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Reaching high!!

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A Message from the KAHPERD President

A Message from Your President

Greetings from your president to my fellow KAHPERD members and readers of this Journal. Another round of thanks to Dr. Steve Chen for once again creating such a quality Research and Information Journal that helps its readers receive relevant research information in our field. Needless to say we owe him a big thank you for his continued involvement in creating a strong research oriented component to our organization.

Thanks to each of you who has contributed in some way to this journal. Thanks goes not only to the writers but also to those of you who have taken their time to help review. Steve has collected a variety of subjects that I think will please your enthusiasm for research.

Once again I thank you, you the reader for your continued involvement with the students in our Commonwealth. Through your collective efforts our children will become better prepared for the challenges of tomorrow. We too must pass to them the skills and persistence that education can provide them with a committed heart for the search of knowledge.

Jim Hinerman, KAHPERD President
Eastern Kentucky University

Acknowledgement

As the Editor of the KAHPERD Journal, I would like to show my appreciation to the following reviewers for their assistance in reviewing this current issue.
Dr. Todd Farmer, Lindsey Wilson College; Dr. Louisa Summers, Eastern Kentucky University; Mr. Jim Hinerman, Eastern Kentucky University; Dr. Johnny Newsome, Morehead State University; Dr. Manual Probst, Morehead State University, Ms. Sara Larson, Morehead State University; Mrs. Kristen Hewitt, Morehead State University; Dr. Monica Magner, Morehead State University; Mrs. Vicki Johnson-Leuze; & Dr. Kristi King, University of Louisville

Sincerely,
Steve Chen, KAHPERD Journal Editor

KAHPERD Journal Submission Guideline

SUBMISSION OF A PAPER

The KAHPERD Journal is published twice yearly (spring and fall) by the Kentucky Association for Health, Physical Education, Recreation, and Dance. The journal welcomes the submission of empirical research papers, articles/commentaries, best practices/strategies, interviews, research abstracts (spring Issue only) and book reviews from academics and practitioners. Please read the information below about the aims and scope of the journal, the format and style for submitted material and the submissions protocol. Your work will more likely to be published, if you follow the following guidelines thoroughly.

Articles are accepted via an electronic attachment (must be in Microsoft Word format, doc or docx) through e-mail to the editor before the deadline dates. Submissions should be sent to editor, Steve Chen: s.chen@moreheadstate.edu

Deadlines: Spring issue—March 1 & fall issue—September 1

AIMS AND SCOPE

The main mission is to bring together academics and practitioners to further the knowledge and understanding of issues and topics related to health, physical education, sport administration and marketing, exercise science, sport coaching, dance, and recreation, etc. We encourage submissions relating to these topics from a variety of perspectives.

CONTENT

All articles should be written primarily to inform senior practitioners and academics involved in areas of health, physical education, recreation and dance.

Research articles should be well grounded conceptually and theoretically, and be methodologically sound. Qualitative and quantitative pieces of research are equally appropriate. A good format to follow would be: Introduction, Literature Review, Methodology, Results, & Discussion, Conclusion, and Implication. Articles may include an abstract of approximately 150 words including the rationale for the study, methods used, key findings and conclusions. Article should not exceed 10 single-spaced pages (not including references, tables, and figures).

Reviews of books and/or reports are welcome (around 1000-2000 words). Information concerning the book/report must be sent to the editor.

Interviews (it would be nice to discuss with the editor beforehand) and best practice/strategy papers of 1,500-3,000 words should be objective and informative rather than promotional and should follow the following format: Objective/Background/Discussion and Practical Implication.

Research abstracts (300 words or less) are welcome and limited to the spring issue only. The submitted abstracts should have been presented (either an oral or a poster presentation) in the KAHPERD annual conference in the previous year.

*The editor is keen to discuss and advise on proposed research projects, but this is no guarantee of publication.

FORMAT AND STYLE

Manuscripts should follow the form of the guidelines for publications outlined in the 6th edition of the Publication Manual of the American Psychological Association.

Tables, charts, pictures, diagrams, drawings and figures should be in black and white, placed on separate pages at the end of the manuscript. They must be submitted photo ready and reproduced to fit into a standard print column of 3.5 inches. Only one copy of each illustration is required, and captions and proper citations should be typed on the bottom of the table and diagrams. Jargon should be reduced to a minimum, with technical language and acronyms clearly defined. The accuracy of any citations is the responsibility of the author(s).

For more specific style questions, please consult a recent edition of the journal.

SUBMISSIONS PROTOCOL

Submission of a paper to the publication implies agreement of the author(s) that copyright rests with KAHPERD Journal when the paper is published.

KAHPERD Journal will not accept any submissions that are under review with other publications. All manuscripts submitted will be peer reviewed by 3 members of the editorial board. To be accepted for publication in the journal, the article must be approved by no less than 2 of the 3 reviewers. Authors will normally receive a decision regarding publication within six to 12 weeks. Rejected manuscripts will not be returned.

Wellness Levels of Physical and Health Education Professionals

Keri A. Esslinger, Western Kentucky University
Elizabeth C. Pyle, Western Kentucky University
William Hey, Western Kentucky University
Gabrielle Manny, Western Kentucky University

Introduction

Veach & Cissell (1999) stated that a true role model is one who will struggle, like the rest of us, to make healthy choices. Physical educators and health educators are no exception to this struggle. Mental, physical, emotional, social, and spiritual health are equally important dimensions to a healthy lifestyle.

Typically, professional preparation programs for physical educators and health educators underscore the importance of addressing all aspects of an individual's overall health. When a student selects the physical education and health education field, he or she may be held to certain standards of being a role model of a healthy lifestyle. Scott & Black (1999) reviewed how role modeling positive health behaviors by health education professionals is a controversial issue. It is argued that negative role modeling could weaken the practice of health education among students. On the other hand, research by Jenkins and Olsen (1994), argued that students support the professional health educators' responsibilities for being a role model. It can be concluded that health educators have a responsibility to be role models by satisfying their health potential and displaying the healthiest behaviors of which they are capable.

The act of being a role model is controversial in the physical education field as well. Physical educators' appearances can be an influential factor when educating students to promote a physical fitness lifestyle. Dean, Adams, & Comeau (2005) concluded that female physical educator's body appearance affected the performance and attitudes of high school students enrolled in a six-week instructional course on the knowledge of health-related fitness. Melville & Maddalozzo (1988) concluded that male physical educator's appearance of body fat affected their ability to teach healthy exercises to 850 students from six high schools. Students watched two, 20-minute exercise videos. The first video portrayed a lean teacher and the second video portrayed an individual wearing a fat suit. The results showed that the overweight instructor was evaluated lower than the fit instructor. The authors suggested university professional preparation programs recruit physically fit students to pursue physical education.

Results of Roberts, Evans, & Ormond's (2006) study indicated that students enrolled in professional preparation programs scored well in cardiorespiratory fitness and attitudes toward fitness when compared to alumni from other programs. The results of the study supported that

the Basic Instruction Program (BIP) objectives were being met, in which students learn fitness/wellness fundamentals and apply their knowledge to develop healthy habits for a lifetime. Professional preparation programs for physical education and health education programs need to ensure that they are instilling the mindset of a healthy lifestyle in students. Scott & Black (1999) assessed perceptions of graduate students' responsibility to be role models of healthy behaviors. A total of 233 randomly selected health education graduate students participated in the 125-item questionnaire. Study results indicated that graduate students valued the significance of being a role model, graduate program satisfaction, and professional commitments. The results also displayed the students' desire to improve body fat ratio, fitness behavior, nutrition, and overall physical activity as role models.

Physical activity is recognized as an important element of a healthy lifestyle. Peterson, Bryne, & Cruz (2003) performed a study to explain what physical education majors know in relation to physical fitness. Physical education teacher education (PETE) majors from a medium-size university were utilized for the study. Each student in the study was given a fitness test to evaluate their fitness level and then given a cognitive test to evaluate what knowledge they knew about physical activity. The results showed that the physical educators knew more than expected and their physical fitness levels were considered "good". The results also indicate that physical educators need to be active and fit to serve as role models for children that they are educating. This study can give insight in ways to improve how teachers are being prepared.

La Vine & Ray (2006) conducted a study in an attempt to increase the level of physical activity awareness for physical education teacher education majors. Participants were 17 first and second year PETE students. The students were required to wear pedometers for 30 days in November and 30 days in April and reported their personal strides daily. The results of the study indicated that students in the fall did not reach their minimum level of physical activity. After education, there was an increase in their physical activity in the spring. The authors suggested that PETE programs should consider recruiting students who are more prone to be physically active. Students who choose to be PETE majors are responsible for having a healthy lifestyle and encouraging their students to adopt that same lifestyle. Portman (2003) conducted a study to examine if students' physical education experiences have negatively impacted their participation in regular physical activity. Greendorfer (1977) suggested that the strongest predicator of adult participation in physical activity was childhood involvement. The experiences that students have in their physical education classes could potentially affect their future attitudes about physical activity in general. The study included 46 ninth grade students from seven different classes and three different schools and participated in the study based on skill level; only high skilled students and low skilled students were used. The researchers interviewed the students separately and then analyzed the data they collected. The results showed that students enjoyed physical education when they could actually do the skill, when they could be with friends, while others liked being separated based on gender or skill. The high skilled students who already participated in physical activities (sports) outside of physical education class planned on continuing to do so and those students who were not involved in physical activities outside of

their required physical education class had no intentions of becoming involved. Some suggestions from students to help improve their physical education experiences would be grouping students by skill level, so they feel more comfortable and allowing them to choose their own partners or teams. The study indicated that if the goal of physical educators is to encourage students to adopt an active lifestyle in the future then evidence suggested that educators are not achieving their goals.

If an individual is most impressionable as a child, and their activity levels as children are a strong predictor of later participation in physical activity, then it is imperative that physical educators and health educators create the healthiest learning environment. The preceding research underscored the important role that physical educator's health and physical activity behaviors and outcomes influence children's perceptions and behaviors as well. While this type of research has been studied previously it is important to re-visit this issue as the health of our nation has been changing for the worse. It is vital that as physical and health educators we track our levels of wellness to ensure we are not becoming part of the problem.

The purposes of this study were to determine to what extent those in the physical education and health education field adhered to wellness principles, and examine differences in gender and relationships of lifetime activities and wellness scores among participants.

Methods

The participants in this study were physical educators and health educators throughout the nation who attended the national AAHPERD (now S.H.A.P.E.) convention in San Diego, Ca. Prior to recruiting participation in the study, study protocol permission was granted through the University Institutional Review Board to carry out the research. All participants volunteered for the study and the researcher obtained informed consent from each. During the exhibition in a booth, two trained graduate students invited participants to participate in the study. Those who agreed and surveys were administered to volunteers who stopped by the exhibits booth during the conference. The participants in the survey ranged in age from 21 to 58. They had varying levels of teaching experience and education ranging from bachelors to doctoral degrees. Participants were given information regarding their wellness status upon completion and were provided the researcher's contact information if they had any questions or concerns following their participation in the research.

The Body-Mind-Spirit Wellness Behavior Inventory (BMS-WBI) was utilized for this study. The wellness model is comprised of six dimensions that include; physical, emotional, intellectual, social, occupational, and spiritual wellness. These dimensions are subsequently categorized within "Body", "Mind", or "Spirit". The model was designed to emphasize the person creating a balance (National Wellness Institute [NWI], 2006 The (BMS-WBI) was created for use in place of the TestWell® because of the cost effectiveness of the instrument (free), questionnaire length, yet remains valid and reliable. The (BMS-WBI) dimensions of wellness were each significantly

correlated with all appropriate TestWell subscales as a measure of criterion validity. The BMS-WBI has also been shown to be an applicable, affordable, and easy-to-administer instrument (Hey, Calderon, & Carroll, 2006). Along with the (BMS-WBI), participants were given a list of 50 lifetime fitness activities and asked to rank order the15 activities they participated in most. Descriptive variables were analyzed using frequencies, means, and standard deviations. Analysis of variance was used to determine group differences in physical and health educators and gender. Statistical calculations were considered significant at the alpha level of $p < .05$. The SPSS 21.0 statistical package was used to analyze all data.

Results

Results of the research showed no correlation between the lifetime activities (shown in Figure 1.) chosen most frequently and wellness scores. However, results did show significant differences between genders in all of the areas including overall wellness. The ANOVA displayed in Table 1shows these differences and the Dimensional mean scores for gender table (Table 2) depicts mean scores of gender in each area. Participants were instructed to check all physical activities that applied.

Figure 1. Lifetime activities

50 Lifetime Fitness Activities

_____Aerobics
_____Archery
_____Back Packing
_____Billiards
_____Bowling
_____Canoeing
_____Calisthenics
_____Circuit Training
_____Climbing Hills
_____Croquet
_____Cycling
_____Dancing
_____Darts
_____Fencing
_____Fishing
_____Golf
_____Handball
_____Hiking
_____Horseback Riding
_____Horse Shoes
_____Jogging
_____Judo/Karate
_____Jumping Rope
_____Mountain Biking
_____Orienteering
_____Outdoor Fitness Trails
_____Racquetball
_____Rock Climbing
_____Roller Blades
_____Rowing
_____Running
_____Sailing
_____Skiing Cross Country
_____Skiing Downhill
_____Scuba Diving
_____Skating
_____Snow Boarding
_____Squash
_____Stair Climbing
_____Stretching
_____Surfing
_____Swimming
_____Table Tennis
_____Tai Chi
_____Tennis
_____Ultimate Frisbee
_____Walking
_____Water Skiing
_____Weight Training
_____Yoga

Table 1. Gender frequencies

Gender	*Frequency*	*Percent*
Female	21	73.5
Male	13	26.5

Physical and Health Education professionals demonstrated an overall composite score of 104.23 and 114.43 respectively. Mean and standard deviations of each dimension of the BMS inventory are listed in Table 2 for both males and females respectively. As displayed in the table, females scored higher in each area of wellness.

Table 2. Dimensional mean scores for gender

Dimension	$\bar{X}$ *Males*	*Level*	*Dimension*	$\bar{X}$ *Females*	*Level*
Body	18.76	3	Body	21.76	1
Mind	52.08	1	Mind	54.81	1
Spirit	33.46	2	Spirit	37.90	1
Overall	104.23		Overall	114.43	

The "levels" indicated in the table correspond with the interpretation of the dimensions in the subsequent paragraphs.
"3" - Need immediate behavior change to improve wellness lifestyle
"2" - On the way to a wellness lifestyle, but behavior change is needed in certain areas
"1" - Frequency of behaviors indicate that a healthy lifestyle exists

Below is an interpretation of BMS scores listed in Table 2.
Scoring: The BMS-WBCI is scored by totaling the numbers circled for each item within each wellness area or scale. The subtotals for each wellness area or scale can be totaled for a total wellness score. The higher the score, the more often healthy behaviors are occurring and the stronger positive characteristics exist. The lowest possible total score on the BMS-WBCI is a 44 which can be obtained by answering one "1" to all of the behavior statements. The highest possible score on the BMS-WBCI is a 132, which is obtained by answering three "3" to all or the behavior statements.

Interpretation: The total score for either a subscale or the whole instrument can be interpreted using the following:

Raw Score	Interpretation/Actions needed
44-73	Need immediate behavior change to improve wellness lifestyle
74-103	On the way to a wellness lifestyle, but behavior change is needed in certain areas
104-132	Frequency of behaviors indicate that a healthy lifestyle exists

To use each subscale "Independently" the scoring breakdown for the interpretation is below.

Body

9 – 14	Need immediate behavior change to improve wellness lifestyle
15 – 20	On the way to a wellness lifestyle, but behavior change is needed in certain areas
21 – 27	Frequency of behaviors indicate that a healthy lifestyle exists

Mind

20 – 33	Need immediate behavior change to improve wellness lifestyle
34 – 47	On the way to a wellness lifestyle, but behavior change is needed in certain areas
48 – 60	Frequency of behaviors indicate that a healthy lifestyle exists

Spirit

15 – 24	Need immediate behavior change to improve wellness lifestyle
25 – 34	On the way to a wellness lifestyle, but behavior change is needed in certain areas
35 – 45	Frequency of behaviors indicate that a healthy lifestyle exists

A one-way analysis of variance was conducted to compare genders in each area of wellness (Table 3.). This was done in lieu for four independent t-tests, as the pairwise results would be the same. The data suggests significant differences in gender in each of the constructs and overall with women reporting significantly better wellness in each all areas; Body, $F(1, 32) = 75.66$, $p = .017$*), Mind $F(1, 32) = 59.96$, $p = .013$*, and Spirit $F(1, 32) = 158.52$, $p = .037$*, and overall, $F(1, 32) = 158.52$, $p = .001$*.

Table 3.
ANOVA BMS-I comparison of Gender

Source of Variation		*SS*	*df*	**F*	*p*
Body Composite	Between Groups	75.66	1	75.66	.017
	Within Groups	384.58	32	12.02	
	Total	460.24	33		
Mind Composite	Between Groups	59.96	1	59.96	.013
	Within Groups	280.16	32	8.76	
	Total	340.112	33		
Spirit Composite	Between Groups	158.52	1	158.52	.037
	Within Groups	1071.04	32	33.47	
	Total	1229.56	33		
Overall Wellness	Between Groups	835.02	1	835.02	.001
	Within Groups	2091.45	32	65.36	

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	Total	1229.56	33		
Overall Wellness	Between Groups	835.02	1	835.02	.001
	Within Groups	2091.45	32	65.36	
	Total	2926.47	33		

Conclusions

This research may suggest that physical and health educators who are dedicated to the profession (data collected at the AAHPERD national conference) are still not achieving wellness across the board. As a profession, greater effort in all areas of wellness and setting the goal above the average population should ensue, thus making physical educators and health educators true role models for the profession.

While the data shows women to be significantly more "well" than men in this research, it should be noted that during the data collection process, two male graduate assistants were utilized to recruit participants and collect the data. This may have skewed the data with more healthy women than men. Even though there were no correlations among the activity's ranked and overall wellness, there did seem to be a surprising amount of significance and difference between the genders considering the low number of individuals in this study.

The study had several limitations. First, while the BMS-I instrument was valid and reliable, the study had a low N. The sample was large enough for descriptive statistics and mean comparisons, but the sample ideally could have included more males. Because of this, there are few conclusions that can be made based upon this sample of males. Future studies need to have more participants in general, but specifically more males than this did.

This research gives reason to look further into wellness of those in health and physical education, and if their wellness effects other aspects of their job. For example, do wellness levels of PE and Health teachers have an impact of teacher effectiveness? Do wellness levels of teachers affect student perceptions of what being a "well" individual means? Future research could even look at how "fit" PE teachers look at/evaluate/interact with students who are not skilled not "fit"? Does

this affect students' perceptions? Also, how unfit/obese/lower skilled students evaluate the PE and health teachers who they considered "fit/unfit"?

This research and research like this cannot answer all of our questions regarding wellness of health and physical educators. However, it starts a very important conversation regarding the impact of an individual's wellness in health and physical education and the potential effects from it.

References

Dean, M., Adams II, T. M., & Comeau, M. J. (2005). The effect of a female physical educator's physical appearance on physical fitness knowledge and attitudes of junior high students. *Physical Educator*, 62(1), 14.

Greendorfer, S. (1977). Role of socializing agents in female sports involvement. *Research Quarterly.* 48(2) 304-310.

Hey, W., Calderon, K., & Carroll, H. (2004). Use of the body-mind-spirit dimensions for the development of a wellness behavior and characteristic inventory for college students. *Health Promotion Practice*. 1(9), 125-133.

Jenkins, A., & Olson, L. (1994). Health behaviors of health educators: A national survey. *Journal of Health Education.* 25(6), 324-332.

La Vine, M. E., & Ray, C. (2006). Physical activity patterns of PETE majors: do they walk the talk? *Physical Educator*, 63(4), 184.

Melville, S., & Maddalozzo, J. (1988). The effects a physical educator's appearance of the body fatness has on communicating exercise concepts to high school students. *Physical Education*. 7(4). 343-352.

National Wellness Institute. (2006). Retrieved October 10, 2014, from http://www.nationalwellness.org/

Petersen, S., Byrne, H., & Cruz, L. (2003). The reality of fitness for pre-service teachers: what physical education majors 'know and can do'. *The Physical Educator*. 60(1), 5-19,

Portman, P. (2003). Are physical education classes encouraging students to be physically active: experiences of ninth graders in their last semester of required physical education. *Physical* Educator. 60(3), 150-160.

Roberts, T., Evans, T ., & Ormond, F . (2006). Using assessment to support basic instruction programs in physical education. *The Physical Educator*. 63(1), 38-41.

Scott, L., & Black, D. (1999). Role modeling: an opportunity for the health education specialist. *Health Education and Behavior,* 26(5,) 623-624.

Veach, C., & Cissell, W. (1999). Role modeling: a dilemma for the health education specialist. *Health Education and Behavior.* 26(5), 621-622.

HEALTH ADVOCACY INTERVENTION FOR YOUTH: A CASE STUDY OF METRO YOUTH ADVOCATES

Tiffany Monyhan, University of Louisville
Sasha Belenky, Greater Louisville YMCA
Kristi McClary King, University of Louisville

Introduction

Low-income, urban neighborhoods are disproportionately affected by diet-related health issues, such as diabetes, obesity, and heart disease (Eberhardt & Pamuk, 2004). *Healthy People 2020*, the nation's health agenda, suggests that the causes of these disparities should shift the focus from individual health behaviors to exploring further into what elements in the environment may lead to unhealthy eating habits and future disease (U.S. Department of Health and Human Services, 2014; Lovasi, Hutson, Guerra & Neckerman, 2009). It can be difficult for families to engage in healthy eating behaviors if there is not a grocery store in their neighborhood and if they are surrounded by fast food and convenience stores. A "food desert" is a term used to describe neighborhoods with a lack of access to affordable fruits, vegetables, whole grains or other foods that make up a balanced, healthy diet (Centers for Disease and Prevention, 2012; Lovasi, 2009).

Proximity to healthy choices is sometimes outweighed by cost-effectiveness as a barrier for making healthy food purchase decisions for many people. Research has indicated that shoppers in urban low-income families tend to be strategic with their grocery shopping, keeping in mind prices and selections of the store while weighing the distance and cost of travel (Zachary, Palmer, Beckham & Surkan, 2013). With a demand to provide enough food for their household on limited budgets, shoppers opt for the less healthy, more cost-effective, non-perishable food options, often found in frozen foods, canned goods, and/or in bulk. Often grocery stores are not routine destinations for many low-income groups because of their far distances required to travel, therefore, groceries are replaced by convenience stores where packaged foods and sugary items are plentiful (Cannuscio, Weiss, & Asch, 2010). Low-income families are susceptible to diet-related illnesses and other health issues, and with the abundance of research on the many barriers preventing individuals and families in urban, low-income neighborhoods from a healthy diet, research is lacking when it comes to providing actual solutions (Hu, Acosta, McDaniel & Gittelsohn, 2013).

Social Ecological Model

The social ecological model, used in many health promotion studies, explains health behavior as being influenced by multiple levels and as a process of interaction between these five levels: intrapersonal, interpersonal, institutional, community and public policy (Glanz, Lewis & Rimer, 2008). The intrapersonal level includes one's personal health behaviors. The interpersonal would

include family members, close friends, or other close, important figures that may have influence on a behavior. Institutional influences would include workplaces, schools or any other significant institution of influence. The community level may include the neighborhood one lives in or a community where one belongs. Public policy includes health care policies, laws, or regulations. Research has shown the social ecological model to be extremely insightful when applied to various health behaviors, specifically nutrition (Schoenberg, Howell, Swanson, Grosh & Bardach, 2013; Sorenson et al., 1999). Another important aspect of the social ecological model that is important to note in this case study is what Glanz et al. (2008) explain as multiple level interventions being most effective in changing behavior. There have been many research studies that indicate changing a behavior by targeting one level of the model does not successfully sustain change.

Policy and Advocacy

Some researchers have suggested that even further studies on policy implications in regards to food deserts is necessary before developing an informed intervention design (Zachary, Palmer, Beckham & Surkan, 2013; Cummins, Flint & Matthews, 2014). In a broader approach to a solution, systemic changes reversing the trend of health disparities for low-income communities through government and business responsibility has been suggested (Gordon et. al., 2011). Other solutions have included interventions that improve the physical environment (e.g. sidewalks) and changes in regards to urban planning to create environments (e.g. parks) with equal access across neighborhoods of all income levels (Lovasi, Hutson, Guerra & Neckerman, 2009). Several studies have shown that the solution of urban agriculture could have success if the barriers cited by community members in urban areas were addressed sufficiently (Kato, 2013; Hu, Acosta, McDaniel & Gittelsohn). These barriers include convenience, price, and perceived poor taste (Dixon et al., 2007). It is possible however that none of these changes will occur unless community members advocate for positive changes in their communities.

The importance of community building and community involvement in community-based health promotion efforts calls for more programs that include youth as change agents in their communities. Advocacy training interventions can empower youth to address policy changes in their communities that ultimately decrease health disparities (Israel et al., 2010). Health advocacy is “the processes by which the actions of individuals or groups attempt to bring about social and/or organizational change on behalf of a particular health goal, program, interest, or population” (Gold, & Miner, 2002).

Purpose

This paper is intended to describe how a community group is working towards change on a local level, and to provide insight to readers on how members of a youth advocacy program perceive and utilize their roles as leaders in health promotion and advocacy. Specifically, the purposes of this paper are to a) describe how health, more specifically nutrition and food access, is promoted

by a youth advocacy program and b) describe how stakeholders representing different levels of the social ecological model perceive that a youth advocacy program is supported in achieving its goals to advocate for health and positive change.

Methods

"Case Study Design": The Design of this Paper

This "case study" was conducted in partial fulfillment of a graduate course project in Community Health and Organization at University of Louisville in the Department of Health and Sport Sciences for a Master's in Education in Community Health. A "case study" is a process of research in which detailed consideration is given to the development of a group and their context. Incorporating case studies into graduate coursework is a common strategy in professional preparation programs to provide students opportunities to gain in-depth understanding of community health. The information gathered for this paper was not collected as actual data for research purposes therefore an Institutional Review Board was not consulted to review the protocol. For purposes of this paper however, the description of the information collected will be presented as if presented in an actual research study with the typical research article headings of Introduction, Methods, Results, and Discussion. All participants involved in this project were volunteers and have read and approved this final paper. A qualitative approach was used in the project. Data collection methods included a semi-structured interview, meeting observations, and document reviews.

Setting

Louisville, Kentucky is a metropolitan city that is a good example of the problem of differential food access and health disparities based on race, ethnicity and socioeconomic status. The Food in Neighborhoods Community Coalition released a report on the state of food in Louisville (Geronemus, Mayor's Healthy Hometown Movement, & Congressional Hunger Center, 2010). The report addresses the community's health crisis when it comes to diet-related illnesses and the lack of healthy foods, particularly in the city's poorest neighborhoods. One of Louisville's lowest income neighborhoods, West Louisville is considered a food desert, with an average of 1 full service grocery per 25,000 residents, as compared to the overall Jefferson County ratio of 1 per 12,500 residents (Community Farm Alliance, 2007).

Youth Advocacy Program: Metro Youth Advocates

As more is known about the importance of addressing the problem of food access and health disparities, groups are forming locally to attack these issues. In the case of Metro Youth Advocates, youth are coming together to advocate for change. The YMCA, the Healthy Hometown Movement, Metro United Way, Metro Council, Jefferson County Public Schools and community leaders around Louisville partnered together to form this program that supports youth

advocacy (YMCA, 2014). The goal of the program is to form a diverse group of young people who are "inspired, informed, and engaged to advocate for policy change at the community level." With the goal of diversity, this year's Metro Youth Advocates includes 105 students from 35 zip codes, 28 high schools and 10 ethnicities (YMCA, 2014). Over 8 sessions, the students will learn about critical thinking, problem solving, and public speaking that will allow them to advocate meaningfully with community leaders, public officials and fellow youth. They will also serve as an instrument for projecting the youth voice around the city and aim to get other young people involved in issues that affect them. The issues they address span from education, violence, drugs, recycling and vacant properties. Health is also a primary concern, with last year's cohort doing a presentation about urban agriculture being promoted locally.

Participants

Participants for this case study included one staff member at the YMCA (representing the organizational level of the social ecological model) who was interviewed, and 105 student members of Metro Youth Advocates (representing the community level and interpersonal levels) who were observed and informally interviewed. Three community leaders who served as guest speakers were also observed at the meeting (representing the organizational level). There were no direct participants from the institutional or intrapersonal levels, however, information was obtained regarding the roles in all levels of the social ecological model.

Procedures

Convenience sampling was used to select the interview and observation participants. The first author contacted the YMCA staff member to gauge her interest in being interviewed. Upon interest, an email was sent to schedule a 20-30 minute phone interview at a time convenient to the participant. The interview participant was asked open-ended questions regarding strengths and weaknesses of the MYA program from their respective role. She was also asked questions about how different levels of the social ecological model support MYA and their goal of improving health and advocating for policy change.

Observations were obtained by the first author's attendance at one of the eight sessions in which Metro Youth Advocates met, where the first author took field notes. The meeting session observed was entitled "Stakeholders and Community Investment." Observations of the 105 high school students and three community speakers at the meeting were analyzed using questions regarding overall strengths, their interactions with other stakeholders, and their interest in health promotion on a local level. Document reviews included emails with YMCA staff, handouts from MYA meeting, and information from the MYA website.

Data Analysis

Qualitative data from the interview were transcribed by the first author. Observational field notes were also transcribed during and shortly after the event meeting. Documents such as handouts,

websites, and meeting minutes were also compiled. All three sources of data were then coded for themes and organized. The third author read the interview and observation transcriptions and the document reviews. Discussion among the two authors ensued until consensus was reached regarding the overall themes of the data. The key themes included program strengths, program weaknesses, data related to social ecological model (at organizational, individual, institutional, community, and interpersonal levels), and self-efficacy of members (nutrition/health habits and advocacy/leadership skills), and MYA impact on health, specifically nutrition and food access. The second author reviewed all themes and concurred with the overall findings of the first and third author.

Results

The interview with the YMCA staff member showed strong positive feelings for Metro Youth Advocates and a personal investment in their goals. The strengths were addressed as the diversity of the group, the passion of the students, as well as the support from the community. It was also noted that the students involved are not traditional high-achievers, but culture leaders, which contributes to the diversity of the two cohorts thus far. The only weaknesses noted were finding additional opportunities for MYA to get involved in the city. Addressing other stakeholders involved, the community was described as embracing the program and their goals noting, "MYA is creating a group of young leaders and community organizations are looking for informed youth." City leaders were also described as supportive and as champions for youth advocacy. Jefferson County Schools was seen as a great supporter, having been very cooperative in selecting students for the program and encouraging them to get involved.

Regarding the students on an interpersonal level, it was noted that they "expand their horizons in MYA about issues they may not have thought as much about before" and that the issues they talk about they can apply to their high school environment, like food access and obesity. Other significant positive effects noted in the interview were increasing leadership skills, exposure to networking, and helping the students see the full picture, in regards to understanding the connection between various issues. The participant stressed that the goal is for health promotion to not just be understood and relevant to the students involved in the local food or food access group, but also to the groups working on other issues such as education or violence. In regards to confidence-building, the participant stated that they "notice improvement over the sessions in their interactions with community leaders".

Findings from the observational field notes found the most significant strength as the enthusiasm by the students, their active involvement in every aspect of the meeting, and their interest in getting involved with the organizations the speakers were representing. Other strengths noted by the researcher were an element of fun provided by staff, students and guest speakers, the diversity, and the enthusiasm and support by staff and speakers.

The authors noted that the students appeared extremely informed on their respective topics and on advocacy and community engagement. Through a series of easels posing questions such as "If you had $100 for purpose of improving your community, what would you spend it on?" students were strongly encouraged to write their thoughts. Answers included "Clean up local parks and

plant flowers," "Clean up streets in the West End," "Promote youth involvement in the city," "Buy new seeds and soil to donate to Louisville Grows," and even touched on health issues like "I would use it to show children that being active and going outside is important." Health education was addressed other times during the meeting. Students were encouraged to share stories to the room about something they are passionate about. One student shared their own story attesting to the problem of food deserts and health disparities.

Discussion

The purpose of this case study was to evaluate how a community group is working towards change on a local level and to provide insight on how members of Metro Youth Advocates perceive their roles as leaders in health promotion and advocacy. This case study was also intended to analyze how other stakeholders representing different levels of the social ecological model support Metro Youth Advocates in achieving their goals of advocating for health and positive change. The overall results showed many positive effects of the program, as well as significant support from other stakeholders.

The data showed that Metro Youth Advocates has achieved success in providing young people with an opportunity to use their voice and learn about advocacy. The high school students appeared very informed and actively involved in the meeting and with discussions with city leaders. The information provided from the YMCA staff member demonstrated that the program teaches leadership skills and builds confidence in young people, emphasizing that MYA is developing future community leaders.

The results reflecting the overall success of the MYA program echoed other similar studies. A research study by Blum (1998) analyzed factors in successful adolescent health change interventions. The authors suggested that successful interventions involved programs built on a foundation of youth development. Therefore, it would be hypothesized that a program like Metro Youth Advocates would be successful in developing personal changes regarding the issues they address. Consistent with this case study, involvement in the program seemed to have a positive effect on the members and their thoughts on nutrition and health promotion. The staff member indicated that the issues the students address, including health topics, seemed to affect their own personal beliefs, particularly because they can apply it to their high school environment.

Research has indicated that getting young people involved in issues that affect them locally may be an approach to addressing barriers preventing a nutritious diet. College students participated in urban gardening while learning the complexities of urban food security, while working with and gaining a better understanding of the disadvantaged communities and the challenges they faced (Grossman et al., 2012). However residents from the community expressed hesitation with interacting with and learning from the students participating in the program. Another research study observing student involvement looked at interdisciplinary partnerships and healthy food access in working class minority neighborhoods. The authors found that the capacity of students

was enhanced through the concepts and skills they learned with their involvement and their study of food access (Suarez-Balcazar et al., 2006).

Both observed data and interview data showed that multiple levels of the social ecological model were supportive of MYA and were essential in helping them strive towards their goals of change and advocacy, which in turn affected their own personal health knowledge and beliefs. Although their influence and interaction with the program varied, it was clear that each level of the model had some effect on the efficacy of the program and supported the goals of youth advocacy at the local level.

Conclusion

This case study used a qualitative approach to evaluate multiple aspects of a local community group affecting health. The data collected provided insight on Metro Youth Advocates, a program aiming to create change and to develop future leaders. The results suggest the importance of utilizing our youth to impact health, as well as other local issues that affect them. They also suggest the importance of applying the social ecological model in developing successful programs.

Metro Youth Advocates serves as a model for future community investment programs, not just in health promotion, but in other areas of need as well. It is evident from the data collected in this study that a program guided by a passionate group of young people with the support from other levels in the social ecological model can advocate for local change and can provide a future of leaders in health education and beyond. These findings of this case study highlight the need for community-lead youth advocacy programming. Metro Youth Advocates strategically fills this niche.

References

Blum, R. (1998). Adolescent health: priorities for the next millennium. *Maternal and Child Health Journal, 2*(3), 181-187. doi: 10.1023/A:1021831311114

Cannuscio, C., Weiss, E., & Asch, D. (2010). The contribution of urban foodways to health disparities. *Journal of Urban Health, 87*(3), 381-393. doi: 10.1007/s11524-010-9441-9

Centers for Disease Control and Prevention. A look inside food deserts. Available at http://www.cdc.gov/features/FoodDeserts/. Accessed May 27, 2014.

Community Farm Alliance (2007). Bridging the divide: growing self-sufficiency in our food supply. Retrieved from http://www.communityfarmalliance.org/BridgingTheDivide.pdf. Accessed May 27, 2014.

Cummins, S., Flint, E., & Matthews, S. A. (2014). New neighborhood grocery store increased awareness of food access but did not alter dietary habits or obesity. *Health Affairs, 33*(2), 283-291.

Dixon, J.,Omwega, A., Friel, S., Burns, C., Donati, K., & Carlisle, R. (2007). The health equity dimensions of urban food systems. *Journal of Urban Health, 84*(1), 118-129.

Eberhardt, M. S., & Pamuk, E. R. (2004). The importance of place of residence: examining health in rural and nonrural areas. *American Journal of Public Health, 94*(10), 1682-1686.

Geronemus, K., Mayor's Healthy Hometown Movement, & Congressional Hunger Center. (2010). *The state of food: A snapshot of food access in Louisville.* Louisville, Kentucky: Mayor's Healthy Hometown Movement (Louisville, KY).

Glanz, K., Rimer, B. K., & Viswanath, K. (2008). Health Behavior and Health Education: Theory, Research, and Practice. San Francisco, CA: Jossey-Bass.

Gold, R. S. & Miner, K. R. (2002). Report of the 2000 Joint Committee on Health Education and Promotion Terminology. *Journal of School Health, 72*, 3-7.

Gordon, C., Purciel-Hill, M., Ghai, N., Kaufman, L., Graham, R., & Van Wye, G. (2011). Measuring food deserts in New York City's low-income neighborhoods. *Health & Place, 17*(2), 696-700.

Grossman, J., Sherard, M., Prohn, S. M., Bradley, L., Goodell, L. S., & Andrew, K. (2012). An Exploratory analysis of student-community interactions in urban agriculture. *Journal of Higher Education Outreach and Engagement, 16*(2), 179-196.

U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Available at http://www.healthypeople.gov/2020/. Accessed May 27, 2014.

Hu, A., Acosta, A., McDaniel, A., & Gittelsohn, J. (2011). Community perspectives on barriers and strategies for promoting locally grown produce from an urban agriculture farm. *Health Promotion Practice.*

Israel, B. A. D., Coombe, C. M. P., Cheezum, R. R. M. P. H., Schulz, A. J. P., McGranaghan, R. J. M. P. H., Lichtenstein, R., Burris, A. (2010). Community-Based

Participatory Research: A Capacity-Building Approach for Policy Advocacy Aimed at Eliminating Health Disparities. *American Journal of Public Health, 100*(11), 2094-2102.

Kato, Y. (2013). Not just the price of food: challenges of an urban agriculture organization in engaging local residents. *Sociological Inquiry, 83*, 369-391.

Lovasi, G., Hutson, M., Guerra, M., & Neckerman, K. (2009). Built environments and obesity in disadvantaged populations. *Epidemiologic Reviews, 31*(1), 7-20.

Schoenberg, N. E., Howell, B. M., Swanson, M., Grosh, C., & Bardach, S. (2013). Perspectives on healthy eating among Appalachian residents. *The Journal of Rural Health, 29*, 25-34.

Sorensen, G., Stoddard, A., Peterson, K., Cohen, N., Hunt, M. K., Stein, E., Lederman, R. (1999). Increasing fruit and vegetable consumption through worksites and families in the Treatwell 5-a-day Study. *American Journal of Public Health, 89*(1), 54-60.

Suarez-Balcazar, Y., Hellwig, M., Kouba, J., Redmond, L., Martinez, L., Block, D., Peterman, W. (2006). The making of an interdisciplinary partnership: The case of the Chicago food system collaborative. *American Journal of Community Psychology, 38*(1/2), 113-123.

YMCA. MYA 2014. Retrieved from http://kyymca.org/wp-content/uploads/2013/10/MYA-2014.pdf. Accessed May 27, 2014.

Zachary, D. A., Palmer, A. M., Beckham, S. W., & Surkan, P. J. (2013). A framework for understanding grocery purchasing in a low-income urban environment. *Qualitative Health Research, 23*(5), 665-678.

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Professional Development, Physical Educators, and National Board Certification: What's the Connection?

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Although there are numerous professional development options available for school districts and teachers, there is one that sets itself apart from the others –National Board Certification. The purpose of this essay to briefly explain the process; examine how physical educators and students can benefit; and to discuss Kentucky's commitment to placing high quality teachers, i.e. National Board Certified Teachers, in the schools of Kentucky. Many of those who have participated in the process concur that the experience of becoming a National Board Certified Teacher (NBCT) was key to the improvement of their teaching skills and a number of studies have researched this phenomenon.

National Board Background

The National Board of Professional Teaching Standards (NBPTS) was created in 1987 with the mission of establishing standards and a reliable and valid performance-based process for teachers to certify they had met those standards; these standards were developed by teachers to advance the profession of teachers (NBPTS, Mission & History, 2014). The Board established the Five Core Propositions as the profession's vision for accomplished teaching; these propositions represent what all accomplished teachers share in expertise and dedication to student achievement advancement (NBPTS, Mission & History, 2014).
Proposition 1: Teachers are committed to students and their learning.
Proposition 2: Teachers know the subjects they teach and how to teach those subjects to students.
Proposition 3: Teachers are responsible for managing and monitoring student learning.
Proposition 4: Teachers think systematically about their practice and learn from experience.
Proposition 5: Teachers are members of learning communities.
(http://www.nbpts.org/five-core-propositions#sthash.tmmk87Se.dpuf)

These propositions are the core of all National Board Certificates regardless of grade level or subject areas and delineate the specific knowledge and skills of each certificate area. Today there are 25 different certificate content areas available in several different age/developmental groups within a specific discipline (NBPTS, Mission & History, 2014). National Board Certification is a voluntary, performance-based, and peer-reviewed process (NBPTS, Mission & History, 2014).

The Certification Process

Since its inception, NBC has maintained rigorous standards for each certification area around the five core propositions although the components have been periodically revised. These revisions are based on current research and put into place to help remove the barriers in the process

(NBPTS, Revisions, 2014). In the 2014-2015 cycle, NBC candidates in all certificate areas will be required to complete four components: three portfolio entries, which are submitted online, and a computer-based assessment, which is administered at a testing center. However, rather than one fee for the entire process, each component is priced individually at a cost of $475.00 for a total cost of $1900.00 which is less than the original fee (NBPTS, Revisions, 2014). Also, rather than being committed to completing all 4 components at the same time, candidates can now take one at a time; "candidates will have the option to pay for and submit each component separately" (NBPTS, Revisions, 2014, p.2). These changes make the process easier but it in no way lessens the rigor of the completing each component. Eligibility for NBC is three-fold: 1) bachelor's degree from an accredited institution; 2) a valid state teaching license; and 3) completion of three years of successful teaching in one or more early childhood, elementary, middle, or secondary schools (NBPTS, Revisions, 2014).

The portfolio entries include: Differentiation in Instruction; Teaching Practice and Learning Environment; and Effective and Reflective Practitioner. Each of these three components requires a reflective written commentary along with samples of student work, teaching video, or evidence of impact across the education community (NBPTS, Revisions, 2014). For example, in the entry concerning Differentiation in Instruction, the candidate must demonstrate his/her ability to integrate assessment into instruction to promote learning by all students and must also explain how the results of the assessment informed instructional decisions and improved the candidates teaching (NBPTS, Component 2, 2014). The 4th component is a content knowledge assessment which is administered at a computer-based assessment center.

National Boards in Physical Education

NBPTS first offered certification in physical education in 2000-2001cycle with two age-groups from which to choose – Early and Middle Childhood (EMC) 3 years to 12 years, and Early Adolescence to Young Adulthood (EAYA) ages11-18+. The physical education standards addressed in this certification were created by physical educators and the five core propositions of National Boards were their foundation; assessment of each portfolio component is scored by physical educators. The physical education standards included: knowledge of students; knowledge of subject matter; sound teaching practice; student engagement in learning; high expectations for learners, learning environment; curricular choices; assessment; equity, fairness, and diversity; reflective practices and professional growth; promoting active lifestyles; collaboration with colleagues; and family and community partnerships (NBPTS, 2013). Each physical education NBC candidate submits the 3 portfolio components and the content knowledge assessment; student work samples, teaching video and evidence of impact are required. The content knowledge assessments include the following areas (NBPTS, 2013):

- motor learning, biomechanics, and skill acquisition
- fitness components, related scientific/exercise principles and their application to physical education themes/activities
- safety, equity, and fairness issues

- planning instruction for students with disabilities
- the principles of movement and critical elements of specific movement forms
- integration of skills from other disciplines along with appropriate uses of technology for effective physical education instruction

More specifically within the content knowledge assessment there are items called constructed response items. For example, to address exercise science, the candidate will use his/her "knowledge of health-related fitness components and principles of fitness to plan a developmentally appropriate physical education activity" (NBPTS, Content, 2014, p. 17) or in the exercise about physical activity and wellness, the candidate will analyze a scenario that describes a student's current physical activity levels or daily activities, and make recommendations for a wellness program that is appropriate for the student according to his or her needs, current situation, and age" (NBPTS, Component 1, 2014, p. 17). Therefore, while the structure of the questions remains the same, the specific details of the scenarios may differ.

National Board Certification Review

Research concerning the impact of NBCTs on student-learning has been substantial; and studies have shown that NBC proved to be an effective signal of teacher quality (Cavalluzzo, 2004). Vandevoort, Amrein-Beardsley, and. Berliner (2004, p. 36) reported that:

> "Given the weakness in the studies that showed no relationship between Board certification and student achievement (Stone, 2002 and Stephens, 2003) and the strengths of the Bond, Smith, Baker, & Hattie (2000) study (showing deeper student classroom work) as well as the Goldhaber and Anthony (2004) study and our own, the preponderance of the evidence suggest that the students of NBCTs achieve more."

Besides the relationship between NBCTs and student outcomes, other aspects of NBC have been researched. Petty, O'Connor, Dagenhart, and Good (2007) found that NBCTs gained more respect and recognition; that their confidence increased, and they were afforded more professional opportunities. On the flip side, there are a small number of NBCTs that reported the process was not beneficial because it was too stressful and time-consuming; it was expensive; and there was little or no state or local recognition and/or compensation during the process.

In recent years, there has been more research specific to NBCTs and physical education; this is no doubt because physical education certification has been in existence over 10 years and the numbers of certified physical educators has grown making this research more significant. In the early years of certification in physical education, much of the research was qualitative – NBCTs in physical education giving testimonials, such as these from the "Issues" question in the Journal of Physical Education, Recreation, and Dance (2003, p. 18):

- "I achieved certification in 2001, and I can honestly say that I am better teacher because of the process." Beth H., IL

- "I would recommend seeking national certification to all teachers who desire
  either to improve their teaching or increase their knowledge of teaching." Alice, M, GA
- "…for individual candidates, whether they become certified or not, the process is a tremendously rewarding professional development opportunity." John D., MI
- "Given current struggles that find the physical education field searching for a secure place in the public school curriculum, the creation of master teachers who help students to acquire skills that will benefit them throughout life will eventually have positive repercussions." Eric S., UT

Looking at performance of physical skills, Phillips (2008) investigated competency levels of high school physical education students and found that "students of NBCTs had higher levels of students' competency on all four-performance indicators and on the overall measure when compared with students of non-NBCTs." Continuing with this line of research, Phillips (2012) looked at the characteristics of NBCTs that produced greater competency. She concluded that NBCTs had a command of student learning in terms of instruction, assessment, and communication – components of the certification process.

An investigation (Gaudreault and Woods, 2012) of the benefits for physical education teachers after achieving National Board Certification included: improved teaching; staying current with new teaching theories and methods; elevated confidence; increased professional opportunities; fulfilling collaboration and mentoring experiences; and greater respect from fellow teachers and administrators.

Implications for Kentucky Physical Education Teachers

National Board Certification in Physical Education is a viable professional development tool; the benefits for students and teachers alike have been suggested in a number of studies. Considering the recent changes to the NBC process in terms of financial costs and completion of individual components, these may help reduce a teacher's level stress and time commitment; in addition, school districts may also consider more assistance to teachers seeking national certification. The state of Kentucky has documented a commitment to its teachers obtaining NBC. On July 14, 2000, the General Assembly established, on behalf of the public school teachers and students in the Commonwealth, a goal by the year 2020 there will be at least one (1) national board certified teacher in every public school in Kentucky (KRS.161.131, 2000). The number of NBCTs in Kentucky as of the end of the 2012-2013 cycle indicates there is still work to do to reach that goal (NBPTS, Directory, 2014).

Table 1. Numbers of National Board Certified Teachers (NBCTs) as of December 2013 (NBPTS, Directory, 2014)

Total NBCTs in US	106,389		Total PE NBCTs in US	1947	EMC - 1080	EAYA - 867
Total NBCTs in KY	2,980		Total PE NBCTs in KY	35	EMC - 25	EAYA - 10
					Early Middle Childhood	Early Adolescence Young Adulthood

The General Assembly also established monetary compensation (16 KAR 1:040, 2000) but has since amended it a number of times. The most recent amendment created on June 25, 2013 stated, "The board may limit the number of participants accepted in any given enrollment or application period due to the lack of available funds" (KRS 161.134, 2013). In addition, the following statement was posted on the Kentucky Education Professional Standards Board website

*__Temporary Suspension of Enrollments in the Teachers' National Incentive Trust Fund__

Due to budgetary limitations the EPSB is under a temporary suspension of all enrollments into the Teachers' National Certification Incentive Trust Fund. Should funding become available, staff will enroll the number of candidates into the trust fund commensurate with the amount allocated. (http://www.epsb.ky.gov/certification/nationalboard.asp)

Although, financial assistance in Kentucky has been suspended, one of the biggest incentives for achieving NBC is being granted Rank I, the highest rank for teachers in the state of Kentucky once certification is achieved (KRS 161.1211, 2006).

National Board Certification in Physical Education does carry with it benefits for students, teachers, and school districts. If the 2020 Kentucky goal is to be realized, physical education teachers need to be included; the county map of Kentucky shows where NBCTs in physical education are located as of December 2013. How about at least one National Board Certified Physical Education Teacher in every county?

Diagram 1. NBCPET programs in Kentucky

KAHPERD

Kentucky Association for
Health, Physical Education, Recreation and Dance

References

Cavalluzzo, L. C. (2004). *Is national board certification an effective signal of teacher quality?* Alexandria, Virginia: The CNA Corporation.

Gaudreault, K.L. and Woods, A. M. (2012). The benefits of pursuing national board certification for physical education teachers. *Journal of Physical Education, Recreation and Dance*, 83(8), 49-52.

Kentucky Education Professional Standards Board. (2014). *Certification.* Retrieved from http://www.epsb.ky.gov/certification/nationalboard.asp

16 KAR 1:040 Teachers National Certification Incentive Trust Fund. Retrieved from http://www.lrc.state.ky.us/kar/016/001/040.htm

KRS 161.1211 Classification of Teachers (rank change). Retrieved from http://www.lrc.ky.gov/statutes/statute.aspx?id=3854

KRS.161.131 Legislative findings and goals on national board certified teachers. Retrieved from http://www.lrc.ky.gov/statutes/statute.aspx?id=3862

KRS 161.134 Preparation for National Board Certification--Incentives--Authority to prorate reimbursements if funds insufficient -- Administrative regulations for mentoring program. Retrieved from http://www.lrc.ky.gov/statutes/statute.aspx?id=3865

National Board of Professional Teaching Standards. (2013). *Early and middle childhood physical education: Assessment at a glance.* Retrieved from http://www.nbpts.org/search/node/physical%20education%20standards

National Board of Professional teaching Standards. (2014*). Component 1: Content knowledge at-a-glance.* Retrieve from http://www.boardcertifiedteachers.org/sites/www.boardcertifiedteachers.org/files/Component%201_v4.pdf

National Board of Professional Teaching Standards. (2014). *Component 2: Differentiation in instruction-component at-a-glance.* Retrieved from: http://www.boardcertifiedteachers.org/sites/www.boardcertifiedteachers.org/files/Component%202_v3.pdf

National Board of Professional Teaching Standards. (2014). *Core propositions.* Retrieved from http://www.nbpts.org/five-core-propositions

National Board of Professional Teaching Standards. (2014). *Mission & history.* Retrieved from http://www.nbpts.org/mission-history

National Board of Professional Teaching Standards. (2014). *NBCT Directory.* Retrieved from http://www.nbpts.org/nbct-search

National Board of Professional Teaching Standards. (2014). *Revisions.* Retrieved from http://www.boardcertifiedteachers.org/about-certification/updates

Petty, T.M., O'Connor, K.A., & Dagenhart, D.B. (2007). National board certification: Is Renewal worth it? *Education Forum, 71*(2), 168-182.

Petty, T.M., O'Connor, K.A., & Dagenhart, D.B. (2009). Was it worth it? Some national board certified teachers say no! *The Educational Forum*, *74*(1), 19-24.

Phillips, A. (2008). A comparison of national board certified teachers with non-national board certified teachers on student competency in high school physical education, *Physical Educator*, 65(3), 114+

Phillips, A. (2009). What do they have that I don't have? Characteristics of national board certified teachers. *Journal of Physical Education, Recreation and Dance, 80*(2), 44+

Unknown (2003). Issues. *Journal of Physical Education, Recreation, and Dance, 74*(2), 18+

Vandevoort, L. G., Amrein-Beardsley, A., & Berliner. D. C. (2004). National board certified teachers and their students' achievement." *Education Policy Analysis Archives,12*(46).

College Students' Behaviors, Perceptions, Beliefs, and Attitudes Regarding Tanning Bed Use and Skin Cancer

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Abstract

The World Health Organization (WHO, 2003) considers tanning devices to be carcinogenic. Moreover, the International Agency for Research on Cancer changed their classification of indoor tanning devices from "probably carcinogenic" to "carcinogenic to humans" after a review of the scientific evidence in 2009 (ACS, 2013d). Regardless of the health risks, people still continue to use indoor tanning mainly for appearance reasons. According to the Centers for Disease Control and Prevention (CDC), white women between the ages of 18 and 21 years residing in the Midwest and white women between the ages of 22 and 25 year in the South were most likely to use indoor tanning devices. Many studies have assessed the motives for tanning bed use and tanning behaviors, however, no known studies have measured behaviors, perceptions, beliefs, and attitudes regarding tanning bed use among Kentucky college students. Therefore, the purpose of this research study was to identify behaviors, perceptions, beliefs, and attitudes regarding tanning bed use among college students' ages 18-25 years who attended a southeastern Kentucky University. Both paper and online surveys were administered to 252 undergraduate students enrolled in general health courses at a large southeastern public university (45% rate of completion), during the spring of 2014 semester. The tanning survey included 45 anonymous questions about demographic information, tanning bed use behaviors, risk factor knowledge, and perceptions of skin cancer risk. The results indicated that these college students did not have a considerable amount of misbeliefs about health benefits of tanning bed use and they were knowledgeable about the cancer risks. In addition, the findings suggests that education alone is minimally effective and it will take a shift in social norms to modify tanning behaviors.

Introduction

Cancer is currently the second leading cause of death in America accounting for nearly one of every four deaths each year (American Cancer Society, ACS, 2013a). An annual report of the ACS (2013a) estimated that approximately 1,660,290 new cancer cases would be diagnosed and 580,350 (or the equivalent of 1,600 people per day) Americans are projected to die from cancer in 2013.

Among the types of cancer reported each year, skin cancer is the most common. Of all skin cancers diagnosed, basal and squamous cell skin cancers affect about 2.2 million and melanoma affects more than 76,000 Americans each year (ACS, 2013b). An estimated 12,650 deaths (9,480 from melanoma and 3,170 from other non-epithelial skin cancers) may occur in 2013 (ACS, 2013a). Those at risk for skin cancer include people who have (1) fair skin, (2) natural blond or red hair color, (3) sensitivity to ultraviolet light, (4) a difficult time tanning, (5) a history of excessive sun exposure and sunburns, (6) tanning bed use, and (7) a past history of skin cancer (ACS, 2013c). In fact, the Centers for Disease Control and Prevention (CDC, 2013a) estimated that if current trends continue, one in five Americans may develop skin cancer in their lifetime. Fortunately, skin cancer is preventable and non-life threating if caught early.

Tanning bed use has been found to increase a person's risk for skin cancer and premature aging. The World Health Organization (WHO, 2003) considers tanning devices to be carcinogenic. Moreover, the International Agency for Research on Cancer changed their classification of indoor tanning devices from "probably carcinogenic" to "carcinogenic to humans" after a review of the scientific evidence in 2009 (ACS, 2013d). Furthermore, reducing the number of adolescents and adults who use artificial UV light for tanning is one of the Healthy People 2020 goals (CDC, 2012). Tanning bed use has been associated with a 75% higher risk of melanoma and is particularly dangerous for people who begin tanning younger than age 35 (CDC, 2013b).

According to results from the 2010 National Health Interview Survey, 32% of non-Hispanic white women aged 18-21 reported indoor tanning in 2009. In addition, among non-Hispanic white adults who used an indoor tanning device in 2012, 58% of women and 40% of men reported tanning 10 times or more during this time (CDC, 2013b). Geographically, Non-Hispanic white women between the ages of 18 and 21 years residing in the Midwest (44%) and non-Hispanic white women between the ages of 22 and 25 years in the south (36%) were most likely to use indoor tanning devices (CDC, 2013b). The data from the 2010 National Health Interview Survey indicated the highest prevalence rates of indoor tanning were among white women aged 18-21 (31.8%) and 22-25 (29.6%; CDC, 2012). These age groups reflect the traditional college students in the Midwest and South.

Comparatively, in the southeastern state of Kentucky, the rate of new melanoma diagnoses was 14% higher than the national average from 2002-2006 (United States Environmental Protection Agency, EPA, 2010). It is estimated in 2014 there will be 1,540 new cases of melanoma across the state (ACS, 2014). According to the National Conference of State Legislatures, Kentucky state law (KRS 217.924) regulates tanners between the ages of 14 and 18 by requiring parental consent and the agreement that the minor must use protective eyewear. Moreover, the regulation requires that people younger than 14 years old be accompanied by a parent or legal guardian when using a tanning bed (National Conference of State Legislatures, 2014). However, advocates for stricter tanning laws question whether these regulations are effective.

Some may find that being tan is a fashion or cosmetic statement that has led to a large indoor tanning industry across the state and the country with little to no regulation. Consequently, indoor tanning bed use has become an important public health issue because of the drastic expansion of the industry and the number of individuals now using commercial tanning beds (WHO, 2003, U.S. Department of Health and Human Services, 2014). With the large number of tanning salons there is undoubtedly a noticeably high level of visits to those tanning salons. Also, it is believed there are numerous misconceptions about safety and the risks of tanning bed use. Consequently, the tanning bed industry has reacted to the need for prevention by promoting indoor tanning as healthy and uses terminology such as "safe tan"(Brady, 2012). Moreover, findings suggest that appearance-driven motivations are being targeted for tanning services (Neenan, Lea, & Lesesky, 2012). To further the matter, it has been found that even with risk information available, college students and other young adults continue to use tanning beds (Bagdasarov, Banerjee, Greene, & Campo, 2008; Larkin, 2002).

Tanning Bed Use Behaviors and Social Influences

In a study by Neenan et al. (2012), North Carolina College students were asked to identify reasons for tanning bed use. The most commonly stated reason for tanning bed use among current and former tanners was the belief that they looked better with a tan. Similarly, in a pilot study by Basch, Hillyer, Bash, and Nuegut (2012) in a western New York college, students were asked their beliefs about tanning and sun exposure. Basch et al. (2012) found that there was a positive feeling about the appearance of being tanned and 60% of their participants had used a tanning bed within the last year. In another study by Knight et al. (2002) almost all of their current tanning bed users (92%) expressed that they enjoyed a tanned appearance.

Several studies have measured the social influence on behaviors such as tanning bed use. For example, in a study by Bagdasarov, Banerjee, Greene, and Campo (2008), having a friend who uses a tanning bed was a strong predictor for intent to use tanning beds. Bagdasarov et al. (2008) stated that, "research suggests that tanning behavior may be influenced by social norms, health practitioners should examine normative messages and interventions to reduce tanning bed use" (p. 560). Furthermore, Attal (2008) studied whether sorority affiliation affected indoor tanning frequencies in college students. The results indicated that sorority members have a higher risk of using a tanning bed one or more times ever; however the monthly and semimonthly frequency of using a tanning bed is not affected by sorority membership compared to the sample of non-sorority members. Therefore, there appears to be no association between sorority membership and frequency of tanning bed use.

Addictive Nature of Tanning

According to Poorsattar and Homung (2007), "The potential addictive nature of UV light tanning might explain why educational prevention efforts have been largely unsuccessful" (p. 375). Addiction research has indicated that tanning bed users showed characteristics of substance-

related disorder (SRD), which may explain why people continue to tan after knowing the risks. Furthermore, Poorsattar and Homung (2007), asked students who reported tanning bed use to complete the CAGE (cut down, annoyed, guilty, eye opener questionnaire tool) questionnaire to determine whether tanning bed users showed symptoms of SRD and whether they scored positively with regard to UV light use. In the study, these researchers found that 18% of the students who admitted to tanning scored positive on the CAGE questionnaire assessing addictive characteristics. This compares to research on drinking college students that scored positive CAGE relative to addiction (Poorsattar & Homung, 2007).

Purpose of the Study

Several studies (Knight, Kirincich, Farmer, & Hood, 2002; Neenan, Lea, & Lesesky, 2012; Poorsattar & Homung, 2007) have assessed the reasons for tanning bed use and tanning behaviors among college students. However, no known studies have measured the behaviors, perceptions, beliefs and attitudes regarding tanning bed use risks among Kentucky's college students. Therefore, the purpose of this research study was to identify behaviors, perceptions, beliefs, and attitudes regarding tanning bed use among college students' ages 18-25 years who attended a southeastern Kentucky University. It is hypothesized that college students do perceive a high risk for cancer from tanning bed use but continue to use them.

Methods

Survey Development

The tanning survey was created by the researchers and the question development was based on questions that the research team believed was missing from other surveys about characteristics of tanning bed use. To assess content validity, a panel of Public Health professionals, who were experts in questionnaire development, were asked to review and edit the survey. A pilot study was conducted to improve format and item clarity, as well as to establish test-retest reliability for the survey. The participants in the pilot study were college students same as the participants in this study. The survey was administered twice to the pilot group of 14 students with two and half hours between administrations. The students' initial responses established item clarification and test-retest reliability.

Subjects and Procedure

Participants included 252 undergraduate students from a southeastern Kentucky University enrolled in nine general health courses. Male and female students between the ages of 18-25 years were invited to complete an anonymous, 45-item questionnaire either online or a paper survey. The survey was composed of Likert scale questions, multiple choice and one open-ended question. A consent form was included on the survey that was given to all potential participants and completion of either survey implied consent. The researcher verbally read the consent and

briefly described the purpose of the study to the live lecture participants. The online survey included the consent information at the beginning of the survey. The survey included questions on demographic information, tanning bed use behaviors of current, past and non-users, knowlegde and regulation beliefs, social influences, tanning bed addiction, perception of health benefits and the risk of tanning bed use and skin cancer. In addition, one qualitative question was asked about the students motivation for tanning bed use. The data were collected over a span of approximately one week.

Results

There were 252 students enrolled in nine courses who were invited to complete the survey. Of these 252 students, 113 (45%) responded either by completing the online survey or a paper survey. Respondents were primarily female (74%) and white (95%). The majority of respondents were 18 - 21 years of age (57%) while the second age range was 22-25 years (27%). There was only one survey that was excluded for missing age data. Also, the respondents older than 26 years were excluded, yielding 93 final surveys for analysis. Of this sample, 68% indicated they were currently using a tanning bed (53%) or had used one at least once in their life time (15%). For the purpose of this paper, past tanning bed users were defined as those who have not used a tanning bed in the last year and current users were respondents who had used a tanning bed in the last year (See Figure 1). Overall, females comprised 89.6% of current tanning bed users and 61.5% of past tanning bed users. Moreover, the majority (68.9%) of current and past users were between the ages of 18-21 years.

Behaviors of Current, Past and Non-Users

Among college students surveyed; over half (64.4%) reported that they had not asked a dermatologist or doctor to check their moles, 5.6% were not sure, and only 29% had asked to have their moles checked. Also, college students were asked if awareness of the risks of skin cancer changes behavior; 28% responded neutral, 18.3% disagreed, and 37.6% agreed. When college students were asked if wearing protective eye wear in the tanning bed was important; 6.3% of current users reported no, 93.8% of current users reported yes, 7.7% of past users reported no, and 92.3% of past users reported yes. In addition, college students were asked approximately how many times they had used a tanning bed (See Figure 2).

College students were asked about how often they used sunscreen and frequency of sunburns on a Likert Scale using the following possibilities; always, most of the time, neutral, never, and sometimes (See Table 1).

Table 1. College student's behavior of current, past and non-users

Question	Always	Most of the Time	Neutral	Sometimes	Never

How often do you use sunscreen?	5.6%	26.7%	5.6%	46.7%	15.6%
How often do you get sunburned?	3.3%	7.8%	24.4%.	45.7%	18.9%

Knowledge and Regulation Beliefs

The majority (60.0%) of respondents indicated that tanning beds, according to the World Health Organization, are rated high as a carcinogen to humans. In addition, 48.3% of respondents reported that they were not sure how long a person should avoid intentional exposure to sunlight or tanning beds after tanning bed use and 7.9% reported 48 hours which is the recommended time.

When college students were asked if melanoma is the deadliest form of skin cancer over half (70.0%) of respondents reported yes, 25.6% were not sure, and 4.4% reported no. Just over seventy-five percent of college students (75.3%) reported that childhood and adolescent sunburns did increase the risk of melanoma, 4.5% said no, and 20.2% were not sure. Furthermore, college students answered whether there should be legislation governing tanning bed use and if persons under the age of 18 years should be allowed to use tanning beds based on a Likert scale of neutral, strongly disagreed, disagreed, strongly agreed, and agreed (See Figure 3).

Social Influences of Tanning Bed Use

Respondents were asked if they were ever pressured by a friend or family member to use a tanning bed with 84.4% reporting no and 14.4% reporting yes. Similarly, 56.5% of respondents had never gone tanning with a parent and 41.9% answered they had. However, of current and past users, 87.1% revealed that a parent was aware of their tanning bed use and 83.7% had parents who were aware of their first tanning visit. In addition, the majority (69.3%) of first-time tanning visits occurred when the student was under the 18 years of age.

Addictive Nature of Tanning

Current and past tanning beds users were asked to rate issues of an additive nature using a scale based on the following options; no, not sure, or yes. When current and past tanning bed users were asked if they ever felt bad for using a tanning bed; 47.9% of current users reported no, 47.9% of current users reported yes, 38.5% of past users reported no, and 46.2% of past users reported yes. Only 4.2% of current tanning bed users and 7.7% of past users believed they were addicted to tanning. Likewise, respondents were asked if tanning bed use resembles substance dependence (addiction) disorders based on a Likert Scale of strongly agree, agree, neutral, disagree and strongly disagree (See Figure 4).

Perception and Belief of Health Benefits

In this study, 66.0% of current users, 48.3% of non-users and 30.8% of past users agreed they were at risk for skin cancer. Though the majority of respondents (68%) used a tanning bed at some point in their lives, 98.9% believed that skin cancer prevention was important. Similarly, college students were asked questions about their perception of the benefits of tanning bed use based on a Likert Scale of; strongly agree, agree, neutral, disagree and strongly disagree (See Figure 5).

Perception and Belief of Risk

College students were asked to rate their perceptions and beliefs of risk of tanning bed use based on a Likert Scale using the following possibilities; strongly agree, agree, neutral, disagree, and strongly disagree (See Table 2).

Table 2. College student's perception of the risks of tanning bed use.

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Because the intensity of UV can be controlled, tanning beds are safer than the sun?	2.2%	3.3%	10%	57.8%	26.7%
An indoor base tan provides protection from the sun?	0%	6.7%	24.4%.	46.7%	22.2%
Tanning bed use in moderation has no skin cancer risks?	0%	3.3%	14.4%	46.7%	35.6%
Skin-reddening from tanning bed use is acceptable?	0%	5.6%	15.6%	51.1%	26.7%
Because the time in a tanning bed can be controlled, it is safer than tanning in the sun?	2.2%	5.6%	21.1%	45.6%	25.6%
Skin cancer prevention is important?	63.3%	35.6%	1.1%	0%	0%
Tanning bed use has cancer risks?	48.9%	47.8%	3.3%	0%	0%
Tanning accelerators increase tanning risks?	15.6%	37.8%	36.7%	10%	0%
The more time spent in a tanning bed increases the risk of skin cancer?	40%	50%	10%	0%	0%

Qualitative Results

Using an open-ended question, students were asked about their motivation for tanning bed use; (34%) reported using tanning beds because they wanted a tanned appearance, 18% reported using tanning beds to increase confidence or self-esteem, 16% reported using tanning beds for clearing up their acne or eczema, and 14% reported therapeutic reasons. Tanned appearance answers included: to have a base tan all year, to be dark or tan, to have an even tan. Some therapeutic reason for using tanning bed included: relaxing or reduce stress and that it helps with sore muscles. A few used a tanning bed to keep from burning at the first of summer or while on vacation.

Discussion

In this study, 68% of surveyed college students had used a tanning bed at least once in their lifetime, which is a higher prevalence than past studies on tanning bed use among college students (Neenan et al., 2012). Similar to other studies, our study found white females aged 18 to 25 years to be the majority of current and past tanning bed users **(**CDC, 2012; Neenan et al., 2012**).** Basch et al. (2012) stated that recent studies of tanning practices revealed that over 80% of students felt that having a tan was very or somewhat important and the attitude was higher in females. Appearance was found to be the most common motivation for tanning bed use. This is consistent with aforementioned research on reasons college students use tanning beds.

This attitude is most likely motived in some part by social norms that highly value appearance, especially for women (Holman et al., 2013). With research (Watson et al., 2013) suggesting that behavior may be influenced by social norms, we found 87.1% of these college students' parents were aware of tanning bed use, which may indicate parental acceptance of tanning bed use. However, we did not find that current or past tanning bed users were being pressured by a friend or family member as a strong factor of use like other studies (Bagdasarov et al., 2008).

Remarkably, there was not a considerable amount of misbeliefs about health benefits of tanning bed use. This is demonstrated by, the high percentage (63.3%) of these college students who strongly believed that skin cancer prevention was important and that tanning beds do not provide a healthy tan (77.8%). The college student sample was very well-informed about the risks of tanning bed use and skin cancer. Only a small percentage (3.3%) of college students believed that tanning beds used in moderation had no skin cancer risks and was safer than the sun because the intensity of UV is controlled (5.5%). Additionally, most users realized that tanning bed use does not provide any health benefits and increases the risk of developing skin cancer. Based on our findings, it's plausible to assume that tanning bed risks are being communicated to young adults but even with false safe tanning bed perceptions, college students continue tanning beds behaviors. .

This study found that these college students' responses were unexpectedly inconsistent regarding regulation beliefs. Almost half (43.3%) stayed neutral on whether there should be legislation

governing tanning bed use and the rest of the responses were split. However, exactly half (50%) of responses believed that persons under the age of 18 years should not be allowed to use a tanning bed. Nevertheless, the U.S. Food and Drug Administration (FDA) recommended stricter regulations on indoor tanning devices and several states (Illinois, Nevada, Texas, Connecticut, and New Jersey) passed laws that prohibited minors under a certain age from tanning devices (American Academy of Dermatology, 2014).

There are several limitations to this study. A small sample size obtained from an online survey and surveys from students attending class on particular day's limits generalizability to young adults in Kentucky. In addition, it is not known if all of the college students that participated in the study were Kentucky natives. There could be some bias among those who were not present for the live survey and those who elected to take the survey. Behaviors, perceptions, beliefs, and attitudes regarding tanning bed use was also assessed by self-report, which may not correspond to actual use. However, this study has several strengths. This study adds to the gaps in current knowledge about behaviors, perceptions, beliefs, and attitudes regarding tanning bed use among Kentucky college students' ages 18-25 years.

Conclusions

The results imply that this sample of college students fail to understand the need to protect themselves from risks of skin cancers, even with knowledge of risks associated with tanning bed use. This was expected on some levels based on previous studies, demonstrating that college students place more value on appearance than prevention of skin cancer (Basch et al., 2012.). We agree with Knight et al. (2002), and Bagdasarov et al. (2008), that education alone is minimally effective and it will take a shift in social norms to modify tanning behaviors. The review of literature on tanning bed use included studies that have measured the prevalence of tanning bed use, high-risk indoor tanning behavior, and reasons for tanning bed use, tanning bed addiction and sorority affiliation. Overall, studies have demonstrated the majority of college students were knowledgeable about the risks of artificial UV exposure and educational efforts were reaching tanning bed users; however, this has not changed indoor tanning behavior (Knight et al., 2002).

Future Implications

More research should be conducted to assess the apparent disconnect for college students' understanding between UV-exposure from indoor tanning and the realities of skin cancer. Addiction may help explain why tanning bed use is difficult to modify. Therefore, prospective interventions should take into consideration the possibility of tanning bed addiction to help further positive results in regard to a very difficult behavior to change. Stricter tanning bed legislation along with consistent skin cancer prevention education efforts in schools, communities, and at home for teens and college students are warranted.

References

American Academy of Dermatology (2014). *Indoor tanning.* Retrieved from http://www.aad.org/media-resources/stats-and-facts/prevention-and-care/indoor-tanning

American Cancer Society (2013a). *Cancer facts and figures 2013.* Retrieved from http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2013/index

American Cancer Society (2013b). *Skin cancer research updates.* Retrieved from http://www.cancer.org/research/acsresearchupdates/skin-cancer-research

American Cancer Society (2013c). *Skin cancer facts.* Retrieved from http://www.cancer.org/cancer/cancercauses/sunanduvexposure/skin-cancer-facts

American Cancer Society (2013d). *Known and probable human carcinogens.* Retrieved from http://www.cancer.org/cancer/cancercauses/othercarcinogens/generalinformationaboutcarcinogens/known-and-probable-human-carcinogens

American Cancer Society (2014). *Skin cancer facts & figures 2014.* Retrieved from http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2014/

Attal, A. L. (2008). Effects of sorority participation on artificial tanning habits in college students. *Undergraduate Research Journal for the Human Sciences*. Retrieved from http://www.kon.org/urc/v8/attal.html.

Bagdasarov, Z., Banerjee, S., Greene, K., & Campo, S. (2008). Indoor tanning and problem behavior. *Journal of American College Health*, *56*(5), 555-562.

Basch, C. H., Hillyer, G. C., Basch C. E., & Neugut, A. I. (2012.) Improving understanding about tanning behaviors in college students: A pilot study. *Journal of American College Health*, 60(3), 250-6. doi:10.1080/07448481.2011.596872

Brady, M.S. (2012). Public health and the tanning bed controversy. *Journal of Clinical Oncology*, 30(14), 1571-1573. Doi: 10.1200/JCO.2011.40.9359

Centers for Disease Control and Prevention. (2012). Use of indoor tanning Ddvices by adult-United States 2010. *Morbidity and Mortality Weekly Report*, 61(18), 323-326. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6118a2.htm

Centers for Disease Control and Prevention. (2013a).What is the CDC doing about skin cancer. Retrieved from http://www.cdc.gov/cancer/skin/what_cdc_is_doing/index.htm

Centers for Disease Control and Prevention. (2013b). Skin cancer. Retrieved from http://www.cdc.gov/cancer/skin/basic_info/indoor_tanning.htm

Holman, D. M., Fox, K. A., Glen, J. D., Guy, G. P, Watson, M., Baker, K. …Geller, A. C. (2013). Strategies to reduce indoor tanning: Current research gaps and future opportunities for prevention. *American Journal of Preventive Medicine*, 44(6), 672-681. doi:10.1016/j.amepre.2013.02.014

Knight J. M., Kirincich A.N., Farmer E.R., & Hood A.F. (2002). Awareness of the risks of tanning lamps does not influence behavior among college students. *Arch Dermatol*, 138(10), 1311-1315. doi:10.1001/archderm.138.10.1311

Larkin, M. (2002). US university students ignore tanning lamp risks. *Lancet*, 360(1941), 1226.

National Conference of State Legislatures (2014). *Tanning restrictions for minors-state laws.* Retrieved from http://www.ncsl.org/research/health/indoor-tanning-restrictions.aspx#Tanning

Neenan, A., Lea, S., & Lesesky, E. (2012). Reasons for tanning bed use: A survey of community college students in North Carolina. *North Carolina Medical Journal*, 73(2,) 89-92. Retrieved from: http://www.ncmedicaljournal.com/wp-content/uploads/2012/03/NCMJ_73201_web.pdf

Poorsattar, S. P., & Hornung, R. L. (2007). UV light abuse and high-risk tanning behavior among undergraduate college students. *Journal of the American Academy of Dermatology*, *56*(3), 375-379. doi:10.1016/j.jaad.2006.08.064

U.S. Department of Health and Human Services. (2014). *The Surgeon General's call to action to prevent skin cancer.* Retrieved from: http://www.surgeongeneral.gov/library/calls/prevent-skin-cancer/call-to-action-prevent-skin-cancer.pdf

United States Environmental Protection Agency. (2010). Facts about: Skin cancer Kentucky. Retrieved from: http://www.epa.gov/sunwise/doc/ky_facts_web.pdf

Watson, M., Holman, D. M., Fox, K. A., Guy, G. P., Seidenberg, A. B., Sampson, B. P., & ... Lazovich, D. (2013). Preventing skin cancer through reduction of indoor tanning: Current evidence. *American Journal of Preventive Medicine*, 44(6), 682-689. doi:10.1016/j.amepre.2013.02.015

World Health Organization (2003). *Artificial tanning sun beds: risk and guidance.* Retrieved from http://www.who.int/uv/publications/sunbedpubl/en/index.html

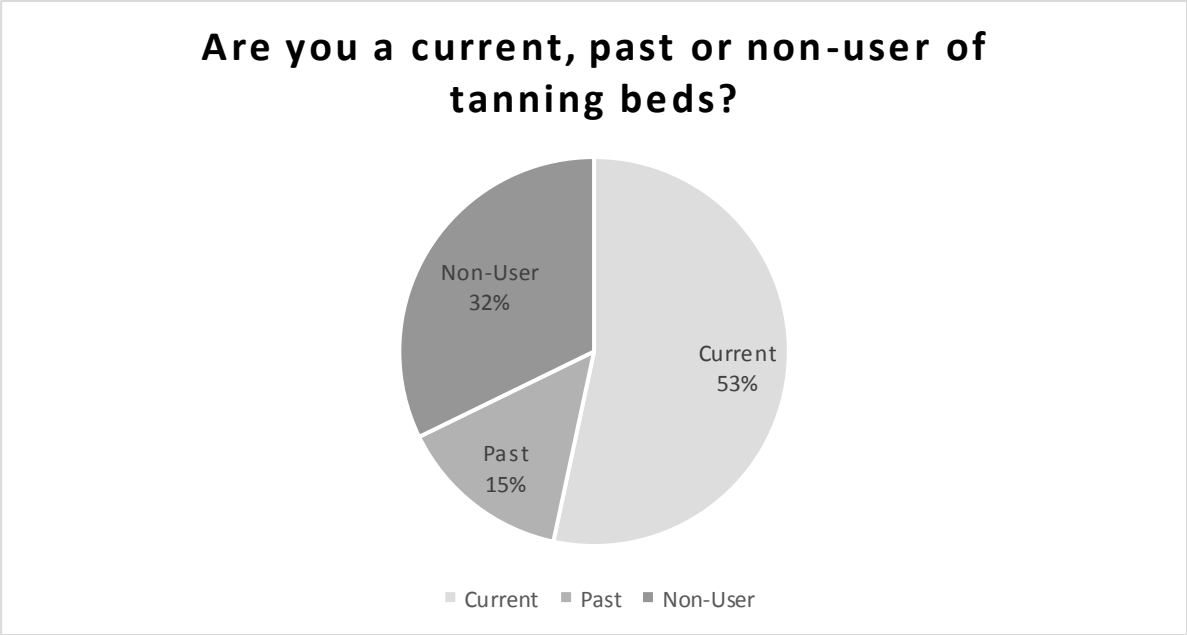

Figure 1. Are you a current, past or non-user of tanning beds? This figure illustrates college students self-reported tanning bed usage.

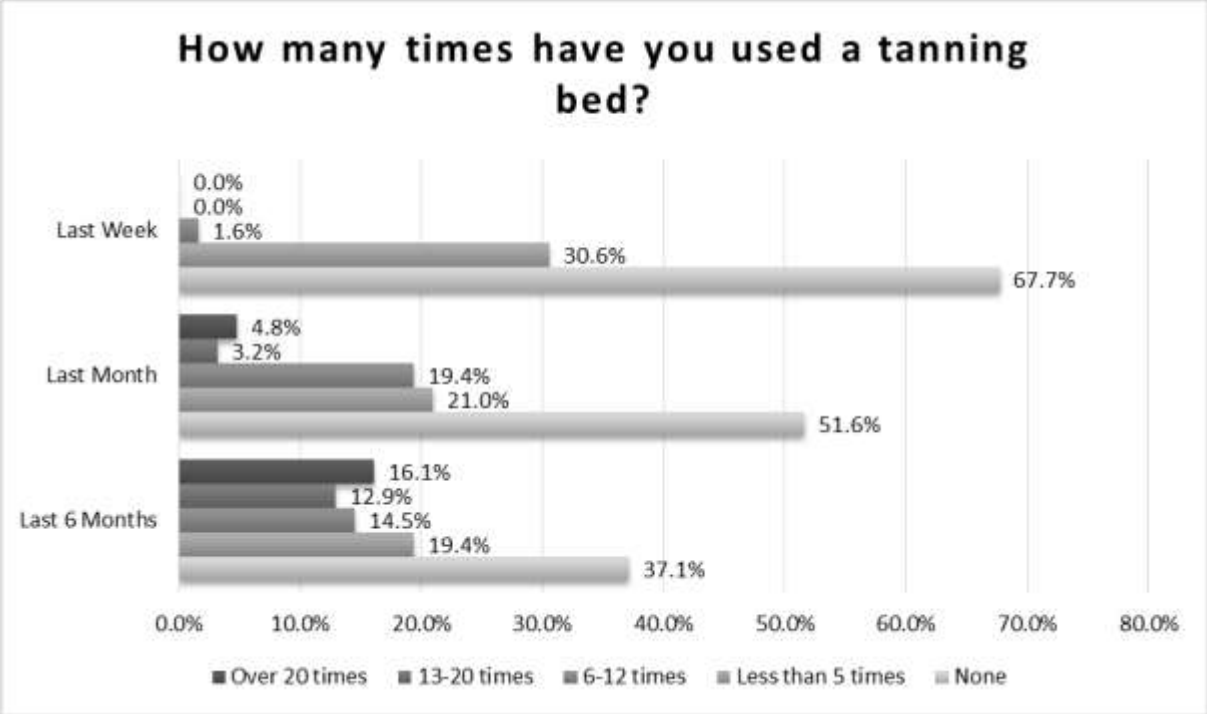

Figure 2. How many times have you used a tanning bed? This figure illustrates college students self-reported tanning bed usage in the last 6 months, last month and last week.

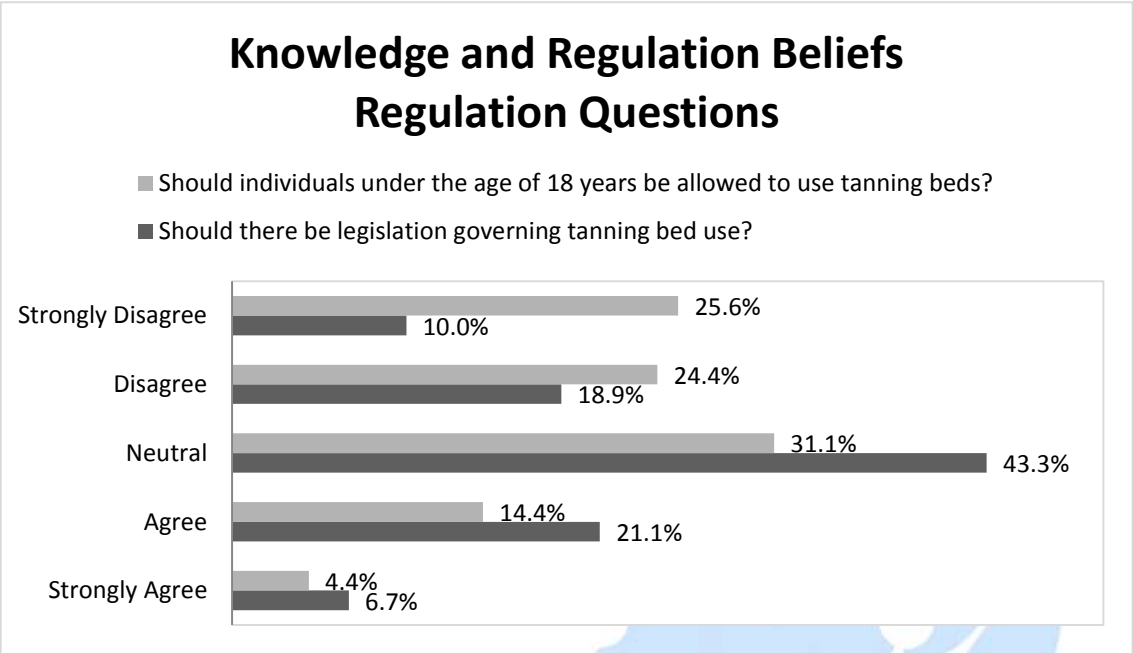

Figure 3. Should there be legislation governing tanning bed use? Should individuals under the age of 18 years be allowed to use tanning beds? This figure illustrates college student's regulation beliefs.

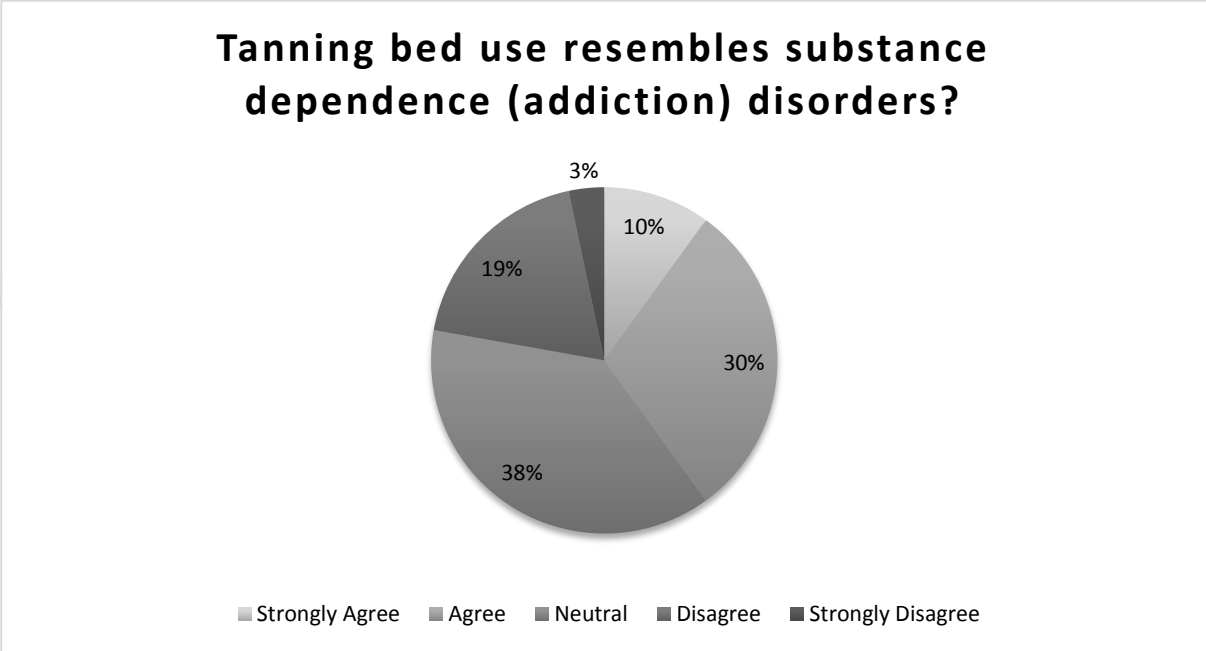

Figure 4.Tanning bed use resembles substance dependence (addiction) disorders? This figure illustrates college student's belief whether or not tanning bed use can be addictive.

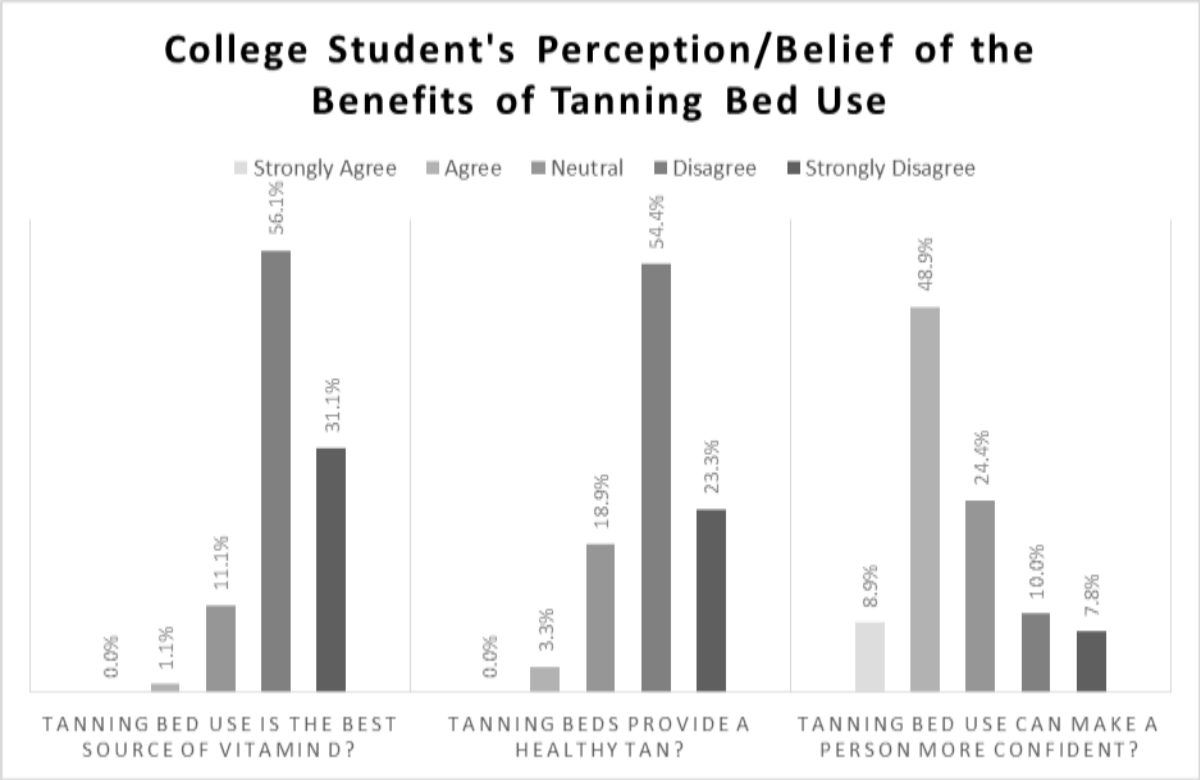

Figure 5. College student's perception/belief of benefits of tanning bed use. This figure illustrates college student's perception/belief whether or not tanning bed use has any benefits.

EVIDENCE-BASED PRACTICE IN ADAPTED PHYSICAL EDUCATION: INTEGRATING THEORY AND PRACTICE

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Introduction

Research by Hutzler (2011) found that evidence-based practice (EBP) helps decision making that is based on research outcomes. EBP has its origin in medicine, but can be applied to other disciplines such as social work, nursing, and education (Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996). Moreover, EBP is a growing movement in the medical sciences that affects the behavioral and educational sciences so that they use current research evidence in their fields (Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996). EBP can be explained as a three-legged model proposed by Haynes, Devereaux, and Guyatt (2002), consisting of (a) the best available research evidence provided by researchers and synthesized through qualitative appraisals of content compiled through systematic searches, (b) practitioners who use evidence within their decision-making process to counterbalance missing knowledge and potential bias, and (c) service recipients or patients, who may have their own insights from previous knowledge or experience and intuition and who should agree with the proposed intervention plans. McKinlay, McLeod, Dowell, and Howden-Chapman (2001) stated that EBR includes meta-analyses, systematic reviews, and individual data-based studies directed at improving the scientific reasoning for decision-making processes.

Gaps between Theory and Practice

The primary gap between modified physical education and practice is fundamentally affected by two variables. First, there is a lack of empirical studies in adapted physical education fields. Second, few attempts have been made to produce the meaningful and integrated body of knowledge in modified physical education. The field of modified physical education needs additional meaningful applied research to provide quality practices. Knudson (2005) pointed out that researchers must work more on applied research instead of theoretical research. In other words, few useful studies are available to practitioners to use in their practices. In addition, very few publications integrate their findings and emphasize application. It is also important to carefully evaluate the accuracy of information on the Internet. Many practitioners search online websites to collect information for their professional practice in spite of the large percentage of websites may provide incomplete information. The modified physical education fields will continue to improve, if researchers focus on creating and disseminating meaningful applied research. Therefore, the purpose of this paper is to address gaps between theory and practice and to explain developing plans for EBP in modified physical education.

Developing Plans for Evidence-Based Practice in Modified Physical Education

This section summarizes two strategic plans that can be utilized to encourage EBP in modified physical education. The largest obstacle facing modified physical education is finding current studies to apply in practice. Metzler (1994) said that by increasing the emphasis on integration in adapted physical education (APE), professionals may make a positive impact on minimizing the gaps between theory and practice. The increasing body of knowledge in modified physical education requires more quantitative and narrative reviews of the published literature in professional journals. In this regard, the fundamental application of EBP in modified physical education is to provide intervention and a proper exercise program for an individual client. Jin and Yun (2010) proposed a three-step process to determine and integrate research evidence into practice. They indicated there are three steps in EBP: creating evidence, disseminating evidence, and implementing evidence. First, creating evidence is related to developing questions based on a specific population to provide intervention that contributes to positive outcomes and to searching peer-reviewed articles to amass scientific information about modified physical education. Second, disseminating evidence assists practitioners in applying evidence-based findings into their practices. Third, implementing evidence is making a decision in practice. More importantly, decision making should focus on the strength of available research findings, on service recipient's preferences, and on professional judgment. Examples of strategies for applying evidence-based practices are listed in Table 1.

Table 1. Strategies for implementing evidence-based practices in adapted physical education

Types of Disabilities	Resources for Evidence-Based Practices	Content Description
Behavioral Disabilities	Kauffman, J. M. (2005). *Cases in emotional and behavioral disorders of chidren and youth.* Upper Saddle River, NJ: Pearson Education.	This book provides real-life examples that can be introduced in adapted physical education.
Autism Spectrum Disorders	Kluth, P. (2003). "You're Going to Love this Kid!": *Teaching students with autism in the inclusive classroom.* Baltimore: Paul H. Brookes.	This book suggests how physical education teachers can utilize their classroom environments to help student involvement in class activities and schoolwork.
Specific Learning Disabilities	Grosshans, J., & Kiger, M. (2004). Identifying and teaching children with learning disabilities in general physical education. *Journal of Physical Education, Recreation and Dance, 75,* 18-20.	This article gives strategies for teaching children with learning disabilities in an inclusive physical education setting.

Visual Impairments	Mastro, J., & Hassing-Bonnette, T. (2006). Our noisy national pastime revisited. *Palaestra*, *22*, 32-36.	This article introduces the sport of beep baseball.
Cerebral Palsy	Fitness Canada. (1994). *Moving to inclusion: Cerebral palsy*. Ottawa, ON: Active Living Alliance for Canadians with a Disability.	This book provides physical education teachers with practical tips to teach students with cerebral palsy in general physical education classes.
Spinal Cord Disabilities	American College of Sports Medicine (ACSM). (2003). *ACSM's exercise management of persons with chronic diseases and disabilities* (2nd ed.). Champaign, IL: Human Kinetics.	This book provides suggestions for exercise programming and testing for people with spinal cord disabilities.

Discussion

In this paper, I have reviewed evidence-based practice and research in modified physical education. Evidence-based practice is a transdisciplinary concept that aims to promote accountability for practitioners. There are three components in EBP: (1) the best available research evidence provided by researchers and synthesized through qualitative appraisal of content through systematic searches; (2) practitioners who use evidence in their decision-making process to prevent potential bias; and (3) service recipients, who may have their own insights from their experience, general knowledge, and intuition and who should approve the proposed intervention. In this regard, integrating EBP helps practitioners make decisions about their practice. Therefore, practitioners can improve their critical-thinking skills through successful application of EBP.

References

Haynes, R. B., Devereaux, P. J., & Guyatt, G. H. (2002). Physicians' and patients' choices in evidence based practice: Evidence does not make decisions, people do. *British Medical Journal, 324*, 1350.

Hutzler, Y. (2011). Evidence-based practice and research: A challenge to the development of adapted physical activity. *Adapted Physical Activity Quarterly, 28*, 189-209.

Jin, J., & Yun, J. (2010). Evidence-based practice in adapted physical education. *Journal of Physical Education, Recreation, and Dance, 81*, 50-54.

Knudson, D. (2005). Evidence-based practice in kinesiology: The theory-to-practice gap revisited. *Physical Educator, 62*, 212-221.

McKinlay, E., McLeod, D., Dowell, T., & Howden-Chapman, P. (2001). Clinical Practice Guidelines – a selective literature review. Wellington: Otago University, Wellington School of Medicine and Health Sciences. Retrieved from http://www. Nzgg.org.nz/download/files/WSM_literature_review.pdf August 2004.

Metzler, M. W. (1994). Scholarship reconsidered for the professoriate of 2010. *Quest, 46*, 440-455.

Sackett, D. L., Rosenberg, W. M. C., Muir Gray, J. A., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: What it is and what it isn't. *British Medical Journal, 312*, 71-72.

ACADEMIC TUTORING PROGRAM AND SERVICES FOR SUPPROTING COLLEGIATE STUDENT-ATHLETES

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Abstract

This article addressed the needs of providing adequate academic service and support to help collegiate student-athletes enhance their learning experience and improve their academic performance. The authors introduced the mission and essence of Council for the Advancement of Standards in Higher Education (CAS) and provided the best strategies and services operated by a regional state university in Eastern Kentucky. Examples and practices of an in-house tutoring model as a fundamental part of the Academic Athletic Support Services are illustrated.

Introduction

The life of a student-athlete can be a continuous struggle between their athletic and academic role. It is difficult for young athletes to make a transition from high school into the world of college athletics. Being an intercollegiate athlete can be a very a rewarding experience; however, it can also be also be a challenging one (Jordan & Denson, 1990). The constant struggle to find equilibrium between athletic and academic pursuits never ends. The goal of National Association of Collegiate Athletics (NCAA) is to provide a well-sounded collegiate experience that involves a balance of academics and competitive sports. However, critics of NCAA academic reforms often criticize institutions with a big-time athletic program often severely compromise academe (Anderson & South, 2007; Booth, 2007). Those critics also argue that many academically underprepared student-athletes are placed at the educational institution above their academic capabilities (Grasgreen, 2012; Gurney & Southall, 2013; Palaima, 2011). Football and basketball players had lower academic performance than their athletic peers (Booth, 2007; NCAA, 2013a; Southall, Eckard, Nagel, Tomalski, & Lewinter, 2010). Student-athletes normally would receive greater positive reinforcement from their athletic performance than from their academic performance (Sage & Eitzen, 2013). Athletes' academic performance is either not properly monitored or inappropriately manipulated (Beamon & Bell, 2006; Newberry, 2011; Smith, 2010). Due to the poor academic performance of student-athletes and excessive academic infractions, the Knight Commission on Intercollegiate Athletics had collaboratively made a significant effort to improve each institution's academic integrity and graduation rate. This academic reform introduced new measurements of the academic success (i.e., Graduation Success Rate, GSR and Academic Progress Rate, APR), as well as new academic performance evaluation standards such as 40/60/80 rule, and 6-hour rule (see Appendix I for details) (NCAA, 2003). After NCAA adopted bylaw 16.3.1.1 in 1991, academic support services centers started surfacing within the Division-I athletic departments (NCAA, 2013b). Those centers were

established to provide advising, mentoring, and tutoring services to support student-athletes' academic needs.

Academic Policies and Support Services for Collegiate Athletics

Bylaw 16.3.1.1 ordered NCAA member institutions to "make general academic counseling and tutoring services available to all student-athletes (NCAA, 2013b). The bylaw also allowed the use of "non-athletic student support services" as an alternate (NCAA, 2013b). Contingent on the financial status of athletic programs, Division-I administrators had to decide between creating new academic support structures within their departments or relying on non-athletic support services offered on campus. After another academic reform in 2003, the establishment of athletic academic support services became even more apparent.

Starting from academic year of 2003-04 and each year after, athletic administrators were required to compile and submit the term-by-term academic eligibility, retention and graduation standings for student-athletes on scholarship (NCAA, 2003). Furthermore, the NCAA "assigned punitive actions (including the elimination of a team's athletics-related financial aid, banning from postseason championship participation, restrictions on NCAA membership rights, and public censure) to institutions whose teams did not meet retention, eligibility, and graduation thresholds" (Gurney, 2011). Those aforementioned disciplinary actions prompted increases in athletic budgets for academic support. In order to avoid NCAA penalties, athletic administrators recognized the need for employing in-house academic advisors and counselors to monitor and improve eligibility, retention and graduation rates of their athletes.

To improve student-athletes' academic performance, researchers firmly advocate for the use of the athletic academic support services. Researchers also found that student-athletes face a number of unique challenges that are unknown to the general the student body. For instance, student-athletes are not able to utilize academic support services normally available to the non-athlete students due to their exhaustive practice and traveling schedule. The operating hours of student-oriented services are often during athletes' workouts and practice times. Therefore, academic support services should be designed to tailor to the specific needs of student-athletes and accommodate their busy schedules (Jordan & Denson, 1990). The basic academic support services often cover advising, mentoring, and tutorial services. Peer tutoring was acknowledged as an essential part of athletic support services (Beakman, 2012). Peer tutoring has been demonstrated as an effective method to improve student academic performance, (House & Wohlt, 1989; McKellar, 1986). Positive impact of tutoring on student retention, graduation rates, final grades, and course completion were also well documented (Boylan, Bonham, & Bliss, 1994). In order for tutoring programs to be successful and effective, researchers advocate for proper offering of training, supervision, and feedback (Dvorak, 2004; Maxwell, 2001).

In terms of offering academic services to student-athletes, mid-major and regional Division-I schools normally were at a financial disadvantage and could not afford to support an extensive

academic support center. Twelve member institutions of the Ohio Valley Conference (OVC), "nation's eighth-oldest NCAA Division-I conference" are a textbook example of such depiction (OVC, 2012). The flagship state universities not only have spent far more money for building a competitive athletic program, they usually have a far greater budget for operating an athletic academic support service. As shown in Table 1, on average each OVC member institution enrolls 302.3 students-athletes and employs 2.6 full-time academic support staff employees with a ratio of one full-time academic support employee per every 117 student-athletes. In comparison, University of Kentucky CATS Center employs 10 full-time academic employees (8 academic counselors, one learning specialist, one tutor/mentor coordinator) and hundreds of part-time tutors and mentors (University of Kentucky, 2012).

Table 1. *Information of athletic academic services of all OVC member institutions*

OVC Institution	**Enrollment**	**# Of Student-Athletes**	**# Of full time academic support staff**	**# Of graduate assistants**
Austin Peay	10597	254	2	0
Belmont	6918	236	1	1 + 1 intern
Eastern Illinois	10417	446	2	1
Eastern Kentucky	15968	355	3	2 + 1 intern
Jacksonville State	9161	315	3	0
Morehead State	11000	317	4	0
Murray State	10832	309	3	0
Southeast Missouri State	10541	330	2	2
SIUE	14235	245	3	1
Tennessee State	9165	203	2	1
Tennessee Tech	11118	278	4	0
Tennessee at Martin	8000	340	2	0

Since smaller Division-I schools may not compare with powerhouse in their spending on the academic support to student-athletes, and mid majors alike need to address students' academic need in a different way. While the financial constraint may not allow academic administrators to hire additional full-time staff, the institutional focus may shift toward in-house peer tutoring services. Implementing a successful in-house tutoring model is a simple solution that many athletic administrators overlook. Properly administered and coordinated in-house tutoring program could resolve the issues of underprepared student-athletes, eligibility, PTD rates, and APR points. The purpose of this article is to introduce standards and establishment of an in-house tutoring program as a fundamental part of academic support services within the athletic department structure at a mid-major university. The model is based on the current operational plan of Bratzke Student-Athlete Academic Success Center of Eastern Kentucky University.

Standards for establishing successful learning assistance centers

To ensure the service quality provided by the academic service centers, the Council for the Advancement of Standards in Higher Education (CAS) developed 12 specific standards and guidelines for all academic learning assistance programs (LAPs) (Council for the Advancement of Standards, 2011). The mission of CAS is "to promote the improvement of programs and services to enhance the quality of student learning and development" (Council for the Advancement of Standards, 2011). The twelve components of CAS Standards for Learning Assistance Centers cover areas such as programs' mission, organization, leadership, staffing, assessment and governance, alone with legal and ethical concerns (Council for the Advancement of Standards, 2011). Like any other LAP designed to meet the students' demand, athletic academic support services must meet certain expected standards norms and be ethically and professionally managed with proper student learning outcome assessment (Council fot eh Advancement of Standards, 2011). Table 2 displays the specific standards that are recommended to guide the LAPs and academic service programs.

Table 2 Standards for guiding the LAPs and academic service programs (Council for the Advancement of Standards, 2011).

Component	Description
Mission	All programs are required to have a mission statement for achieving program goals and objectives (such as: building student-athletes' academic potential, promoting independent learning, and supporting academic standards of the institution, etc.)
Program	Programs are intentionally designed, integrated into the life of the institution and responsive to needs of individuals and populations with distinct needs
Organization and Leadership	Programs must be guided by a well-structural system and led by responsible and visionary leaders
Institutional and External Relations	Programs will draw collaborative support from all areas of the university community
Human Resources	Programs are required to establish procedures for staff recruitment, selection, training and performance evaluation
Ethics	Programs must abide to all university rules and regulations and commit to academic honesty
Diversity, Equity and Access	Programs must review relevant professional, ethical standards and must adopt or developed and implement appropriate statements of ethical practice"
Law, Policy and Governance	Programs must be in compliance with laws, regulations, and policies that relate to their repetitive responsibilities and that pose legal obligations, limitations, risks, and liabilities for the institution as a whole
Financial Resources	Programs should strive for financial autonomy and maintain sufficient funds to operate

Technology	Programs must install and adopt proper level of technology to benefit their students
Facilities and Equipment	Programs must have adequate technology" and "adequate, accessible, and suitably located facilities and equipment to support the achievement of their mission and goals
Assessment and Evaluation	Students' success and progress must be systematically evaluated

Format and strucutre of an academic support program

In the following section, the authors will introduce the examples of services provided by the Bratzke Student-Athlete Success Center of Eastern Kentucky University. Readers will obtain an understanding of how the center is operated under the guidelines provided by Council for the Advancement of Standards (2011) and various details and practices concerning offering tutorial services to student-athletes.
Bratzke Student Athlete Academic Success Center in located in the middle of the beautiful campus of Eastern Kentucky University. Its convenient location benefits student-athletes directly. All of the student-athlete tutoring is conducted within the Bratzke Center tutoring space. Each of the Bratzke Center tutoring room is equipped with 6 computers. The space of the room is divided with multiple patricians, creating an intimate tutoring setting. Bratzke Center utilizes the GradesFirst software. GradesFirst provides the functionality to integrate study hall monitoring, tutoring and advising. The produce has a two-way integration with Outlook, which could provide email notifications, calendar updates and text messaging. The product offers a secure Facebook app and self-service Kiosk applications. The product is a SaaS (Software as a Service) application, which is totally web-based and can be access from any location. The all-inclusive approach characteristic for GradesFirst provides impressive student support and the communication opportunities.

The Bratzke Student-Athlete Success Center's mission is dedicated to providing optimal support to all student-athletes in the areas of academic, personal, and social development through collaborative efforts with existing campus constituents, programs and services (Bratzke SAASC, 2012). Its ultimate goal is to offer the support necessary to assist the student-athlete achieve his or her potential- academically, athletically and professionally.

Bratzke Center tutoring program was designed to provide an educational enrichment beyond the classroom experience. The tutoring program is purposely structured to compliment student-athletes hectic schedules. The center is open Monday through Thursday from 8:00 am to 10:00 pm, Friday from 8:00 am to 5:00pm, and Sunday from 6:00 pm to 10:00 pm.

All the tutoring services conducted within the Bratzke Center are directly supervised and managed by the tutoring coordinator, who is a member of Eastern Kentucky University Tutoring Committee. Tutoring Committee meets regularly to coordinate tutoring efforts across campus

and constantly work to improve the service quality of tutoring programs. All the other tutoring centers on campus follow the tutoring model adopted by Bratzke Center. The tutoring services are free and by appointment only. The Tutoring Coordinator schedules appointments for each student-athlete. The tutoring services are based upon the request and availability of tutors. All the tutoring sessions are monitored and conducted within the Bratzke Center Tutoring Space (Bratzke SAASC, 2012).

To ensure the quality of the tutors, only highly recommended, well-trained and experienced peer tutors are employed at Bratzke Center. Tutor recruitment typically starts with the referrals and recommendations from professors, advisors, department chairs and former Bratzke tutors. The selection criteria for peer tutors are listed as follow:

- Minimum 3.0 cumulative GPA;
- Minimum of a B earned in any course he/she wish to tutor;
- Minimum of 30 college credits earned;
- Recommendation letter from a professor and/or department chair stating officially "clearing" the candidate to tutor selected subject(s); and
- Adequate interpersonal and communication skills.

After qualified candidate have been hired, the tutor training sessions will be conducted before the tutoring starts. All Bratzke tutors have College Reading and Learning Association Level-1 certification. CRLA Level-1 certification requires a minimum of 10 hours of training including in Equal Employment Opportunity Laws and Discrimination Prevention for Higher Education, Family Educational Rights and Privacy Act, data trustees training, tutoring skills and ethics (CRLA ethics standards and NCAA rules and regulations), questioning skills, reading skills, and skills for working with disabled (physically challenged) and international students.

The primary training takes place in the beginning of each semester. Short follow-up training sessions are scheduled throughout the semester by the tutor coordinator. During the first day of training, new and returning tutors are given a Bratzke Center Tutor Manual that outlines the center's procedures, tutoring policies, and NCAA rules and regulations (Bratzke SAASC, 2012). The strict hiring and training procedures reassure the obtainment and retention of the excellent peer tutors, who serve as subject matter experts. Tutors must pay special attention on several topics in the NCAA Bylaws, such as 16.02 extra benefit, 16.3.1 permissible expenses, 16.3.1 non-permissible expenses, and 10.1 unethical conducts. It is the tutor coordinator responsibility to train and educate all tutors about NCAA academic standards for student-athletes. Bratzke tutoring program also has its own set of governing policies. Contents of those tutoring policies and procedures cover:

- Payroll procedures;
- No Show policy (It is considered as a no-show, if an athlete is 15 or more minutes late for the session. In the case of a no-show, tutor will be paid for 30 minutes); and,
- Tutor Cancelation Policy and Rescheduling Appointment policy.

Peer tutors of Bratzke Center are expected to be positive role models and maintain professional attitude and relationship while interacting with students. They must comply with NCAA rules and uphold academic integrity as the contractual agreement between them and students.

The operation of athletic support services requires proper founding. Sources of support varied differently based on the organizational structure of the University. Some programs reallocate funds within their budgets to pay for tutoring. Some have offered services conjuncture with other campus academic services, or utilize NCAA Student-Athlete Opportunity Fund. Bratzke Center uses a mixture of all of the above. On average, Bratzke Center hires 15-19 tutors per academic term.

The authors collected relevant information concerning tutoring services in order to assess the program quality and efficiency. Bratzke tutoring program started in the spring of 2010, and it has grown ever since. Based on the collected data, fall semesters are typically more demanding for services than spring semesters. In Fall semester of 2013, Bratzke Center scheduled a total of 1,020 tutoring appointments, and had a total number of 100 of student-athletes utilizing tutoring services. The analysis of students' requests and needs revealed that science, math and business tutors are in the highest demand. This information is an important to help the tutoring coordinators plan and recruit potential tutoring candidates with proper expertise on the academic subjects. The significant role the peer tutoring has been identified as the number of tutor requests, tutoring appointments, and total number of tutors hired increase periodically.

Table 4. Tutoring requests and services from 2010 to 2013

	Spring 2010	**Fall 2010**	**Spring 2011**	**Fall 2011**	**Spring 2012**	**Fall 2012**	**Spring 2013**	**Fall 2013**
Number of Tutors Hired	3	7	9	15	16	19	15	16
Number of Student-Athletes	N/A	7	15	44	61	108	77	100
Number of Scheduled Appointments	245	747	768	1,238	964	1,126	894	1,020
Number of Appointments Attended	245	56	182	602	547	819	678	723
Student-Athlete No-shows	N/A	7	4	55	46	70	47	52

For the upcoming academic year of 2014-15, Bratzke tutoring program will implement a performance evaluation survey to ensure the quality of the tutoring services. The goal of the survey is to identify student-athletes' perceptions on received tutoring services and available.

The institution has monitored its student-athletes' academic performance during last three years. Since the Bratzke started its service, the overall Grade Point Average (GPA) of spring-sports athletes and fall-sports athletes had improved 0.07 and 0.08 points, respectively in 2012-3. In general, female athletes' academic performance had gotten better as the years progress.

However, Male athletes' of fall-sports seems to have less academic improvement than female athletes and male athletes of spring-sports. The overall GPA of all athletes has exceeded 3.00.

Conclusions

Past literature has documented the benefits and effectiveness of academic services programs designed for student-athletes. This paper provides a model of academic services offered by a regional state institution in Kentucky. In general, this academic service program follows the guidelines and standards provided by Council for the Advancement of Standards (2011) closely. The tutoring model applied at the Bratzke SAASC can be easily adopted by any mid major athletic department. Though the institutional work study model applied at the Bratzke Center could be challenging and unfeasible to some athletic department. This can be replaced with the federal work-study funding at the minimum hourly wage. This minor financial adjustment can be made based on resources available to the athletic administrators.

Since the need of academic services support for student-athletes is vital and inevitable, the authors strongly purport that the use of peer tutoring is an economical and efficient way to help student-athletes improve academic performance. Perhaps, more institutions with limited financial resources for academic services may adopt this tutoring model instead of hiring numerous full-time academic counselors. It is also ideal for institutions with this type of academic services to conduct routine assessments and evaluations to monitor the quality and effectiveness of the program in the future.

References

Anderson, A., & South, D. (2007). The academic expereinces of African American collegiate athletes: Implications for policy and practice. In D. D. Brooks & R. C. Althouse (Eds.). Diversity and social justice in college sports: Sport management and the student athlete (pp. 77-94). Morgantown, WV: Fitness Information Technology.

Beakman, M. (2012, December 3). NCAA founds academic support for athletes. *The Daily Tar Heel*. Chapel Hill, NC.

Beamon, K., & Bell, P. A. (2006). Academics verses atheltics: An examination of the effects of background and socialization on African American male student atheltes. *Social Science Journal*, *43*(3), 393-403.

Bell, L. F. (2009). Examining Academic Role-Set Infuence on the Student-Athlete Experience. *Journal of Issues in Intercolllegiate Athletics*(Special Issue), 19-41.

Booth, K. (2007). *Athletes make academic end run.* Retrieved from http://blog.al.com/bn/2007/03/athletes_make_academic_end_run.html

Boylan, H. R., Bonham, B. S., & Bliss, L. B. (1994). Characteristic components of developmental programs. *Research in Developmental Education*, 11(1), 1-4.

Bratzke SAASC. (2012). *SAASC - Tutoring.* (M. J. Banbel, Ed.) Retrieved August 2012, from http://www.saasc.eku.edu: http://www.saasc.eku.edu/sites/saasc.eku.edu/files/files/Chad%20Bratzke%20SAAC%20TUTOR%20MANUAL%20DRAFT%20FINAL%20revised.pdf

Council for the Advancement of Standards. (2011). *Council for the Advancement of Standards in Higher Education.* Retrieved September 2013, from CAS: http://www.cas.edu/getpdf.cfm?PDF=E86D2FCA-DBEC-AD47-33AB941E185E1E67

Dvorak, J. (2004). Managing tutoring aspects of the learning assistance center. *Research for Educational Reform*, 9(4), 39-51.

Grasgreen, A. (2012, May 9). *Tough Choices for Athletes's Advisers*. Retrieved from http://www.insidehighered.com/news/2012/05/09/ncaa-academic-rules-frustrate-advisers-athletes

Gurney, G. S. (2011, April). Stop Lowering the Bar for College Athletes. *Chronicle of Higher Education*. Retrieved October 2013, from http://chronicle.com/article/Stop-Lowering-the-Bar-for/127058/

Gurney, G., & Southall, R. M. (2013, February 14). NCAA Reform Gone Wrong. Retrieved from Inside Higher Ed: http://www.insidehighered.com/views/2013/02/14/ncaa-academic-reform-has-hurt-higher-eds-integrity-essay

House, J. D., & Wohlt, V. (1989). The effect of student and tutor gender on achievement of academically underprepared students in mathematics and science. Journal of Instructional Psychology, 16(4), 192-198.

Jordan, J. M., & Denson, E. L. (1990). Student services for athletes: A model for enhancing the student-athlete experience. *Journal of Counseling & Development, 69*, 95-97.

Maxwell, M. (2001). Peer tutoring: An overview; history and research on program effectiveness. *Journal of the National Tutoring Association, 1*(1), 8-18.

McKellar, N. A. (1986). Behaviors used in peer tutoring. *Journal of Experimental Education, 54*(3), 163-167.

NCAA. (2003, October 9). *Division I Academic Reform: Overview*. Retrieved from http://www.sc.edu/faculty/PDF/DivisionIAcadReform.pdf

NCAA (2013a). *Trends in graduateion: success rates and federal graduation rates at NCAA Division-I institutions*. Retrieved from http://www.ncaa.org/sites/default/files/GSR%2Band%2BFed%2BTrends%2B2013_Final.pdf

NCAA. (2013b). *2013-14 NCAA Division-I Manual: Constitution operating bylaws, effective August 1, 2013.* Indianapolis, IN.

Newberry, P. (2011). *More colleges cluster athletes in less-demanding majors.* Retrived from http://www.northjersey.com/news/more-colleges-cluster-athletes-in-less-demanding-majors-1.874480?page=all

OVC. (2012). *OVC History*. Retrieved October 2012, from ovcsportscom: http://www.ovcsports.com/sports/2012/6/13/GEN_0613124325.aspx

Sage, G. H., & Eitzen, D. S. (2013). *Sociology of North American sport* (9th ed.). New York: Oxford University Press.

Smith, R. A. (2010). *Pay for play: A history of big-time college athletic reform.* Champaign, Illinois: University of Illinois Press

Southall, R., Eckard, E. W., Nagel, M., Tomalski, J., & Lewinter, G. (2010). *Adjusted graduation gap: NCAA Division-I football.* Retrieved from http://www.unc.edu/depts/exercise/csri/PDF/CSRI_2010%20Adjusted%20Graduation%20Gap_NCAA_D-I%20Football-8-2010.pdf

University of Kentucky. (2012). *CATS First of its Kind*. Retrieved from http://catsacademics.com/about/

Appendices

I. NCAA GPA & Progress toward Degree (PDT)

Year in School	Cumulative GPA	% of Degree Completion	Hours Needed Based on 120/128 hrs.
Entering 2nd Year	1.8 (80%)	Not Applicable	24
Entering 3rd Year	1.9 (90%)	40%	48/52
Entering 4th Year	2.0 (100%)	60%	72/77
Entering 5th Year	2.0 (100%)	80%	96/103

Developmental courses shall not exceed six hours and must be taken during the first year of enrollment. These hours DO NOT count toward your degree percentage (40/60/80).

NCAA ACADEMIC ELIGIBILITY STANDARDS

6 hr rule: must pass 6 hours each term (fall and spring)

18 hr rule: must pass 18 hours between the fall and spring semesters (summer courses cannot be used)

Freshman only: Must pass 24 hours prior to start of 2nd year

- -Only 6 hrs of summer classes can be used
- -Only 6 hrs of developmental coursework may be used

Football only (additional eligibility):

- Must pass 9 hours during the fall term
- Must earn eligibility apr point for the fall term
- If requirements are not met the student-athlete must sit out the 1st four games of the next season:

  If a student passes 27 hours prior to the next fall term (includes fall, spring, and summer terms) they can gain the 1st two games back.

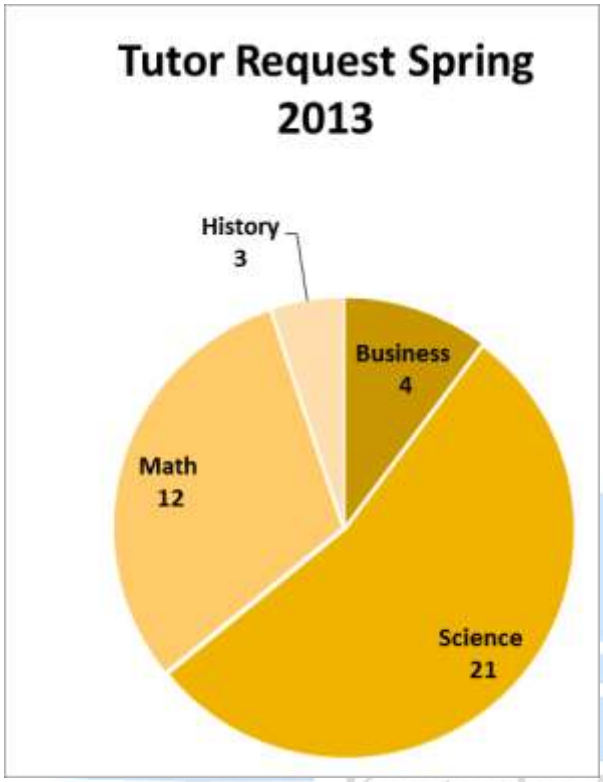
  One time in a student-athlete's career they may earn all 4 games back if they successfully complete 27 hours.

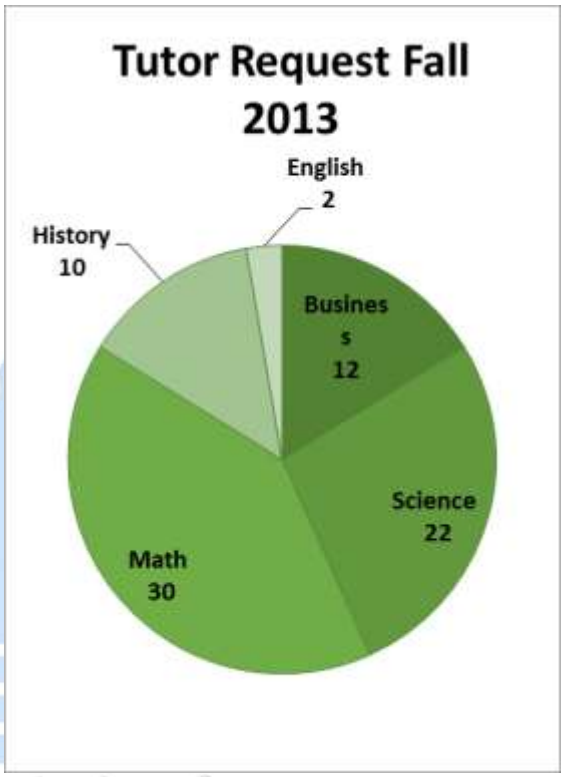
All hours must be degree applicable

Excess free electives will not count for these rules. (Example: If a major allows 0 free electives and a student passes 12 hrs. and 8 of them are free electives they will still be ineligible to compete in that major because they did not pass 6 degree applicable hours).

Hours toward a minor do not count (unless the minor is required for the degree)

II. Results of Student-Athletes' Tutoring Requests in 2013





III. Tutor Evaluation Survey

Your name _____
Tutor's name _____
Subject you were being tutored in _____
Academic Year Freshman Sophomore Junior Senior
How many times have you been tutored in the Bratzke Center?
Never 1-3 4-6 7+
Please state your level of agreement with the following about your specific tutor:

Question	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree
My tutor was prepared for our session.					
My tutor was knowledgeable about the material covered.					
My tutor listened carefully to what I said.					
My tutor treated me in a respectful/professional manner.					
After meeting with my tutor, I felt better prepared to succeed in this course.					
After meeting with my tutor, I had a better understanding of course material.					
After meeting with my tutor, I had more confidence in my ability to retain/apply material.					
I would attend another tutoring session with this tutor.					
I would recommend this tutor to a friend.					

Please state your level of agreement with the following about the Bratzke Center:

Question	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree
I had sufficient privacy during my tutoring session.					

The space provided for my tutoring session was sufficient.					
Any additional materials I needed for my tutoring session were available.					
I was not disturbed during my tutoring session.					
I am always able to use a computer when I come to the Bratzke Center.					

Why did you choose the Bratzke Center for your tutoring session?

1. My coach/academic advisor require it
2. Previous successful tutoring sessions in the Bratzke Center
3. Couldn't make an appointment in the library/with my department
4. Other_____

Please provide any additional comments about your tutor here.

Please provide any additional comments about the Bratzke Center here.

A Descriptive Study of Exercise Science Students' Knowledge of, and Attitudes Toward, Older Adults

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Abstract

Today, there is greater need for health professionals to help older adults maintain function and remain independent. Negative attitudes towards older adults have been found in undergraduate students, with men having more negative attitudes compared to women (Allan & Johnson, 2008; Callahan, 2011). To our knowledge, the attitudes of Exercise Science students have not been examined. The aim of this study was to describe Exercise Science students' knowledge of aging and attitudes towards older adults. Participants (N=76) completed Fabroni's Scale of Ageism and Palmore's Facts on Aging Quiz. The participants scored an average of 15.4 (SD= 2.4) on the PAQ, and 79.4 (SD= 7.9) on the FSA, and there was no correlation between aging knowledge and attitudes. Results suggest Exercise Science students have a low level of aging knowledge and exhibited low levels of ageism, with no difference between males and females. Exercise Science curriculums should continue to improve educational strategies to prepare students for working with older adults.

Introduction

The Administration on Aging (2009) projects that by 2030, older adults (persons 65 and older) will represent 19% of the population. Along with the demographic shift, there is an increase in chronic disease among Americans. Currently, there are 133 million people living with one or more chronic diseases, such as heart disease, diabetes, or cancer (Anderson, 2004). As older adults age, these chronic diseases frequently cause them to lose function and their independence, putting a large burden on the U.S. healthcare system. As the population grows older, there will be a greater need for health professionals to help older adults maintain function and remain independent. However, many health professionals today are less willing to work with older adults, communicate with them differently than younger adults, and hold preconceived notions of older adults (Hultgren, 2012). For example, researchers at John Hopkins University School of Medicine, found 80% of students would aggressively treat pneumonia in a 10 year old girl, but only 56% would do so for an 85 year old women (Currey, 2008).

Ageism, or "the discrimination against an individual based on their age", is prevalent throughout the healthcare system (Angus & Reeve, 2006). When it comes to older adults, the current health care system focuses on disease management rather than prevention. This form of ageism is not only hurting the older adult community, but is further burdening the United States healthcare system. A RAND (Research and Development organization) Study examining health information technology systems projected savings of $81 million or more with aggressive

preventative strategies as opposed to treatments and disease management. (Taylor, Bower, Girosi, Bigelow, Fonkych & Hillestad, 2005) The average expenditure of health care spent on an older adult per year was $11,089, which is significantly higher compared to the amount spent on middle and younger aged adults, which was $3,352 per year (Stanton & Rutherford, 2005).

In health care situations, older adults are faced with longer hospital stays, complex health issues, difficult pain management, and less external support than younger adults (Sorrell, 2010). This unique set of issues brings about a need for increased empathy and quality interpersonal relations between health care providers and older adult consumers (Sorrell, 2010). The specific skill set needed to work with the older adult community cannot be obtained if students are fostering ageist attitudes in their undergraduate careers. To begin to change the healthcare culture, and reduce the costs and effects of ageism, there is a need for better education in medical and allied health students' undergraduate careers.

Negative attitudes towards older adults have been found in undergraduate students across a wide range of disciplines, with men having more negative attitudes compared to women (Allan & Johnson, 2008; Callahan, 2011). It's possible age discrimination begins early in the health professional's training, as most medical and health students have not had opportunities to interact with older adults. A lack of contact, or contact that is of poor quality, can result in negative attitudes toward a certain group of people, based largely on unfair stereotypes (Pettigrew, 1998). Previous research has shown that interactions with the stigmatized group can reduce prejudice and improve attitudes (Hultgren, 2012). In a study conducted with dental students, increased clinical experience and interaction with older adults resulted in improved knowledge and awareness of aging (Fabiano, Waldrop, Nochajski, Davis, & Goldberg, 2005). Stuart-Hamilton & Mahoney researched the effects of aging awareness training on the knowledge of, and attitudes towards, older adults, the researchers found their sample showed greater understanding of aging was associated with more positive attitudes towards older adults (Stuart-Hamilton & Mahoney, 2003). From the study's result, it can be inferred that negative attitudes are rooted in a lack of knowledge about adulthood and aging.

To our knowledge, the attitudes of Exercise Science students towards older adults has not been examined. Many Exercise Science students are preparing for careers in physical education, health and medicine, physical/occupational therapy programs, biology, or sport science. For example, clinical exercise physiologists most often work in rehabilitation settings helping patients with cardiovascular disease who are largely over the age of 60 (ACSM, 2012). Exercise Science students are also likely to become fitness instructors. As the older adult community continues to grow, there will be a higher demand for fitness programs designed to address the functional fitness needs specific to this age group. It is imperative to the health and wellness of older adults that our Exercise Science curriculums are training students to design exercise programs specific to their changing needs, as well as have a commitment to improving the quality of geriatric care. Therefore, the aim of this study was to describe Exercise Science students' knowledge of aging and attitudes towards older adults. A secondary aim of our study

was to compare attitudes of Exercise Science students to students from other medical and allied health disciplines.

Methods

Before conducting the study, the researchers obtained approval from the University's Internal Review Board. Participants were recruited on the first day of the Spring 2014 semester by one of the researchers who visited each class and asked for volunteers to complete the questionnaires. A total of 76 students (33 men and 43 women) were recruited from four undergraduate Exercise Science courses. The majority of students identified as Caucasian and between the ages of 20-24 years. These courses were chosen to be representative of both lower and upper level classes offered at WKU.

The participants completed an 1) informed consent, 2) a demographic questionnaire, 3) Palmore's Facts on Aging Quiz (PAQ), and 4) the Fabroni Scale of Ageism (FSA). Paper and pencil questionnaire packets were distributed to each class. The researcher obtained informed consent from each participant. The participants were told the purpose of the study was to collect data for Southern Association of Colleges and Schools (SACS) accreditation.

The FSA was used to measure the participants' attitudes toward older adults, specifically in the realm of ageism (Fabroni, et al., 1990). The participants were asked to respond how strongly they agreed or disagreed with the given statement on a 4-point Likert scale (1= strongly disagree to 4= strongly agree), resulting in a range of scores between 29 and 116, with higher scores indicating stronger ageist attitudes. A neutral score for the measure would be 72.5. An alpha coefficient of .86 was reported for the scale, showing a high internal consistency for the FSA.

The PAQ, was used to assess participants' knowledge of aging (Palmore, 1990). The quiz format was true or false, comprised of 25 items designed to cover a wide range of physical, mental, and social facts most commonly misperceived about older adults. A point was given to each correct answer on the quiz, with scores ranging from 0-25. This measure has been shown to be a valid and reliable measure of knowledge of aging (Fraboni, et al., 1990).

The data were analyzed utilizing the Statistical Package for the Social Sciences (SPSS), softwares. For both the PAQ and FSA, the responses were coded numerically. The FSA was scored on a 4-point Likert scale. The PAQ had response choices of true or false, and scores were determined by the number of correct responses.

Results

The participants scored an average of 15.4 (*SD* = 2.4) on the PAQ. Scores ranged from a minimum of 10 to a maximum of 20. The participants scored an average of 79.4 (*SD* = 7.9) on the FSA. Scores ranged from a minimum of 58 to a maximum of 90. There was not a statistically significant difference between

men (M = 79.79) and women (M = 79.09), $t(74) = .71$, $p > .05$. There was not a significant correlation between aging knowledge and attitudes towards older adults, $r(74) = -.199$, $p > .05$.

Discussion

The low level of aging knowledge in our sample was not surprising. Many Exercise Science students have not had many opportunities to engage with older adults or participate in gerontology curriculum. Our results are most closely related to studies done with medical and dental students (Carmel, et al., 2006, Waldrop, et al., 2008), but participants did outperform nursing students (Carmel, et al., 2006). Allan, et al. (2009) conducted a descriptive study of aging knowledge using the PAQ. The undergraduates scored an average of 11.92, indicative of a low level of aging knowledge that was related to higher levels of ageism. The researchers also tested for aging anxiety, which turned out to be a mediating factor. The students with more aging knowledge tended to be less anxious and had less ageist attitudes. Previous studies have done well with testing students before and after participation in an aging course (Allan, et al., 2009; Cottle & Glover, 2007; Stuart-Hamilton, et al., 2003), but there is a gap in studies measuring changes in knowledge and attitudes after a course involving quality interpersonal contact with older adults. Aging anxiety could have been an underlying factor in our study, future researchers should consider this mediator.

To our knowledge, the FSA has not been used to measure attitudes in medical and allied health students. Our results do not align with previous research because we did not find a difference in ageism between men and women. The moderately low score on the FSA from the current study could have been a result of the measure having very explicit statements. In a study done by Lin, et al. (2011), explicit attitudes were shown to be slightly more positive than implicit ones. This finding aligns with the social desirability effect which can influence a participant's responses because of social and political pressure and context (Lin, et al., 2011). The participants taking the questionnaire were able to clearly see which statements were positively and negatively coded, such as "Old people deserve the same rights and privileges as other members of our society" (positive), and "Most old people would be considered to have poor personal hygiene" (negative). These statements only capture the explicit attitudes of the participants, not the implicit ones.

Though they were very simple to administer, the FSA was developed in 1990, and the PAQ was developed in 1977, making them outdated measures. Since then, the base of knowledge on aging and adulthood has changed drastically and future researchers should consider developing a more advanced measures of knowledge and attitudes. The Implicit Association Test (Greenwald, Mcghee, & Schwartz, 1998) is a way to further study attitudes toward older adults without the social pressure of being politically correct on an explicit measure.

Institute for the Ages (2014) states that for the next 40 years, the fastest growing segment of the population will be over 80 years old, and it's not just in America. Internationally, 40% of the population in the developed world will be over 55 years of age. These demographic shifts call for medical and allied health professionals with a base of aging knowledge and a positive regard for working with older adults. Our sample of Exercise Science students performed at the similar levels as other medical and allied health students on aging knowledge. (See Table 1) The low level of knowledge shown in the study could cause

Exercise Science students to regress in their attitudes towards older adults, and would harm our healthcare system as it adjusts to the growing older adult consumer population.

Exercise Science curriculum shouldn't stop at incorporating Gerontology concepts into course framework, but also engage students in interactions with older adults. If given the opportunity to serve or work with older adults, students may find a new life in the field of Gerontology. In the future, Exercise Science faculty should foster quality contact between students and older adults, aging knowledge and attitudes towards older adults could improve significantly.

Conclusion

Looking forward, one of the best ways to ensure positive affect toward older adults for Exercise Science students is to engage them in a service-learning course. Beling (2008) showed the greatest increase in aging knowledge from pre to post-tests came from the physical therapy service-learning students, compared to other teaching pedagogies. Intergenerational service-learning is a pedagogy used to link students with older people in the community (Underwood & Dorfman, 2006). Service-learning gives students the opportunity to apply the course concepts and skills outside of the classroom, while providing service to the community (Dorfman, et al., 2004). Service-learning is considered a "high impact" practice, and has been shown to greatly enhance academic development in undergraduate collegians because of its integration of theoretical concepts and real-life experience. (Boswell & Swaner, 2009)

In conclusion, Exercise Science students showed a low level of aging knowledge, but also a low level of ageism. In the future, Exercise Science curriculums should continue to make strides in improving educational strategies to prepare students for working with a growing older adult population.

References

Agnus, J., & Reeve, P. (2006). Ageism: A threat to "aging well" in the 21st century. *The Journal of Applied Gerontology, 25*(2), 137-152.

Allan, L. J., & Johnson, J. A. (2009). Undergraduate attitudes toward the elderly: The role of knowledge, contact and aging anxiety. *Educational Gerontology, 35*, 1-14.

Anderson, G. (2004). The growing burden of chronic disease in america. *Public Health Reports (1974-2004), 119*(3, Chronic Disease), 263-270. Retrieved from http://www.fightchronicdisease.org/sites/fightchronicdisease.org/files/docs/GrowingCrisisofChronicDiseaseintheUSfactsheet_81009.pdf

Beling, J. (2003). Effect of service learning on knowledge about older people and faculty teaching evaluations in a physical therapy class. *Gerontology and Geriatrics Education, 24*(1), 31-46.

Boswell, J. E., & Swaner, L. E. (2009). High impact practices: Applying the learning outcomes literature to development of successful campus programs. *Peer Review, 11*(2), 26-30.

Callahan, S. E. (2011). Knowledge and attitudes about aging: A study of undergraduate students at the university of north carolina at charlotte. *University of North Carolina at Charlotte*, 1-37.

Careers in Sports Medicine and Exercise Science. (2012). *American College of Sports and Medicine, 3*(1), C. doi: 10.1249/00005768-197100310-00009

Carmel, S., Cwikel, J., & Galinsky, D. (1992). Changes in knowledge, attitudes, and work preferences following courses in gerontology among medical, nursing, and social work students. *Educational Gerontology, 18*(4), 329-342. Retrieved August 31, 2014.

Cottle, N. R., & Glover, R. J. (2007). Combating ageism: Change in student knowledge and attitudes regarding aging. *Educational Gerontology,33*(6), 501-512. doi: 10.1080/03601270701328318

Currey, R. (2008). Ageism in healthcare: Time for a change. Retrieved from http://todaysgeriatricmedicine.com/archive/winter08p16.shtml

Dorfman, L. T., Murty, S. A., Ingram, J. G., Evans, R. J., & Power, J. R. (2004). Intergenerational service-learning in 5 cohorts: Is attitude change robust? *Educational Gerontology, 30*, 39-55.

Fabiano, J. A., Waldrop, D. P., Nochajski, T. H., Davis, E. L., & Goldberg, L. J. (2005). Understanding dental students' knowledge and perceptions of older people: Toward a new model of geriatric dental education.*Journal of Dental Education, 69*(4), 419-433.

Fraboni, M., Saltstone, R., & Hughes, S. (1990). The Fraboni scale of ageism (FSA): An attempt at a more precise measure of ageism. *Canadian Journal on Aging, 9*(1), 56-66.

Greenwald, A. G., Mcghee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464-1480. doi: 10.1037/0022-3514.74.6.1464

Heart and Stroke Association Statistics. (2013). Retrieved from http://www.heart.org/statistics

Hultgren, K. (2012). Speak loud and clear: Intergenerational service-learning to ageism and elderspeak. *Psychology Student Work,* 3rd series.

Kline, D., Scialfa, C., Stier, D., & Babbitt, T. (1990). Effects of bias and educational experience on two knowledge of aging questionnaires. *Educational Gerontology, 16*(3), 297-310. doi: 10.1080/0380127900160307

Lin, X., Bryant, C., & Boldero, J. (2011). Measures for assessing student attitudes toward older people. *Educational Gerontology, 37*(1), 12-26.

Lusk, S., Williams, R., & Hsuing, S. (1995). Evaluation of the facts on aging quizzes I & II. *Journal of Nursing Education, 34*(7), 317-324.

Palmore, E. (1977). Facts on aging: A short quiz. *Gerontologist, 17*(4), 315-320.

Partnership to Fight Chronic Disease. (n.d.). Retrieved from http://www.fightchronicdisease.org/

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology, 49*(1), 65-85. doi: 10.1146/annurev.psych.49.1.65

Sorrell, J. M. (2010). The need for empathy in the hospital experience of older adults. *Journal of Psychosocial Nursing, 48*(11), 25-28.

Stanton, M. W., & Rutherford, M. (2005). The high concentration of U.S. healthcare expenditures. *Agency for Healthcare Research and Quality,* (19).

Stuart-Hamilton, I., & Mahoney, B. (2003). The effect of aging awareness training on knowledge of, and attitudes towards, older adults. *Educational Gerontology, 29*, 251-260.

Taylor, R., Bower, A., Girosi, F., Bigelow, J., Fonkych, K., & Hillestad, R. (2005). Promoting health information technology: Is there a case for more aggressive government action? *Health Affairs, 24*(5), 1234-1245. doi: 10.1377/hlthaff.24.5.1234

Underwood, H., & Dorfman, L. (2006). A view from the other side. *Journal of Intergenerational Relationships, 4*(2), 43-60.

Waldrop, D., Fabiano, J., Nochajski, T., Zittel-Palamara, K., Davis, E., & Goldberg, L. (2006). More than a set of teeth. *Gerontology & Geriatrics Education, 27*(1), 37-5

Table 1: *PAQ results for medical and allied health students*

Author	Type of Student	PAQ M (sd)
Beling, et al. (2008)	Physical Therapy	16.87 (2.5)
Carmel, et al. (2006)	Medical	15.19 (7.9)
Carmel, et al. (2006)	Nursing	13.75 (8.82)
Fabiano, et al. (2005)	Dental	14.21 (2.03)
Lusk, et al. (1995)	Nursing	17.57 (2.34)
Waldrop, et al. (2008)*	Dental	15.03 (2.67)

*Note: *The original study was conducted with four cohorts, but were averaged together for comparison*