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The impact of barriers and facilitators of physical activity on quality of life in low income Hispanic adolescents

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Statement of the Problem: Physical activity has been shown to improve the physical, mental, and emotional health of youth. However, many adolescents do not engage in the recommended daily 60 minutes of moderate-vigorous physical activity. Barriers and facilitators of physical activity likely change as children age and may be indicative of adolescents' health-related quality of life (HR-QOL). The purpose of this study was to examine the relationship between physical activity, physical activity barriers/facilitators, and HR-QOL.

Methods and Procedures: Mexican American adolescents (n=418) were recruited from an independent school district in Houston, TX. The Pediatric Quality of Life Inventory (PEDSQL) was used to assess HR-QOL. Questions asked participants to describe how often (from never occurs to almost always occurs) they have problems with various physical tasks, situations at school, and social situations. Items are summed to create a total HR-QOL score. The Youth Barriers and Facilitators questionnaire was used to assess barriers and facilitators of physical activity that students faced. Participants were asked how often (never occurring to always) each barrier and facilitator occurred. Barriers and facilitators were analyzed as a dichotomous variables (experienced or never experienced). The Modifiable Activity Questionnaire for Adolescence (MAQ) evaluated the physical activity level of the child. Students were asked how many sports they participated in over the past 12 months (from zero to four or more activities) and to list all the physical activities they typically did and how frequently they performed each activity. Sports participation was analyzed as a dichotomous variable (participated or not). Metabolic Equivalents (METS) for each listed activity were calculated and summed to create a total METS score. Independent sample T-tests were conducted to examine differences in HR-QOL between students who experienced each barrier or facilitator and those that did not. A linear regression model was developed to predict HR-QOL from the amount of physical activity (total METS), sports participation, and barriers and facilitators to physical activity that were found to differ in T-testing.

Results: All students who participated in the study self-identified as Mexican American. Students were 12.01 ± 0.56 years old and 55% were female. T-tests indicated significant differences in HR-QOL for six facilitators and 15 barriers. The overall linear regression model predicting HR-QOL was significant ($F = 6.54, p < 0.001$). Neither total METS nor sports participation made unique contributions to the model. The following facilitator and 5 barriers to physical activity significantly predicted student's HR-QOL: Friends did physical activity with them ($\beta = 4.53, p < 0.05$); homework or chores ($\beta = -3.81, p < 0.05$); physical activity is too much work ($\beta = -3.95, p < 0.01$); their friends teased them during physical activity ($\beta = -4.68, p < 0.01$); they don't like how their body feels when they do physical activity ($\beta = -3.12, p < 0.05$); and the weather was too bad for physical activity ($\beta = -3.40, p < 0.05$).

Conclusion: When barriers and facilitators of physical activity are taken into consideration, physical activity itself was not predictive of HR-QOL of Mexican American adolescents. Social aspects of being physically active, such as being teased by friends while doing physical activity, appear to be particularly important predictors of HR-QOL. The results of this study can be used to inform the design of physical activity interventions. Future research should determine if changes in facilitators and barriers of physical activity lead to improvements in HR-QOL.

The Relationship between Physical Activity and Stress among Military and Non- Military Students

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Statement of the Problem: Studies have shown physical activity and exercise can promote positive changes in a person's mental health and enhance ability to cope with stressful encounters (Craft & Landers, 1998). Furthermore, exercise interventions appear to have a positive influence on an individual's depression state (Salmon, 2001). Similar patterns are observed in psychological stress, through the use of cross-sectional and experimental studies. Exercise has been linked to lessening an individual's stress level, which has been observed in various populations, from athletes to the elderly, and even veterans, who deal with post-traumatic stress disorder. This study seeks to explore the difference in physical activity and stress levels between non-military and military college students. **Methods & Procedures:** 294 college students (33 military & 261 non-military; 124 males & 170 females) completed a Godin-Leisure Time questionnaire (GT), Surgeon General's Contemplation to Exercise (SGC) and the Perceived Stress Test (14-item, PS). An independent t-test was used to determine physical activity between military and non-military and Cronbach's was used to test objectivity between the activity surveys, with an alpha set at .05 for all tests. **Results:** There were no significant differences in physical activity levels as measured by the GT between military and non-military students, $p=.669$, nor in SGC for exercise between military and non-military students, $p=.191$. There was also no significant difference in PS between military and non-military students, $p=.153$. There was, however, a significant difference between men and women for SGC, $p=.008$, as well as between men and women in meeting the Surgeon's General guidelines for physical activity, $p=.001$. Additionally women report significantly greater stress compared to men, $p=.006$. Finally, agreement of the activity questionnaires was low. **Summary of Findings:** Findings suggest either 1) military personnel can cope with stress in the same ways as non-military or 2) there is confusion on how to respond to certain questions on the surveys. When determining the association between stress and physical activity, consideration should be given on what questionnaires to use and how to use those questionnaires. Secondary findings suggest more women than men are not meeting the guidelines for physical activity and this may be impacted by stress.

The impact of Hurricane Harvey on the physical activity behaviors of low income, ethnic minority adolescents

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Statement of the Problem: It is well established that natural disasters can be harmful to health, especially for those of low socioeconomic status and ethnic minority who are less likely to adequately prepare for, cope with, and recover from a natural disaster. Little attention, however, has been focused on the impact of natural disasters on health behaviors important for short and long-term management and prevention of chronic diseases such as physical activity. This study aimed to evaluate the impact Hurricane Harvey had on the physical activity of middle and high school students in Houston, Texas throughout the entire week of the hurricane's duration and up to 15 weeks after the disaster.

Methods and Procedures: Middle and high school students (n=177) were recruited from an independent school district in Houston, Texas. Participants filled out a demographic questionnaire to assess their age, gender, and ethnicity. Participants' free/reduced school meals eligibility was received from the school. Moderate-vigorous physical activity (MVPA) and light physical activity (LPA) were assessed by the School Physical Activity and Nutrition (SPAN) questionnaire. The SPAN questionnaire asked students to recall their MVPA by asking how many days during the last week they participated in activity for 30 minutes that made their heart beat fast. Response options ranged from zero to seven days per week. SPAN also assessed the number of hours per day students spent using a computer, tablet, phone, or playing video games. Response options ranged from zero to six or more hours per day. Students completed the SPAN questionnaire two days prior to the hurricane, when they returned to school, at the end of the quarter, and at the end of the semester. One-way ANOVAs, independent sample T-tests, and correlations were conducted to examine differences in physical activity variables at baseline by demographic characteristics. Four separate repeated measures ANOVA models were developed to examine the changes in physical activity variables over time. Demographic characteristics for which physical activity differed were included as covariates. Post hoc pairwise comparisons were conducted to determine when differences occurred over the semester.

Results: Participants were 14.61 ± 1.75 years old, were primarily of either Hispanic (78%) or African American (17%) ethnicity, male (51%), and were eligible for free/reduced school meals (83%). The repeated measures ANOVA indicated that LPA was significantly lower during the hurricane than at all other time points ($F(3,177) = 11.98, p < 0.001$). After adjusting for gender, time spent playing video games was significantly higher during the hurricane than prior to the hurricane and at the end of the quarter ($F(3, 176) = 3.38, p < 0.05$). No significant differences in MVPA or screen time were found over the semester.

Conclusions: Although there were no significant changes in MVPA, LPA decreased and time playing video games increased during the hurricane. By the end of the semester, however, physical activity levels had returned to pre-hurricane levels. This is important to know because it indicates that although physical activity patterns were disrupted during the hurricane, students were able to resume their normal activities within the span of a semester. As all students in this study were taking a physical education class, future research should compare patterns of physical activity after a hurricane between students in a physical education class and those who are not.

Assessment of Physical Fitness and Quality of Life in Children with Disabilities

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Purpose: There is a high prevalence of disabilities among children, including autism spectrum disorder (ASD; Baio et al., 2018), attention-deficit/hyperactivity disorder (ADHD; Visser et al., 2014), and intellectual disability (Maenner et al., 2016). Children with disabilities show a high rate of obesity, increased health risks, and decreased quality of life (Chiang & Wineman, 2014). Keeping a healthy level of physical fitness (e.g., weight status) is recommended to enhance individual's health-related quality of life (HRQOL) including physical and psychosocial health. However, little is known about the physical and psychosocial health among children with disabilities. The purpose of this study, therefore, was to examine the current status of physical fitness and HRQOL among children with disabilities. The effect of weight status (healthy weight vs. unhealthy-weight) on study variables was also examined.

Methods: This study applied a cross-sectional research design. Participants consisted of 23 children with disabilities (16 boys; $M_{age} = 10.17 \pm 3.67$) recruited from local communities in North Texas. Among all participants, there were 52% Caucasians, 39% Hispanics, and 9% other ethnicities. Majority of them were with multiple disabilities: ASD (11), intellectual disability (9), ADHD (5), Down syndrome (4), Dyslexia (1), and physical disability (1). The participants attended a university service learning course for two days per week during the regular semester. Participating children completed the physical fitness measurements including balance, grip strength and body mass index (BMI). A validated parent-reported survey was used to measure children's HRQOL including physical and psychosocial function (PedsQL 4.0; Varni et al. 2001) and demographic information. Participants were categorized as healthy weight and unhealthy-weight based on the BMI percentile. Multivariate analysis of covariance (MANCOVA) was conducted to test the weight status effect on study variables by controlling age.

Results: Participants' performance for one leg standing ranged from .92s to 14.46s ($M = 4.71s$, $SD = 3.79s$). A balanced grip strength between left and right hands were found in these children ($M_{left} = 26.72lb$, ranges from 4.2 to 64.7; $M_{right} = 26.76lb$, ranges from 11.1 to 67.9). Around half of the participants were overweight (7) and obese (4) and their average BMI was 19.29 ($SD = 4.95$). The HRQOL in this population was lower than children without disability (Gu, Chang, & Solmon, 2016) for both physical function ($M_{cwd} = 67.16$ vs. $M_{cwod} = 88.71$) and psychosocial function ($M_{cwd} = 62.17$ vs. $M_{cwod} = 83.96$). According to the MANCOVA results, children with healthy weight had higher HRQOL than unhealthy-weight children with small to higher effect sizes (Cohen's d) for physical function ($d = .20$, $SD_{pool} = 17.25$), psychosocial function ($d = .60$; $SD_{pool} = 13.49$), and overall HRQOL ($d = .58$, $SD_{pool} = 11.97$).

Conclusions: The findings indicated an urgent need of improving physical fitness for the children with disabilities. Particularly, enhancing their balance is essential for children with disabilities as it is the critical ability to prevent falls in their daily lives. The findings also provide insights regarding the influence of weight status on HRQOL among children with disabilities. From public health perspectives, practitioners (e.g., parents and caregivers) should provide more physical fitness-based exercise/training in their daily routines for children with disabilities.

Barriers and Facilitators of Sports Participation for Hispanic Female Adolescents

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Statement of the Problem: Adolescent obesity has tripled over the past three decades in the United States. A modifiable risk factor of obesity is physical activity and adolescents are advised to do at least an hour of it every day. This can be accomplished through sports participation, which promotes a healthier lifestyle through consistent exercise. Currently, not all adolescents equally engage in sports –particularly Hispanic females who typically report low physical activity levels and have higher prevalence of obesity. The objective of this study was to determine barriers and facilitators that predicted Hispanic middle school girls' participation in sports.

Methods and Procedures: Hispanic, middle school females (n=233) were recruited from an independent school district in Houston Texas. Physical activity barriers and facilitators were assessed using a youth physical activity barriers and facilitators questionnaire. Response options ranged from never to almost always and were analyzed as a dichotomous variable: never or at least occasionally. Sports participation was assessed by asking, "During the past 12 months, how many teams or individual sports or activities did you participate on a competitive level, such as varsity or junior varsity sports, intramurals, or out-of-school programs?" from the Modifiable Activity Questionnaire. Response options ranged from none to four or more activities, and were analyzed as a dichotomous variable: participated or not. A series of chi-square tests and independent sample t-tests were conducted to determine which barriers and facilitators were different between girls who participate in sports and girls who do not. Barriers and facilitators found to be significantly different by sports participation status were included as independent variables in a logistic regression to predict the likelihood that girls participated in sports.

Results: Girls who participated in sports reported a higher number of facilitators ($t(236) = -3.68, p < 0.001$) and a lower number of barriers than girls who do not participate in sports ($t(238) = 3.06, p < 0.01$). Five facilitators were reported significantly more frequently and four barriers were reported significantly less frequently by girls who participated in sports than by girls who did not participate in sports. The logistic regression model explained 29% (Nagelkerke R^2) of the variance in sports participation and correctly classified 71.2% of girls participating in sports. Girls who reported that their friends did physical activity with them had over 200% higher odds to participate in sports. Girls who reported that their parents provided transportation had 183% higher odds to participate in sports. Girls who reported that they would rather sleep were 53% lower odds to participate in sports ($P < 0.05$). Girls who didn't want people to see their body when they did physical activity were 60% lower odds to participate in sports ($P < 0.01$). Girls who reported not being very good at physical activity were 68% lower odds to participate in sports ($P < 0.01$). The total number of barriers and the total number of facilitators were not significant predictors of sports participation.

Conclusions: The results of this study indicate that social and logistical support as well as girls' comfort with their body and physical activity abilities are important predictors of sports participation. These results can be used to develop informed and improved interventions. Future research should investigate the effect of changes to these specific barriers and facilitators on sports participation among Hispanic adolescent females.

Utilizing PechaKucha to Increase Public Speaking Skills among Pre-Service Educators

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Statement of the problem: Health and physical education positions require educators to be proficient and engaging presenters. PechaKucha is a presentation format derived from the field of architecture, where the presenter displays 20 images at 20 seconds each. The presenter talks alongside the image and at the end of 20 seconds, the image automatically advances to the next slide/image. This presentation format is unusual and contradicts how many pre-service educators are used to presenting as they typically rely heavily on notecards or words on the slides to help them navigate through presentations. Therefore, the purpose of this activity is to provide an environment where pre-service educators practice using modern design and public speaking skills in order to build confidence and increase their professional preparedness.

Methodology: Using the PechaKucha presentation format, pre-service educators are first tasked with picking a topic of their choice to present to peers. This first opportunity serves as a low-stakes, “practice round” for them to get comfortable with the format and build their confidence speaking in front of peers. The second round is completed in teams, and each team is assigned a disability to present using the PechaKucha format. The activity requires pre-service educators to work collaboratively in small teams to conduct research, create a presentation using modern design, rehearse to ensure fluidity and clarity, and finally present their assigned disability to their peers.

Procedures/Results: Qualitative data were analyzed from pre-service educators (n=70), via informal class discussions, exploring the impact of the PechaKucha activity. Participants gathered to discuss their personal experiences, which included the benefits of using modern design, being pushed outside their comfort zones, working collectively in small teams, and feeling more confident speaking in front of others. Overall, participants found the activity to be interesting, encouraging, and relevant to their future careers.

Conclusions: Training pre-service educators in modern design and public speaking is crucial for creating high-quality and well-prepared educators. Integrating PechaKucha into teacher preparation programs provides a valuable learning opportunity for pre-service educators to develop these essential presentation skills. Utilizing PechaKucha, we can provide a supportive learning environment where they can build the presentation skills needed to excel in and outside of the workplace.

The Effects of an After-School Physical Activity Intervention on School-aged Children's Fundamental Motor Skills

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Introduction: The development of fundamental motor skills (FMS) is the primary focus of the national elementary school physical activity (PA) standards (SHAPE America, 2014), which will further our understanding of physical literacy in the early grades. Being competency in FMS is the key foundation for children to learn and apply complex skills in different PA contexts (Stodden et al., 2008). Moreover, a high level of FMS will improve school-aged children's engagement in PA and develop a healthy lifestyle (Roetert et al., 2018). However, research indicates that many children could not meet the FMS proficiency standards at the end of elementary school year (Erwin & Castelli, 2008). Given that many elementary schools have decreased or even eliminated children's PA opportunities during the school time (Roetert, Ellenbecker, & Kriellaars, 2018), after-school programs may provide additional PA opportunities to enhance children's motor skills as a way developing physical literacy (Roetert et al., 2018; Stodden et al., 2008). Therefore, the purpose of the current study was to examine the effects of an eight-week after-school PA program on children's FMS.

Method: Participants were 37 children (girls = 24; boys = 13; $M_{age} = 6.54$, $SD = 0.86$) from three public elementary schools (southern region of U.S.) in this intervention study. Among them, the intervention group (twenty-six students from one school) participated in an after-school PA program for eight weeks (i.e., three times a week and 60 minutes each time). The intervention included 10 minutes for warm-up and instruction, 45 minutes for skill practice, and 5 minutes for cool down and conclusion. The students' FMS were assessed using the Test of Gross Motor Development – 2nd edition (TGMD-2, Ulrich et al., 2000) by two trained research assistants both at the baseline (Time 1) and immediately after the intervention (Time 2). Raw scores of locomotor, objective control and overall motor skills from the TGMD-2 test were used in the data analyses. The paired samples *t*-test was used to analyze the intervention effects on the participants' FMS.

Results: The Intra-class Correlation Coefficient (ICC) values reached 0.93 (locomotor), 0.95 (objective control), and 0.96 (TGMD - 2 overall score) indicating that the scores across 12 skills were highly reliable (Koo & Li, 2016). After the eight-week after-school PA intervention, students had significant improvement in locomotor ($M_{T2} = 36.19$ vs. $M_{T1} = 23.55$, $p < .001$, $d = -1.74$), objective control ($M_{T2} = 37.76$ vs. $M_{T1} = 22.05$, $p < .001$, $d = -1.72$), and overall FMS ($M_{T2} = 73.96$ vs. $M_{T1} = 45.61$, $p < .001$, $d = -1.86$). Control group's FMS had no significant changes between Time 1 and Time 2.

Discussion: After the eight-week PA program, the intervention group demonstrated significant FMS development while the control group did not display any changes in FMS. The findings supported that motor skill dominated after-school PA program can provide school-aged children opportunities to develop FMS.

Gender and Racial Difference in College Students' Body Images

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Background/Purpose: Negative body images are concerned by many college students and may lead to unhealthy lifestyles (Egelton, 2011). Body dissatisfaction (BD) and social physique anxiety (SPA) represent the global satisfaction and affective facets of body image (Menzel et al., 2011). Existing studies have reported gender differences in BD and SPA, but findings of racial differences were inconsistent and only a few studies were conducted among college students. Considering the great impact of emerging social media (e.g., Instagram, Twitter, YouTube, etc.) on young adults' body images (Tiggemann & Zaccardo, 2015), it is critical to update our knowledge of college students' body images. The purpose of this study was to examine gender and racial differences in college freshmen students' body images, focusing on their BD and SPA.

Methods: College freshmen students ($N = 47$, $M_{\text{age}} = 19.62 \pm 2.33$ years) enrolled in a fitness education course from a four-year university consented to participate in this study. Among 24 female and 23 male participants, 23 and 15 participants identified with Caucasian and Asian, respectively. The rest nine participants identified with Africa American, Hispanic and Bi-racial.

Procedures: The Body Dissatisfaction sub-scale of the Eating Disorder Inventory-2 (EDI-BD, Garner et al., 1991), the Social Physique Anxiety Scale (SPAS, Hart et al., 1989), and a demographic information survey were completed by participants using Qualtrics online survey tool. Both EDI-2 and SPAS were validated among non-clinical adult samples (Motl & Conroy, 2001; Theil & Paul, 2006). The total score of EDI-BD and mean score of SPAS were calculated to measure BD and SPA, respectively. MANOVA were performed in SPSS 21.0 to examine gender and racial differences in BD and SPA separately. Racial difference was only examined between Caucasian and Asian students due to the small sample sizes of other racial subgroups.

Results: There were insignificant gender differences in body images. However, post-hoc tests (ANOVA) showed that female students' SPA scores were significantly higher than male students with a medium effect size [$F_{(1, 44)} = 5.28$, $p = .026$, partial $\eta^2 = .11$]. Significant racial differences in body images were found with a large effect size [Wilks' Lambda = .61, $F_{(2, 34)} = 10.95$, $p < .001$, partial $\eta^2 = .39$]. Asian students reported significantly higher BD than Caucasian students with a large effect size [$F_{(1, 35)} = 8.37$, $p = .007$, partial $\eta^2 = .19$]. Gender difference in BD and racial difference in SPA were insignificant.

Discussion/Conclusions: This study showed that in social settings, females are more aware that their bodies are evaluated by others (Myers & Crowther, 2012) and thus may experience greater SPA than male students. The study also revealed significant higher BD among Asian students, who may be influenced by traditional Asian values and preferences for slim body shape (Lau et al., 2006). Because one's body and its movement are often scrutinized in physical education settings, physical educators need to develop strategies to alleviate students' BD and SPA. We recommend college instructors to establish a learning environment that emphasizes self-care and self-appreciation, help students deal with peer and cultural pressures, and promote healthy eating and regular physical activities as effective coping strategies for BD and SPA.

Identifying Barriers and Effects of Using Fitbit Charge 2 among College Freshmen

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Statement of the Problem: It has been well documented that the increase of physical activity (PA) levels on a regular basis with an adequate amount of sleep can reduce the risks of many lifestyle-related illnesses. Among the multiple approaches for PA promotion, the use of PA wearables become imperative devices for motivating and monitoring PA behaviors. Although a number of studies have reported the use of various PA wearables in college students, limited literature is available focusing on the barriers and effects of students' use of Fitbit Charge 2 (FC2), which hinders our endeavor of using FC2 for PA promotion in higher education settings. Therefore, the purpose of this study is to examine barriers and effects of using FC2 among college freshmen.

Methods: A descriptive phenomenological approach was used to identify barriers and effects of using FC2. A total of 47 college freshmen ($N_{female} = 24$, $N_{male} = 23$; $M_{age} = 19.62 \pm 2.33$ years) enrolled in a fitness education course from a large four-year southern state university consented to participate in this study. Most of those participants were Caucasian and Asian, which were 48.9% and 31.9%, respectively. The rest of the participants were identified as African American, Hispanic and Bi-racial.

Procedures: Participants wore FC2 for the entire semester and were required to engage in online discussions concerning barriers and effects of using FC2 at the end of the semester. The discussion topics focused on barriers encountered (e.g., physical or psychological barriers), the effects of using FC2 on PA and sleep behaviors, and suggestions for the better use of FC2. All of their discussion notes were recorded in an electronic file. A constant content comparison method was employed to generate themes. Two researchers independently coded and analyzed the data. Member checking and peer debriefing were used to ensure the credibility of the data and results interpreted.

Results: The following themes were identified: (a) no physical or psychological barriers were identified when using FC2; (b) students believed that some key functions of FC2 (e.g., tracking steps, active minute, and sleeping) had positive impact on their PA behaviors (e.g., increased PA and be more aware of PA) and sleep behaviors (e.g., increased sleep time, tracking and monitoring the quality of sleep); (c) although family members and friends could encourage their use of PA wearables such as FC2, few of them received any encouragement from their family and peers; and (d) students still preferred to use the Fitbit App to get their PA and sleep data directly, instead of using the Fitbit website, even though it was very easily to access the website data.

Conclusions: This study revealed a positive experience of using FC2 to monitor PA and sleep behaviors among college students, shedding light on further studies regarding healthy lifestyle promotion by using FC2 as an important tool. Social factors (e.g., family members' and friends' support) should be taken into consideration when encouraging students to use PA wearables. A better designed FC2 App is needed to easily sync, export, and analyze data for students in the future.

Undergraduate Students' Knowledge, Interests, and Career Aspirations in Health and Human Performance

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Undergraduate students spend an inordinate amount of time contemplating future careers while in college. In addition, undergraduate degree programs and departments are faced with providing accurate information about possible careers to best prepare students for future success. A survey was administered in a foundations kinesiology course at a large, urban university to gauge undergraduate students' knowledge, interests and career aspirations in health and human performance. Information obtained will be used to assist in program development by modifying curriculum to best meet the needs of students. The survey was administered over three semesters (summer 2017, fall 2017, spring 2018) and included questions related to demographics, knowledge, areas of interests, and careers in health and human performance related fields. There were 713 students who completed the survey, with 945 registered for the class, a 75% completion rate. The majority of the students were between the ages of 19-22 at 78.75%, the rest of the students were older than 22. There were slightly more females than males who completed the survey, 43.77% males, and 56.23% females. There was also a nice representation of different race/ethnicities, 31.02% Asian/Pacific Islander, 25.64% Hispanic, 22.52% White/Caucasian, 16.71% Black/Africa American. Full time students who completed the survey made up 89.8% of the sample, 48.87% of the students reported working part time, 12.75% reported working full time jobs, and 31.44% reported not working during the school year. Students were also asked how many hours a week do they typically study during the week, the most popular answers were 10+ hours at 27.42%, 5 hours at 16.42%, and 8 hours 13.78% of respondents. Of the students who completed the survey 30.01% are junior classification, 25.18% are senior classification, 24.75% are sophomore classification, and 17.92% are freshman classification. The majors of the students are very broad, 42.39% are Kinesiology majors, 8.82% biology majors, 6.82% psychology majors and 4.13% Human Nutrition and Foods. Minors were also very broad in this group of students, 23.47% are Kinesiology minors, 8.96% biology minors, 7.82% Health minors, 6.69% Human Nutrition and Foods and 6.12% psychology minors.

To summarize, these students are an ethnically diverse group of 18-22 full time junior, senior and sophomore students with a variety of academic majors. This group was relatively equal across their interest levels in 47.99% Exercise Science, 21.20% Human Nutrition and foods, 16.76% Fitness and Sports and 14.04% Sports Administration. Students were also asked about their current knowledge in different subject areas. The weighted averages of these subjects ranked knowledge of physical fitness, nutrition, exercise and sports, psychology and anatomy as the top five. The lowest knowledge areas include biomechanics, sports medicine, measurement, and motor behavior. The students had varying interests in careers, based on the weighted average physical therapist, doctor, physician assistant, athletic trainer, and occupational therapist ranked the highest. Students had very low interests in jobs such as podiatrist, massage therapist, occupational therapy assistant, occupational therapy aide, and strength coach based on the weighted average. Students had an average interest in careers such as dietitian, occupational therapist, personal trainer, and physical therapy aide. Also, 36.10% of the students felt Graduate school was definitely realistic for them.

The spring 2018 semester included a comment box, students were asked, "What areas of your education do you need to improve in, in order to achieve your career goals?" There were 219 responses that were individually coded into 11 topics. The most common themes were 46.58% about study skills and 35.62% in core knowledge. Study skill comments included increasing studying, decreasing procrastination, and time management. Core knowledge included increased knowledge in math, biology, chemistry, physics, anatomy and physiology.

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Exploring Motivational Process of Parental Support on Physical Activity for Children with Disability?

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Purpose: Regular physical activity (PA) participation can help maintain and improve fitness and wellness for children with disability. Recent research highlights parents' roles in promoting their children's PA engagement while also recognizes a variety of factors that influence parent's perceptions and support. The theory of planned behavior (TPB; Ajzen, 2005) has identified three salient motivational factors that influence an individual's behavior and intention: 1) attitudes, 2) subjective norms, and 3) perceived behavioral control (PBC). Grounded by the TPB model, this mixed-methods study examined parental support and perceptions of PA for their children with disability and explored the underlying reasons for parents' perceptions on supporting PA.

Methods: A mix-method research design was used in this study. Participants were 22 parents/guardians (mothers/female guardians = 21, father = 1) who had child(s) with disabilities from local communities in North Texas. Half of them were Caucasians (50%), 41% were Hispanics, and 9% other ethnicities. Their education levels varied from master degree (2), college degree (17), and high school (3). The quantitative part used a validated 5-likert-scale survey to assess parents' perceived attitude, subjective norm, PBC, and intention, as well as their parental support (Rhodes et al., 2016). The follow-up qualitative part explored the underlying reasons for parents' perceptions of supporting PA according to the TPB components. Three trained interviewers conducted audio-recorded semi-structured individual interviews with a subsample of nine (9) mothers. Content analyses were conducted to interpret the data. Two coders coded the data deductively following the framework of TPB by using the Nvivo (version 11).

Results: The descriptive analyses demonstrated that parents were very supportive to their children's PA ($M = 4.12$, $SD = .66$). They also had positive perceptions of supporting PA for their children, with the means ranging from 4.18 to 4.42 among attitude, subjective norm, PBC, and intention. The Pearson's r correlation analysis revealed that all the TPB components were significantly related to each other (r s range from .46 to .70) while they had weak to moderate correlations with parental support (r s range from .15 to .37). The qualitative data resulted in three themes on attitude: 1) the importance of keeping children active and healthy; 2) the enjoyment of watching children being involved with others, and 3) The treatment function of PA to children's disabilities. Interviews about subjective norm revealed that the support mothers perceived were mainly from husband and children's grandparents. Two themes were generated: 1) mothers determine children's PA schedules, and 2) support from family members are encouraging and helpful, such as driving children to PA programs. PBC (i.e., barriers) produced four main themes: 1) limited resources of appropriate PA programs for children with disability; 2) the high cost of supporting PA for children with disability (e.g., finance, time, and transportation); 3) busy schedules to support PA, and 4) concerns of children's success in PA due to their disabilities (e.g., no experience, limitations due to disability).

Conclusions: The findings of this study revealed that parents/guardians who have children with disability are supportive and have positive perceptions of supporting PA for their children. As Rhodes et.al. (2013) discovered, multiple barriers from parents, children, and environment constrain actual engagement in physical activities among children with disability. The family-based interventions aiming to promote PA for children with disability should provide parents/guardians with extra support and information about PA programs in local areas. Strategies to encourage other family members' contributions to PA of children with disability is highly recommended and needed.

The Ontological Foundations of Constructivist Realism: PE Curriculum Construction

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Purpose: The Society for Health & Physical Educator's posits that a physical education program should have a written, sequential curriculum for all grades aligned with the national standards for physical education. Learning standards are developed by national professional organizations such as SHAPE and state education agencies rather than by the federal department of education, and not the federal government. When curriculum development or reform transpires, educators and especially physical education teachers are not asked to be part of this process. By allowing physical education teachers to develop curriculum, teachers feel included and empowered to share their ideas. Even with its limitations, the standards-based approach has consistently been the framework for national and emerging educational initiatives.

Method: Constructivist Realism is an ontological position that accommodates the best of positivism and constructivism. The analysis employed a hybrid approach, which utilized both the data driven inductive approach and the deductive approach, as the teacher's voice is better represented. The deductive analysis was used in the study, due to a clear structure of analysis based on previous knowledge, the six step curriculum development model. The inductive approach worked from the bottom up, using the participant's views to build themes via formal interviews, discussions, and informal interviews for aspects of curriculum development.

Certified physical education teachers (n = 12) with at least two years of teaching experience and a curriculum director (n = 1) served as participants in the study. The data collection began in the summer of 2007, with the formulation of the physical education teacher advisory committee and concluded in the Fall of 2015.

Curriculum development in physical education is blending the ideas from curriculum theorists. By merging the theorist's work, a six-step curriculum development model was cultivated to construct curriculum. For each step of the model, a question or a series of questions were implemented to garner the expected outcome & develop the reformed curriculum.

Results: The results of this study are presented in three parts: (a) a deductive analysis of the curriculum development process, (b) PECAT analysis, and (c) inductive reasoning by which themes and categories emerge from the data through the researcher's careful examination of discussions, structured interviews, and informal interviews.

Conclusion: This study provides a clear example of a curriculum advisory committee's knowledge being valued throughout the curriculum development process by embedding questions into the curriculum development process. By allowing people's voices to be heard and their perspective shared, organizations can create meaning to resolve complex health issues.

Preparing PETE Students for Appropriate Practices: Identifying Areas for Improvement

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Statement of the problem: Teachers are expected to follow best practices within their content areas. For physical education (PE) teachers, many of these practices are outlined in SHAPE America's Appropriate Instructional Practice Guidelines, K-12 (2009). A larger research study examined the extent to which undergraduate physical education teacher education (PETE) programs are preparing their preservice PE teachers for implementing appropriate practices. This report focuses on those appropriate practices that the preservice PE teachers are least prepared for, as reported by program faculty. **Methods and Procedures:** Participants ($N = 124$) were PETE faculty across the United States who responded to an electronic survey created by the investigator. The survey consisted of six demographic questions and 77 Likert scale questions representing the 77 appropriate practices outlined in SHAPE America's Appropriate Instructional Practice Guidelines, K-12 (2009). For the Likert scale questions, participants ranked the extent to which they agreed or disagreed that their institution was preparing PETE majors to implement each of the practices in the document on a scale from 1 (strongly disagree) to 5 (strongly agree). **Results:** Descriptive statistics were used to analyze all demographic and Likert scale data. Mean level of agreement on the Likert scale questions ranged from $M = 3.71$ ($SD = 1.00$) to $M = 4.80$ ($SD = .51$). Of the 77 practices, 71 had a mean above 4 (indicating agreement) and the remaining six had a mean above 3 (indicating faculty were neutral). These six practices are further examined. **Summary of Findings:** Overall, PETE faculty generally agree that their programs are preparing preservice PE teachers to implement appropriate practices. However, individual programs may wish to examine what they are personally doing to prepare preservice PE teachers for appropriate practices and develop strategies for any areas of weakness.

A Profile of Female Military Wounded Warriors Participating in the 2018 Warrior Games

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Statement of Problem – The Warrior Games are athletic competitions for military personnel considered injured, ill, or wounded. The Games are modeled after the U.S. Paralympics and have been supported by the Department of Defense (DOD) since 2013. Warrior Games include competition in archery, cycling, track, field, indoor rowing, powerlifting, shooting, sitting volleyball, swimming, and wheelchair basketball. The purpose of the Games is to provide a mechanism for recovery, rehabilitation, and reintegration into the community or workforce for these veterans. Assumptions are made that participation in these Games is largely represented by male competitors with minimal consideration for the contribution from female wounded warriors. **Purpose** – The purpose of this study was to identify the demographic profile of female wounded warriors who have increased the success and broadened the awareness of the Warrior Games.

Methods – The literature review included information compiled by the DOD along with on-site interviews with athletes and coaches at the recent 2018 Warrior Games. This purely descriptive, demographic research produced surprising findings. **Procedures** – The data were collected from the 2018 Official Program for the Department of Defense Warrior Games held in Colorado Springs and also retrieved from the online source www.dodwarriorgames.com. Additional data were compiled by the authors following consultation with coaches and competition staff. One author attended the Games and was provided media access to interview participants and coaches. **Results** – The impairments represented at the Warriors Games included the following: Ataxia, Hypertonia, Impaired Muscle Power, Impaired Passive ROM, Intellectual Impairment, Limb Deficiency and Visual Impairment. Table 1 presents a profile of Female Warriors by Sport participation. Table 2 is an overall comparison of both male and female profiles by Military Branch.

Table 1.

| Female Profile | Archery | Cycling+ | Field+ | In. Row+ | Pwr lift+ | Shooting | Sit vb | Swim+ | Trk+ | WC Bbk |
|---------------------------------------|---------|----------|--------|----------|-----------|----------|--------|-------|-------|--------|
| Females by Sport | 8 | 23 | 22 | 14 | 7 | 9 | 6 | 28 | 17 | 5 |
| Percentage by Sport | 21.62 | 62.16 | 59.46 | 37.84 | 18.92 | 24.32 | 16.22 | 75.68 | 45.95 | 13.15 |
| +medals reported separately by gender | | | | | | | | | | |

Table 2.

| Warrior Games by Military Branch | Total Warrior Count | Male Warrior Count | Female Warrior Count | Overall Medals Won*(N=515) | Overall Medal % |
|--------------------------------------|---------------------|--------------------|----------------------|----------------------------|-----------------|
| US Air Force | 39 | 25(64%) | 14 (36%) | 165 | 32% |
| Navy | 40 | 33 (82%) | 7 (18%) | 101 | 20% |
| Army | 39 | 29 (74%) | 10(25%) | 96 | 19% |
| USMC | 35 | 31(86%) | 4(11%) | 88 | 17% |
| SOCOM | 33 | 31(94%) | 2(6%) | 65 | 13% |
| *Overall count includes both genders | | | | | |

Summary – The purpose of this study was to establish the demographic profile for female competitors in the 2018 Warrior Games. Results indicate that female participation ranges from 6-36% across the five major military branches. The sports of swimming and cycling appear to have the highest percentage of female athletes. These sports lend themselves to a “team” and not an “individual” sport concept meaning multiple athletes contribute as a group to the teams’ successes. In review of the overall medal count, the USAF had the highest percentage of females and the greatest overall medal count. This suggests that the female athletes not only contributed to team size but medals awarded. Analysis will also be presented according to performance for the Ultimate Warrior Champion for females across military branches. The Ultimate Champion Award is established for the athlete who competes in their respective functional classifications in eight special sporting events, including swimming and cycling. Female participation needs to be recognized and supported for future Warrior Game competitions.

Measuring Perceived Motivational Climate in Middle School Physical Education

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Over the last 10 years, the 2 x 2 achievement goal model has been widely used in the physical education (PE) settings. This model consists of four types of achievement goals: mastery-approach, performance-approach, performance-avoidance, and mastery-avoidance. However, the models used for measuring student perceived motivational climates to date have been exclusively based on the traditional dichotomous climate framework (i.e., mastery climates and performance climates). There is a need to develop a new scale to reflect and assess four different perceived motivational climates: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance climate. The purpose of this exploratory study was to examine the validity and reliability for the 2x2 perceived motivational climate in middle school physical education (PMCMSPE).

A total of 271 students from four middle schools in the southwest United States participated in the survey. Participants ranged in age from 11-15 years ($M = 13.03$, $SD = .84$), and consisted of sixth (3.7%), seventh (39.5%), and eighth (51.8%) graders. Students completed the 2 x 2 PMCMSPE developed by the lead author. This scale includes 12 items to assess four achievement goal climates: mastery-approach, performance-approach, performance-avoidance, and mastery-avoidance climates. Each type of climates includes three items using a 7-point Likert-scale.

Confirmatory factor analysis (CFA) and Cronbach alpha coefficients were used to assess factorial validity and internal consistency of the scores produced by the 2x2 PMCMSPE. The results from CFA have yielded an acceptable fit of the data to the hypothesized four-factor model [Chi-Square degrees of freedom ratio ($\chi^2/DF = 1.72$); comparative fit index (CFI) = .94; TLI = .92; Goodness-of-Fit (GFI) = .95; and the root mean square error of approximation (RMSEA) = .05]. Cronbach alpha coefficients for the performance-approach, mastery-approach, performance-avoidance, and mastery-avoidance climate subscales were .64, .70, .61, and .51, respectively, generally indicating acceptable internal consistency, with an exception of mastery-avoidance climate subscale.

The findings provide evidence of construct validity for the 2 x 2 PMCMDPE, and the new scale can be used to assess four different perceived motivational climates in middle school PE settings. However, the internal consistence for the mastery-avoidance climate subscale was relatively low. A possible explanation might be related to the small number of total items in each domain and a small sample size used in this study. Therefore, there is a need for continued research on the examination of psychometric properties of 2x2 PMCMSPE in PE settings.

Credit for play: Texas higher education institutional practices concerning academic credit for intercollegiate athletic participation.

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Public awareness of “athlete-only courses” has emerged through investigative reporting and scholarly research, countering the notion that intercollegiate athletic participation (IAP) is truly extra-curricular. Recent studies have reported the prevalence and nature of IAP credit courses (CIAP) in institutions of higher education (IHEs) throughout the NCAA and NCCAA, but no study found addressed this practice among all IHEs in Texas. The primary purpose of this study was to document the nature and prevalence of CIAP among all Texas IHEs (n=66) with membership in the NCAA, NCCAA, and NAIA. Data collection involved review of 2017-18 online academic catalogs in order to determine general education degree requirements, course titles, and course descriptions for references pertaining to course credit for IAP. Athletic department websites were the source for institutional athletic affiliation. Data analysis and presentation included frequency tables and a Fisher’s Test calculation regarding presence of CIAP. Twenty-seven IHEs (40.9%) required a physical education credit course as part of baccalaureate degree general education requirements; 12 of those (44.4%) allowed IAP to satisfy this requirement. Regarding CIAP overall, 26 IHEs (39.4%) reported such, primarily among NCAA Division II and NCCAA members (Fisher’s Test $p=.00086$). Possible explanations for the prevalence of CIAP among NCAA D2 and NCCAA institutions center on greater compatibility with institutional mission/culture and higher proportion of student-athlete enrollment. Discussion included the implications of substituting IAP for courses centered on wellness content and the further segregation of student-athletes from the general student body.

The Effects of Physical Education Teachers' Transformational Leadership on High School Students' Expectancy Value

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The leadership practices exhibited by physical education teachers have been found to have a significant impact on promoting students' learning. The main purpose of this study was to explore: (a) differences on high school students' perception regarding expectancy-value according to their grade, gender, and ethnicity and (b) the relationship between physical education teachers' transformational leadership and high school students' expectancy-value.

To conduct this study, two questionnaires were employed: transformational teaching questionnaire (Beauchamp et al., 2010), expectancy-value questionnaire and (Duncan & Tammen, 1989). A total of 223 high school students participated in this study through a convenience sampling technique, and 202 questionnaires were used for the data analyses. Data collected were analyzed by descriptive, exploratory factor analysis, t-test, ANOVAs, and regression.

The study results showed that generally 9th grade students in high school perceived higher expectancy-value than 10th, 11th, and 12th grade students. Male students had higher expectancy-value than female students. However, there was no statistically significant difference among ethnic groups. In addition, according to single regression, transformational leadership had a positive impact on students' expectancy-value. Lastly, based on multiple regressions, intellectual stimulation was a common factor that affected high school students' expectancy-value. The results of the study support the importance of transformational leadership that affects high school students' expectancy-value in physical education. Thus, it is recommended that physical education teachers be able to understand and display appropriate leadership, in particular transformational leadership.

Zika Virus: Are College Students Aware?

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Zika virus is an emerging disease in the United States. Although many Americans have heard of the disease and are aware that the virus is linked to birth defects in babies born to infected mothers, many Americans are unclear about options for testing and treating the virus or the availability of vaccines to prevent it. Numerous education campaigns on the risks of Zika virus infection, its symptoms, evaluation methods, and preventive behaviors for transmission reduction have been conducted (World Health Organization, 2016). To determine if these educational efforts have been successful and if the messages about Zika virus are being received, a survey was conducted at a university in rural South Texas. Upon IRB approval, a questionnaire regarding the virus and its prevention and control was posted on SurveyMonkey®. Students were invited to complete the survey and 245 students (females=162, males=79, 4 non-report) participated. There were 121 Kinesiology majors and 124 non-majors with a 79% Hispanic participation. The number of students aware of the basic facts about Zika virus varied. While 62.13% were aware the virus had been found in Miami, only 19.15% knew it has also been found in Brownsville, TX. A surprising 57.45% knew that the virus can be transmitted in ways other than via mosquito, and 78.72% of those surveyed were aware of the danger to pregnant women posed by the disease. Even though 67.09% of those surveyed agreed there is no cure for Zika virus, most believed they could safely travel to Zika infected areas by getting a vaccine (51.06%), even though there is currently no vaccine available. Finally, only 11.06% knew that the best way to prevent spreading the disease after traveling to an area with Zika virus is to abstain from sexual contact for several months (CDC, 2018). A Chi-Square test was performed and no relationship was found between *Score* and *Major*, $\chi^2(1, 241)=2.879, p=.09$ which was surprising. Also the average pass rate of 32.4% was of concern. Even though most students were aware of Zika virus and appear to be informed about how Zika is spread, many lack the information about the availability of treatments, vaccines, and tests for the virus. Dissemination of information is crucial in both health awareness and disease prevention. More importantly, the means of getting that information to the public can be improved as the situation continues to change.

Key words: *Zika virus, disease prevention, disease treatment*

Effectiveness of the Afterschool Fitness Program

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STATEMENT OF THE PROBLEM: The childhood obesity rate has been increased for decades in the United States. Based on the most recent data from the Center for Disease Control and Prevention (CDC), the prevalence of obesity is 18.5% and affected about 13.7 million children and adolescence (CDC, 2017). One of the recommended strategies to prevent child obesity is helping children to be more active providing chances to participate in physical activities regularly. Purpose of the study is to assess the effects of the afterschool physical activity program for elementary school students in BMI and level of fitness. **METHODS:** Subjects were 3rd and 4th graders who registered the afterschool program in San Antonio, TX area. All the subjects participated in the 45-minute afterschool physical activity program twice a week for 4 weeks. *FITNESSGRAM*® was implemented as an assessment instrument twice (pre- and post-test). The measured tested items were height, weight, curl-ups, shoulder stretch, Trunk Lift, Pushups, and Pacer test. Descriptive statistics and *t*-test were conducted to analyze data. **RESULUT:** Total 14 subjects ($N=14$), 6 Males and 8 Females, participated in the afterschool physical activity program. Average height and weights were 146.09 centimeters and 43.6 kilograms. *t*-test revealed there is a significant difference in the scores for measured test items, Curl up, ($Mean_{pre}=44.624$, $SD_{pre}=11.245$, $Mean_{post}=26.429$, $SD_{post}=13.243$; $t(13)=7.307$, $p<.000$), Shoulder stretch right ($Mean_{pre}=12.138$, $SD_{pre}=3.133$, $Mean_{post}=13.607$, $SD_{post}=4.091$; $t(13)=12.430$, $p <.000$), Shoulder stretch left ($Mean_{pre}=12.037$, $SD_{pre}=2.381$, $Mean_{post}=14.328$, $SD_{post}=6.521$; $t(13)= 8.278$, $p <.000$), Trunk lift ($Mean_{pre}=9.642$, $SD_{pre}=1.292$, $Mean_{post}=13.409$, $SD_{post}=7.749$; $t(13)= 6.501$ $p <.000$), Pushups ($Mean_{pre}=16.428$, $SD_{pre}=6.699$, $Mean_{post}=21.428$, $SD_{post}=11.270$; $t(13)=7.114$, $p <.000$), and Pacer test ($Mean_{pre}=12.928$, $SD_{pre}=10.816$, $Mean_{post}=23.789$, $SD_{post}=11.235$; $t(13)=7.715$, $p <.000$). **CONCLUSIONS:** There was no significant difference observed in weight after subjects took the physical activity program. However, there was significant difference in all the measured fitness related test items.

Movement Screening and Mobility Training in Community College Personal Fitness versus Yoga Courses

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Statement of the Problem: Movement screening (MS) has long been advocated as an effective method to sample or profile movement competency in high performance populations such as elite athletes, first responders, military personnel and others. However, it also has applications in the general population as well. Loss of mobility and motor control as shown in aging or sedentary individuals with low MS scores has been identified as a primary factor contributing to physical inactivity. We have previously studied students in community college personal fitness courses and found that a curriculum focused on developmental/corrective exercise and general resistance training improved functionality measures on a MS for a large percentage of initially low, or moderately fit participants.

PURPOSE: The purpose of this study was to perform a pilot study to determine if community college students (including dual credit high school students) would improve anthropometric/mobility measures pre- and post, following participation in one semester long personal fitness classes versus yoga classes. **METHODS:** All subjects (Total N = 60; Females = 35, Males = 15; Fitness Females, N = 15; Yoga Females, N = 9; Fitness Males, N = 6; Yoga Males, N = 9; Mean Age = 21.3 years for Females and 19.0 for Males; mean Pre-Body Mass Index - BMI = 27.04 for Females and 26.8 for Males) were enrolled in basic personal training fitness or yoga courses and completed simple anthropometric/mobility measures (BMI, waist and hips, girths, shoulder mobility etc.) and an MS battery of 5 screens (scored as yes/no for success). Subjects then completed a personal fitness course taught by an instructor who emphasized 15-20 minutes of core and mobility training and 30 minutes of general resistance training per each class session versus a traditional yoga course. Preliminary data analyses included multivariate (MANOVA) and Chi Square statistical techniques utilizing an aprior alpha level significance of $p < .05$. **RESULTS:** There were no statistical differences on the five MS items over time (pre- post-) between fitness or yoga participants. However, the combined data for fitness and yoga groups did show improvements (percent Failing vs. Passing) on all but two (shoulder and single leg stance) of the MS movements. The mean results for the other 3 MS items were as follows: *Toe touch* – 8.9% Fail, 91.9% Pass Pre and 5% Fail, 95% pass Post; *Push Up* – 55.4% Fail, 44.6% Pass Pre and 44.6% Fail, 55.4% Pass Post; and, *Wall Squat* – 31.7 % Fail, 68.3% Pass Pre and 24.0% Fail, 76% Pass Post. **CONCLUSIONS:** Our pilot study results show that completion of a personal fitness course or a yoga course, designed for community college students who were overweight, and moderately low to moderate fit initially, were equally effective at improving MS scores (although not significantly). Future studies like ours utilizing larger sample sizes are warranted to further evaluate whether participation in various community college activity courses (like personal fitness and yoga) can improve mobility and motor control in initially low, or moderately fit participants.

Intentions and Consequences of College Student Texting and Driving
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Texting while driving has attracted considerable media attention and intense public interest. Attention to this issue is justified. At any given time in the U.S., an estimated 1.0% (or 135,300) of all drivers are observed manipulating a handheld device, which includes texting and dialing (NHTSA, 2009). In 2011, distraction was a contributing factor in about 10% of all driver fatalities and 17% of injuries in the U.S. (NHTSA, 2013), with drivers 15–22 years of age representing the highest proportion of distracted drivers (WHO, 2011). In some college samples, 92% of respondents reported reading texts while driving (Atchley et al., 2011). Given the rate of phone use by college students, this study investigated the intentions and consequences of college student texting and driving. Participants ($n = 524$) completed a 24-item instrument related to the study. More specifically, the survey measured the frequency of their phone use while driving, their intent to use a cell phone while driving (intentions), and how they (perceived behavioral control) and others (subjective norm) feel about their cell use while driving.

Participants were much more likely to read a text while driving during the last week compared to sending a text – 52.28 and 38.59%, respectively. With regard to their intentions in the next week, they were more likely read a text (33.65%) when compared to sending a text (20.53%). Participants greatly agreed that those who are important in their lives would not approve of them sending messages while driving (88.97%) or reading texts while driving (86.50%). When asked “I would feel guilty if I sent text messages while driving,” participants moderately agreed ($M=4.16/7.00$, $S=2.11$). Interestingly, they feel less guilty about reading texts while driving ($M=3.74/7.00$, $S=2.04$). Participants feel they have “complete control” over sending and reading texts while driving, $M=6.25/7.00$ ($S=1.49$) and $M=6.19/7.00$ ($S=1.49$). Participants feel that most all of their friends and peers send ($M=5.29/7.00$, $S=1.36$) and read ($M=5.24/7.00$, $S=1.36$) texts while driving at similar rates as themselves. Gender differences were found for a number of student texting behaviors. Females reported higher rates of sending texts while driving compared to men, $t(513)=-1.98$; $p=.04$, ($M=3.80$ vs. $M=3.45$). Females also reported higher rates of reading texts while driving, $t(515)=-1.94$; $p=.05$, ($M=4.18$ vs. $M=1.09$). With regard to feeling guilty about sending and reading texts while driving, females reported higher scores in both instances, $t(517)=-4.15$; $p=.00$, ($M=4.51$ vs. $M=3.76$) and $t(520)=-$; $p=.00$, ($M=4.16$ vs. $M=3.26$), respectively.

Findings validate previous outcomes that beliefs and attitudes regarding texting, behavioral intentions, and perceived controls fail to result in positive behavior change. Further, the normative beliefs identified in Theory of Planned Behavior were not indicative of positive behavior change among subjects. Texting may need to be managed by *prevention through regulation* which can result in fines, imprisonment, and suspension of driver’s license. Interventions may also need to be gender specific.