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05. Physical Education

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Abstracts from the 2014 Oklahoma Research Day

Held at the University of Central Oklahoma

02. Education and Professional Studies

05. Physical Education

02.05.01 Efficacy Beliefs of Physical Education Teacher Education Candidates

Kay, Daigle

Southeastern Oklahoma State University

In many states, partial responsibility for teaching physical education at the elementary schools falls on the classroom teacher. During elementary education preparation, most teacher candidates are required to take an elementary physical education methods course. With cuts to programs, some universities are choosing to eliminate this course for elementary education teacher candidates. This study compares these two majors regarding efficacy beliefs prior to participating in an elementary physical education methods course and also after completion of the course. Subjects were 54 teacher candidates enrolled in 3 sections of an elementary physical education methods course. Data were collected using a survey that elicited demographic characteristics and the completion of the Physical Education Teaching Efficacy Scale (PETES). The PETES is a 35-item survey which yields efficacy ratings for seven factors. Looking at a change in efficacy over the course of the semester for all teacher candidates, a dependent t-test was utilized. A significant difference was found and efficacy beliefs improved during the course of the semester. Although preliminary and cross-sectional in nature, these results support that a single physical education methods courses can have a measurable impact on a teacher candidate's efficacy for teaching physical education, even among elementary education majors. These results suggest that a "one-shot" physical education methods courses can have

02.05.02 Factors Influencing the Academic Performance of Division II Football Student Athletes

Tia, Bennett , Mark Giese, Robert Hubbs

Northeastern State University

The purpose of the study was to investigate whether various variables (geographic location of high school, guardianship, college rank, transfer student, and current living arrangement) had an effect on athlete grade point average (GPA). Student athletes constitute a specialized campus population who confront unique challenges when adjusting to the demands of college life. It is imperative to identify factors that improve student athlete's long-term persistence and success in higher education. Ninety eight Division II college football athlete's at an Oklahoma Regional University served as participants. After proper IRB approval, the qualifying subjects were given a packet that consisted of a consent form and a Subject Data Form which was a questionnaire consisting of 11 questions. A multiple regression model was used to predict if any of the variables had a significant effect on GPA. The model summary had an R value of .229. The R Square was .052. The adjusted R Square was .043 and the standard error of the estimate was .5205. The only variable found to be significant to a student's GPA was whether a student transferred to the university. The analysis of variance indicated an F value of 5.374 and a significance of .023. The implication is that transfer students are trying to integrate into their new environment and might have a difficult time adjusting to academic demands and are often faced with numerous challenges upon transferring.

02.05.03 Body Composition in Health and Physical Education Undergraduate Students

Yoonsin, Oh , Angelica Lopez, Stephanie Boss

Cameron University

More than two thirds (69.2%) of U.S. adults aged 20 years and older are overweight (i.e., Body Mass Index (BMI) > 25) or obese (i.e., BMI > 30; Flegal, Carroll, Kit, & Odgen, 2012). A nationwide survey study (Melville & Hammermeister, 2006) of pre-service physical education majors and minors found that 47% of students are overweight or obese based on their BMI. A more recent study (Williams, Henninger, & Marzano, 2013) showed that 41% of physical education teacher education majors and minors are not in the normal BMI category (underweight, overweight, & obese). This study examined the body composition of students in the health and physical education department at a small regional state university in Oklahoma. Participants (n=91) were recruited from the health and physical education department in spring 2013. Prior to assessment, participants provided their sex, birth date and year, and ethnic information. Participants' heights and weights were measured to calculate body mass indices. Participants' body fat percentages were measured using a Tanita BF-350 and Polar TriFit software. About two thirds (66%) of the students in the health and physical education department were overweight or obese based on BMI. Less than half (47.3%) of the students were overweight or obese for their sex and age based on a body fat impedance analysis. The findings from this study show that heal

02.05.04 The Effect of Student Status on Study Time

Mark, Giese , Chance Bates

Northeastern State University

The purpose of this study was to determine if there was a difference in the amount of time nontraditional college students versus traditional students spend studying per college class or if there was a difference between males and females. Eighty two students in Personal Health General Education classes served as a convenience sample. The survey revealed that 66 traditional students and 17 nontraditional students responded with 44 being male and 39 being female. After proper IRB approval, the students were administered a three question survey that was developed by the authors of the study. The answer to the amount of study time served as the dependent variable and gender and type of student served as the two independent variables. A Two Way Analysis of Variance (X2 ANOVA) indicated neither type of student nor gender had significance ($F=1.850$, $p=.178$) at the .05 level. The implication of this is that neither type of student or gender made a difference in amount of study time

02.05.05 The Preferred Method of Weight Loss Among College Men and Women Seeking to Lose Weight

Mark, Giese , James Estes

Northeastern State University

The perception of how college men and women believe is the best way to lose weight was the focus of this study. A total of 84 male and female students were recruited from General Education Personal Health classes and served as a convenience sample. From the participants, we are able to calculate the percentage of men and women seeking to lose weight, and what they believe was the best possible method. By determining the percentage between men and women, cross tabulation, and Chi-Square, we able to determine if a preference existed between genders. A Chi Square value of 3.08 indicated that the observed frequencies did not vary significantly from those expected. From this study, it appears that there is no systemic gender bias on which is the best way to lose weight.

02.05.06 Differences in Physical Activity Patterns of University Students

Mark, Giese , Timothy Fleetwood

Northeastern State University

The purpose of this study was to determine the difference between how many times a week male and female college students participate in aerobic activities. Eighty-four (84) students enrolled in a Personal Health General Education class served as a convenience sample. After proper IRB approval, the students were administered an exercise questionnaire. In the questionnaire, the gender difference served as the independent variable and how many times a week male and female students exercise served as the dependent variable. The questionnaire results showed little gender difference in how many times a week the students exercise per week ($m = 4.33$, $F= 3.54$). A t-value 1.87 ($p=.065$) indicated that there were no significant difference between college males and females in exercising weekly.

02.05.07 The Effectiveness of the Influenza Vaccination Among University General Education Students

Mark, Giese , Macy Hudson

Northeastern State University

The purpose of this study was to determine the effectiveness of the flu vaccination in students enrolled in an introductory level biology course from October 2012-March 2013. One hundred and ninety-four (194) freshmen enrolled in six sections of either General Biology or Evolution and Diversity class served as a convenience sample. With the IRB's approval, the subjects were administered a four question survey, as well as a consent form, that asked if they received the vaccine and if they thought they were infected. The dependent variables included contracting or not contracting the virus, while the independent variables included receiving the vaccination or not. A Chi Square value of 5.96 indicated a significant difference between the number of students expected to become infected (24.1%) compared with the number actually observed (8.2%) The implication is that the students in our sample may have implemented further preventative measures in addition to the vaccination.

02.05.08 Effects of Motivational Music on a 1.5 Mile Running Time Trial

Jamie, Aweau

University of Central Oklahoma

Research has shown that music has a positive effect on performance measures during exercise and sport. The purpose of this research is to measure the effects of music on a 1.5 mile running time trial. The variables of performance time, average heart rate, ½ distance split time, and rating of perceived exertion will be measured. Participants will each self-select and rate a motivational song. The selected song will be used for the experimental trial. The study design will be a repeated-measures design in which the subjects will be randomly assigned to two groups and each group will run with and without music. The results from the data will be analyzed using dependent t tests. The alpha level will be set at ($p < 0.05$). The researcher hypothesizes that the music condition will improve performance time, increase average heart rate, increase pace during the music condition, and not affect RPE. The results of this study will help coaches, trainers, athletes, and recreational exercisers understand how using music relates to enduring high-intensity exercise. The information can also be used to assist athletes in training and mentally preparing for competition.

02.05.09 The Relationships Between a 300 Yard Shuttle Run and Peak Blood Lactate of College Male Soccer Players

Ahmet, Ozturk

Northeastern State University

The purpose of this study was to determine the blood lactate levels of male college soccer players immediately following a 300 yard shuttle run. The sample population consisted of 15 male soccer players from NSU. Two variables were measured: lactic acid and 300 yard time and the Pearson correlation coefficient were utilized to determine the relationship between the peak lactate levels and the 300 yard shuttle time. The correlation between 300 yard run time and average lactic acid was .14 which shows no significant relationship between run times and peak blood lactate levels.

02.05.10 Ammunition Comparison - Reloaded Vs Commercial

Thomas, Salmon , Erika Salmon

Northeastern State University

Background: Political, social and economic events in late 2012 and early 2013 lead to a shortage of commercial ammunition and extreme price inflation. This prompted many recreational shooters to consider alternative sources, including reloading. Reloading is the process by which spent bullet brass is recycled to remake live ammunition. It is safe, simple and provides significant savings for shooting sports enthusiasts who may use thousands of rounds per year. While commercial 9mm bullets cost 30-60¢ per round, reloads cost 15¢ per round. Research question: Is reloaded 9mm ammunition equivalent to commercial ammunition in terms of manufacturing reproducibility and ballistic performance? Methods: Random samples were taken from three commercial brands (Winchester, Federal, PMC) and from a batch of 9mm reloaded bullets (all 115 grain, jacketed or plated round nose). A masked investigator measured weight and dimensions of each to assess manufacturing reproducibility. We then fired bullets from the same pistol (Springfield XDM, 3.8 inch; masked shooter) to measure velocity and precision (group size). Mean dimensions were compared to SAAMI standards and variances were compared between commercial brands and reloads. Results and discussion: Preliminary results indicate that reloaded ammunition is comparable to commonly purchased commercial 9mm ammunition. Detailed results and discussion will be presented.

02.05.11 Physical Activity Patterns of Health and Physical Education Majors Compared to Non-Majors

Mark, Giese , Kassandra Peck

Northeastern State University

The purpose of this study was to determine the activity of HPE majors compared to Non-HPE majors. A total of seventy-nine (79) students, twenty-eight (28) HPE majors, and fifty-one (51) Education majors served as subjects when comparing activity levels. After proper IRB approval, the subjects were administered to a four response questionnaire of activity levels taken from a health website. The students major and gender served as two independent variables and the amount of physical activity was the dependent variable. The analysis shows that the F value of the Two Way Analysis of Variance was 1.43 and was not significant ($p=.236$). This means that neither gender nor major provided significant differences in their level of physical activity per week.

02.05.12 Effect of Static Stretching on Muscle Flexibility of Division II Women's Soccer Team

Tia, Bennett , Mark Giese, Royan Forester

Northeastern State University

This study examined and determined the effects of static stretching on the occurrence of injuries with a Division II women's soccer team. The study was carried out during the Fall 2011 soccer season. Information was gathered by the researcher by administering a series of static stretching on members of the team over an eight-week period. A pre-test was performed by each participant, which was given predetermined stretches. The stretches included sit and reach, shoulder stretch, arm length, back arch, and trunk length. At the end of the eight weeks, a post-test was given where the second half of the data was collected. A dependent t-test was used to determine if there was a significant difference between the pre and post test on the participant's flexibility. Participants showed that there was a significant difference in flexibility at the post-test compared with the pre-test. The t-score of 4.4 indicate that the means was significantly different, and that the training effect increased flexibility.

02.05.13 Creating a Children's Program to Combat Childhood Obesity

Mary, Nix , Rachelle Franz

University of Central Oklahoma

Childhood obesity has more than doubled in the last 30 years, and it seems this trend will continue if children aren't educated about topics such as physical activity and nutrition. The research in this study will promote nutrition and physical activity in elementary aged children outside of the school walls. This study aims to show how nutrition and physical education can transform children's views on living an active and healthy lifestyle. University of Central Oklahoma students and faculty will design and implement a program for children in Edmond and the surrounding area. In collaboration with students in the Physical Education and Health Program, a registered dietitian will create lessons to teach children what it is like to lead a healthy life through food. The children will be pre-assessed at the beginning of the program with a test of basic nutrition and physical activity facts, and then tested again at the end of the program to show knowledge they have gained. The expected results will be the children will gain a new appreciation for physical activity and nutrition, and the children will increase their knowledge in a fun and interactive way.