candidate shall be responsible for submitting a copy of a complete, accurate biographical sketch to the chairperson.
8. The biographical sketch shall be topically organized, legible, and current.
9. To be considered for the current year, all biographical sketches must be submitted to the chairperson by August 1.
10. Submit nominations to Yvonne Calvin at calviny@gram.edu.

Service Award

1. Any LAHPERD member who resides in the state may nominate a candidate who is worthy of consideration. Supporting information should include name, address, specific contribution/service to LAHPERD, and a statement from the nominator giving other information considered pertinent to the selection of a recipient for the Service Award.
2. Any individual who meets the criteria outlined for each of the awards may apply personally for the award or be nominated by a colleague.
3. A state winner is not eligible for the same award again until after four years.
4. Former district and national winners of the award are not eligible to participate in the same category for an award.
5. Submit nominations by May 20 to the Executive Director or Awards Committee Chair.
6. Submit nominees and information for special awards to: Sonia Tinsley at tinsley@lacollege.edu.

Secondary Physical Education Teacher of the Year Award

1. For the purposes of this award, a secondary physical education teacher is defined as an individual who has major responsibility for teaching physical education in grades 7-12.
2. The candidate must be a current secondary physical education teacher with a minimum of three years' experience.
3. The candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Conducts a balanced and sequential curriculum.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences professional commitment through membership and involvement in local, state, and national physical education organizations.

Elementary School Physical Education Teacher of the Year Award

1. For the purposes of this award, an elementary physical education teacher is defined as an individual who has major responsibility for teaching physical education in grades K-6.
2. The candidate must be a current elementary physical education teacher with a minimum of six years' experience.
3. The candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Conducts a balanced and sequential curriculum that reflects and understanding of child growth and development.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment to the education profession by having served on state/regional/national committees and/or having presented workshops of programs at these levels.
4. Current members of the COPEC Executive Committee are not eligible.

Health Educator of the Year Award

1. For the purposes of this award, a school health educator is an individual who has major responsibility for teaching health education in grades K-12 or in a college/university setting.
2. The candidate must have a minimum of three years teaching experience.
3. In addition, the candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Presents a balanced and sequential curriculum based on the developmental, social, and psychological needs of the students.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment through membership and involvement in local, state, and national health organizations.

Dance Educator of the Year Award

1. For the purposes of this award, a dance educator is defined as an individual who has major responsibility for teaching dance at any level including grades K-12 and/or in a college/university setting.
2. The candidate must have a minimum of three years teaching experience.
3. In addition, the candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Teaches creatively and produces creative work by utilizing various methodologies causing innovative problem-solving learning experiences.
 - c. Presents a balanced and sequential curriculum based on the developmental, social, and psychological needs of the students.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment through membership and involvement in local, state, and national dance organizations.

Recreation Professional of the Year Award

1. For the purposes of this award, a recreation professional is defined as an individual who has major responsibility for teaching recreation pre-professionals/professionals or conducting recreation programming and/or administration in an educational, public, or private recreation setting.
2. In addition, the candidate must be a person who:
 - a. Serves as a positive role model, epitomizing the values and desired outcomes of recreation.
 - b. Demonstrates enthusiasm for the recreation professional and his/her role in it.
 - c. Shows interest in and sensitivity to the needs of students, clients, and fellow professionals.
 - d. Utilizes various methodologies and implements creative, innovative, safe, and effective courses/recreations programs based on:
 - i. the developmental, social, and psychological needs of students and clients; and
 - ii. the philosophies, purposes, needs, and resources of the sponsoring institution.
 - e. Assumes responsibility for his/her professional growth and evidences professional commitment through membership and involvement in local, state, and national recreation organizations.

Taylor Dodson Young Professional Award

1. Candidates should be less than 40 years of age.
2. Candidates' contributions should have been made within the fields of physical education, health education, recreation, research, and dance, or to the profession through such allied field as science, education, or community service.
3. Candidates should have rendered at least five years of meritorious service to the physical education, health education, recreation, or dance professions in the Southern District.
4. Candidates should have been members in good standing of AAHPERD for at least the five consecutive years prior to receiving the award.

5. Candidates for the award should have gained prominence in some of the following:
 - a. Excellence in teaching
 - b. Outstanding administrative achievement
 - c. Leadership in professional associations, including state and national
 - d. Contributions to professional literature
 - e. Outstanding community service
6. Deceased members or those who have moved out of the district should not receive the award nor should the award be given because a person holds a particular job.

Scholar Award

1. Criteria for selection of the Scholar shall include, but not be limited to the following:
 - a. The individual selected should have scholarly presentations.
 - b. The individual should be an active scholar in his/her discipline.
 - c. The individual selected must be a LAHPERD member.
 - d. The individual selected should be capable of communication to groups in the various disciplines.

Gillentine Award

1. Candidates must be adapted physical education teachers, where the majority of their teaching duties are in adapted physical education, in Louisiana and current LAHPERD members.
2. The following criteria are considered:
 - a. Teaching performance
 - b. Innovative abilities
 - c. Involvement with local and state organizations
 - d. Volunteer community work
 - e. Research and scholarly activities specific to adapted physical education

LAHPERD AWARDS' CRITERIA

For more information, contact the Executive Director, Awards Committee Chairperson, or specific award chairpersons identified.

Katherine Hill Honor Award

1. The candidate's contribution should have been made within the field of health education, physical education, recreation and dance.
2. The candidate should have rendered at least five years of meritorious service to the health education, physical education, recreation, or dance education professions in the state.
3. The candidate shall be one of high moral character whose contributions have most fully expressed the spirit of service which this award represents.
4. The candidate should have made a contribution to LAHPERD.
5. Any LAHPERD member who resides within the state may nominate a candidate by submitting the name and vita to the nomination chairperson.
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7. The committee member who sponsors a candidate shall be responsible for forwarding five copies of a complete, accurate biographical sketch to the chairperson.
8. The biographical sketch shall be topically organized, legible, and current.
9. To be considered for the current year, all biographical sketches must be submitted to the chairperson by August 1.
10. Insofar as possible, candidates shall not be advised that they are being considered for the award.
11. Submit nominations to Yvonne Calvin at calviny@gram.edu.

Outstanding University/College Senior Major Award

1. The candidate shall be a full-time student of the university/college from which the nomination is made.
2. The candidate shall have attended the nominating university a minimum of two years.
3. The candidate shall be a member of LAHPERD at the time of the nomination.
4. The candidate shall have an overall grade point average of 3.0 or greater.
5. Any university/college faculty member in health, physical education, recreation, or dance, or a supervising teacher may nominate a candidate by sending the name and a biographical sketch to the chairperson. The supporting information should include date, grade point average, honors and awards, membership(s) in professional organization(s), and a statement from the nominator as to why the student is worthy of the award.
6. All nominations must be submitted to the chairperson by August 1.
7. The person sponsoring the candidate shall be responsible for submitting a copy of a complete, accurate biographical sketch to the chairperson.
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Service Award

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2. Any individual who meets the criteria outlined for each of the awards may apply personally for the award or be nominated by a colleague.
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Secondary Physical Education Teacher of the Year Award

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2. The candidate must be a current secondary physical education teacher with a minimum of three years' experience.
3. The candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Conducts a balanced and sequential curriculum.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences professional commitment through membership and involvement in local, state, and national physical education organizations.

Elementary School Physical Education Teacher of the Year Award

1. For the purposes of this award, an elementary physical education teacher is defined as an individual who has major responsibility for teaching physical education in grades K-6.
2. The candidate must be a current elementary physical education teacher with a minimum of six years' experience.
3. The candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Conducts a balanced and sequential curriculum that reflects and understanding of child growth and development.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment to the education profession by having served on state/regional/national committees and/or having presented workshops of programs at these levels.
4. Current members of the COPEC Executive Committee are not eligible.

Health Educator of the Year Award

1. For the purposes of this award, a school health educator is an individual who has major responsibility for teaching health education in grades K-12 or in a college/university setting.
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3. In addition, the candidate must be a person who:
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 - b. Utilizes various teaching methodologies and plans innovative learning experiences.
 - c. Presents a balanced and sequential curriculum based on the developmental, social, and psychological needs of the students.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment through membership and involvement in local, state, and national health organizations.

Dance Educator of the Year Award

1. For the purposes of this award, a dance educator is defined as an individual who has major responsibility for teaching dance at any level including grades K-12 and/or in a college/university setting.
2. The candidate must have a minimum of three years teaching experience.
3. In addition, the candidate must be a person who:
 - a. Serves as a positive role model, epitomizing personal health and fitness, enjoyment of activity, sportsmanship, and sensitivity to the needs of students.
 - b. Teaches creatively and produces creative work by utilizing various methodologies causing innovative problem-solving learning experiences.
 - c. Presents a balanced and sequential curriculum based on the developmental, social, and psychological needs of the students.
 - d. Assumes responsibility for his/her professional growth.
 - e. Evidences commitment through membership and involvement in local, state, and national dance organizations.

Recreation Professional of the Year Award

1. For the purposes of this award, a recreation professional is defined as an individual who has major responsibility for teaching recreation pre-professionals/professionals or conducting recreation programming and/or administration in an educational, public, or private recreation setting.
2. In addition, the candidate must be a person who:
 - a. Serves as a positive role model, epitomizing the values and desired outcomes of recreation.
 - b. Demonstrates enthusiasm for the recreation professional and his/her role in it.
 - c. Shows interest in and sensitivity to the needs of students, clients, and fellow professionals.
 - d. Utilizes various methodologies and implements creative, innovative, safe, and effective courses/recreations programs based on:
 - i. the developmental, social, and psychological needs of students and clients; and
 - ii. the philosophies, purposes, needs, and resources of the sponsoring institution.
 - e. Assumes responsibility for his/her professional growth and evidences professional commitment through membership and involvement in local, state, and national recreation organizations.

Taylor Dodson Young Professional Award

1. Candidates should be less than 40 years of age.
2. Candidates' contributions should have been made within the fields of physical education, health education, recreation, research, and dance, or to the profession through such allied field as science, education, or community service.
3. Candidates should have rendered at least five years of meritorious service to the physical education, health education, recreation, or dance professions in the Southern District.
4. Candidates should have been members in good standing of AAHPERD for at least the five consecutive years prior to receiving the award.

5. Candidates for the award should have gained prominence in some of the following:
 - a. Excellence in teaching
 - b. Outstanding administrative achievement
 - c. Leadership in professional associations, including state and national
 - d. Contributions to professional literature
 - e. Outstanding community service
6. Deceased members or those who have moved out of the district should not receive the award nor should the award be given because a person holds a particular job.

Scholar Award

1. Criteria for selection of the Scholar shall include, but not be limited to the following:
 - a. The individual selected should have scholarly presentations.
 - b. The individual should be an active scholar in his/her discipline.
 - c. The individual selected must be a LAHPERD member.
 - d. The individual selected should be capable of communication to groups in the various disciplines.

Gillentine Award

1. Candidates must be adapted physical education teachers, where the majority of their teaching duties are in adapted physical education, in Louisiana and current LAHPERD members.
2. The following criteria are considered:
 - a. Teaching performance
 - b. Innovative abilities
 - c. Involvement with local and state organizations
 - d. Volunteer community work
 - e. Research and scholarly activities specific to adapted physical education

GUIDELINES FOR SUBMITTING ARTICLES TO THE *LAHPERD JOURNAL*

Electronic Submissions Only; Revised Fall 2016

The *LAHPERD Journal* is published electronically twice a year, usually the fall and spring, by the Louisiana Association for Health, Physical Education, Recreation and Dance. Articles should be emailed to the editor, Dr. Dan Denson ddenson@mcneese.edu. Articles should be submitted by January 15 to be considered for the April issue and by August 15 for the October issue. *Current LAHPERD members have priority for publication space.*

1. **The Manuscript** Manuscripts should follow the form and style of the current edition of *Publications Manual of the American Psychological Association* and must be double-spaced, **12-point Times New Roman font with standard margins**. All of the authors' names, titles, and institutions should be listed on the cover sheet. Prepare the manuscript in Microsoft Word format and attach author's statement (see Author's Statement below). All correspondence should be addressed to the lead author unless otherwise specified. Limit manuscripts to 12 pages or about 4,800 words.
2. **Tables and Illustrations** All tables and figures must be titled. All tables and figures should be on separate pages with appropriate insertion place(s) indicated in the manuscript. Use tables for reporting extensive statistical information. Data in tables should not be duplicated or extensively discussed in the text. Artwork (graphics, photos, etc.) should be of high resolution to ensure that pixilation or blur is avoided. Please attach artwork as a separate file.
3. **Author's Statement** The author(s) must provide a statement certifying that the article has not been published or concurrently submitted for publication elsewhere.
4. **Refereed Papers** Only position papers and research manuscripts that meet submission criteria will be considered for blind external review. Each paper will be submitted to three members of the LAHPERD Journal editorial board. Papers are reviewed for content and clarity. Specifically, each paper will be gleaned for 1) identification of the problem and purpose of the study, 2) description of methodology including statistical procedures used, 3) reporting of findings, 4) consistency of conclusions and findings, and 5) quality and appropriateness of references. Lead authors will be notified of the status of the manuscript. Papers may be accepted as is, accepted with minor revisions, conditionally accepted pending revisions, or rejected. Only papers that make a contribution to the profession will be accepted for publication.
5. **Documentation** References should be listed at the end of the article and should be arranged in alphabetical order. Each reference cited in the article must be listed and only those cited should be included in the reference page. Follow the form and style for citing and listing references in the current edition of the *Publications Manual of the American Psychological Association*
6. **Announcements** Any announcements and last minute news items must be submitted electronically prior to layout of the journal. Contributors are advised to use Microsoft Word, 12-point Times New Roman font format for all attachments. Avoid first person sentence structure. Be sure to title attachment for inclusion in the *LAHPERD Journal*.
7. **Non-Refereed Papers** *Program development essays, teaching methods, and related papers* are welcome. Authors are encouraged to submit photographs, diagrams and tables as necessary with these papers. These papers will be reviewed by the in-house editorial staff, which consists of the managing editor and the copy editor. Some revisions may be necessary. The editorial staff reserves the right to edit these papers when necessary to maximize available space.
8. **Abstracts** All completed abstracts accepted for presentation at the fall LAHPERD conference will be published in the spring issue of the *LAHPERD Journal*. Incomplete abstracts will be returned to the author(s) to be completed. Complete abstracts should contain: 1) problem statement, 2) purpose of the study, 3) methods, 4) major findings, and 5) conclusions. Limit abstract to 500 words.
9. **Advertisements** The *LAHPERD Journal* has free available space for advertising of select university programs*. All advertisements should be submitted as high resolution files (see 2. Tables and Illustrations above). Professional product and service vendors are invited to advertise. Rates for vendors are: \$100 per issue for full page; \$60 per issue for 1/2 page; and \$30 per issue for 1/4 page. All ads are subject to review and rejection by the editors and/or the executive board of LAHPERD.
*Free ad space is available to departments that are represented by membership in LAHPERD.

LAHPERD MINI-GRANT APPLICATION FORM

1. Print these directions.
2. Type your Application.
3. Be sure to answer all the questions.
4. Mail completed form by May 1st each year to:
Christina Courtney, Mini-Grant Coordinator
University Laboratory School
45 Dalrymple Dr.
Baton Rouge, LA 70803

Page One

Project Title:

Signature of Applicant:

Signature of Principal and/or Supervisor

Applicant's Name:

Applicant's Position/Title

School Name:

School Address:

School System/Parish:

Work Phone:

Work FAX:

Work email:

Home Phone:

Home email:

Page Two

General Project Summary (1 or 2 paragraphs)

Specifics:

1. What is the main idea of this project?
2. Why do you think there is a special need for this project?
3. Give a time schedule of events
4. Approximately how many students will be affected by this project?
5. How will you describe whether your objectives have been achieved and whether your project is successful?
6. Attach 1-3 lesson plans you could use within this project.
7. Detail your budget request. Include specific information such as kinds of materials and equipment needed, sources of supply and costs, or travel/lodging information.

Budget example:

ITEM	SUPPLIER/SOURCE	AMOUNT BUDGETED
Alpha Fit	U.S. Games	\$375.00
Conference Registration Fee	SDAHPERD	\$150.00
Total		\$525.00