Instructional Modifications to Exercise and Physical Activity Programs for Youth with Autism.
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Statement of the Problem
The prevalence of youth with Autism (AU) in the United States is on the rise (Wing & Potter, 2002) and although the benefits of increased physical activity are widely documented, these youth are reported to have low fitness levels (Petrus et al., 2008). Many youth and older individuals with AU have the physical capability to execute a variety of physical tasks; however, the social and behavioral concerns from teachers or the manner in which activities are introduced may explain the disparity. In order to promote fitness activities for individuals with Autism, practitioners must have the instructional knowledge to deliver exercise programs.

Purpose
The purpose of this literature review was to describe recommendations for instructional modifications to exercise and physical activity programs for youth with Autism.

Methods and Procedures
This was a descriptive study that acquired all relevant information using a Bibliometrics design. The databases searched included Academic Search Elite, Education Resources Information Center (ERIC), Ebsco, MEDLINE, Physical Education Index, ProQuest, ScienceDirect, and SportDiscus. Research was included for discussion that was associated with instructional delivery and exercise/physical activities for youth with AU. Data were organized to develop practical recommendations for physical educators working to promote physical activity among youth with AU.

Results
Youth with Autism require specific instructional modifications to ensure success within the physical education environment; including, a structured consistent environment, clear concise instructions, and elimination of loud noises or stimulating surroundings. Other information included the use of picture cards, colored spots, and music to focus attention during instruction.

Summary
Most activities can be simplified to include students with AU; physical educators can use these recommendations to more confidently and consistently include students with AU in physical education.
Application of the System for Observing Fitness Instruction Time (SOFIT) to Assess Relationships Between Practice Activities in Youth Basketball.

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Youth sport is a primary way for youth to engage in voluntary physical activity (PA). Some objectives of youth sport leagues are to promote skill development and appropriate PA. Since much of the sport PA happens in practice sessions, it is necessary to assess the contribution that different components have on promoting appropriate PA. **Purpose.** The purpose of this study was to examine the level and intensity of PA attained in youth basketball practice using the System for Observing Fitness Instruction Time (SOFIT). **Method.** Participants in the study were eight teams and their coaches taking part in a local youth basketball in Southeast Texas. Teams were evenly divided (four and four) into two different age categories (8–9 and 10–11). Physical Activity was assessed during practices using categories and procedures established in the SOFIT. Teams were observed during scheduled practices with the consent of the parents and coaches. SOFIT variables were quantified and converted to percentage form for analysis. Descriptive statistics and correlations were used to analyze the relationship between different variables. Multiple Regression was used to examine the relationship between practice activities and the levels of Moderate to Vigorous Physical Activity (MVPA). **Results.** Significant correlations were found between lesson length and walking time (-.725), standing time and walking time with MVPA (-.937, .826), and knowledge activities and game play (-.760). Finally, Stepwise Regression analysis yielded the following equation to predict moderate to vigorous physical activity (MVPA) as defined by the SOFIT: MVPA = 90.494 – 0.449(SKILL). R = 0.901, R2 = 0.812, SEE = 7.046. **Conclusion.** It appears that different practice activities have differential effects on the amount and intensity of PA attained in youth basketball. Further, a inverse relationship was found between the amount of time spent in skill instruction and attained level of PA.
Exercise Heart Rate Response and Vo2 Measures Using Arm Crank Ergometry and Nintendo™ Wii Boxing for Individuals with Lower Body Impairments
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Statement of the Problem

Interventions to assess cardiorespiratory response to exercise for persons with lower body impairments (i.e. spinal cord injury) are limited. Randall, Keyser, Rodgers, and Rasch, (2001) identified arm crank ergometry (ACE) and wheelchair ergometry as a means to test heart rate and oxygen uptake (Vo2). Other modes of upper body exercise need to be studied. A relatively new intervention reported has been the use of the Nintendo Wii Boxing game, as it is intense enough to contribute to the recommended amount of exercise for moderate intensity physical activity (Pasch et al., 2008).

Purpose

The purpose of this study was to describe the average exercise heart rate (EHR) and Vo2 response using Wii and ACE.

Methods and Procedures

Eight female university students performed an ACE Vo2max test. Participants were divided into four groups (single player Wii (Wii1), two player Wii (Wii2), and ACE), and exercised for 15 min, 2X/wk for 2 weeks. Continuous exercise was standardized for the Wii boxing program, using a continuous punch pace at 60 bpm from a metronome during non-boxing sequences (i.e. knock downs, knock outs, and transition from round to round). Heart rate and Vo2 were measured using a metabolic cart and Polar™ HR monitors.

Results

Correlation between Wii1 and ACE Vo2 was low (r = -.36). Wii1 elicited different response to Vo2 max compared to ACE (67.12% vs 89.25% of max). EHR correlation between Wii1 and ACE was (r = -.008) and t-test (.02). EHR were 118.6 and 141.8 for Wii1 and ACE respectively. Correlations using Wii2 were not possible due to inability to complete all trials.

Conclusion

Within the limits of the study, Wii1 and ACE appear to have different effects on EHR and Vo2; ACE EHRs were higher. Future studies should be conducted using three training modes i.e. ACE vs. Wii1 and Wii2 to assess persons with lower body impairments.
Title: The Effects of an After School Program on the Leisure Time Physical Activity Behavior of Youth with Visual Impairments.

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Abstract:
The purpose of this study was to assess the effect of a theory-based physical activity intervention on duration and intensity of daily after-school leisure time physical activity among adolescents with visual impairments attending a residential school. A range-bound changing criterion design was used among four participants from a Midwest school for the blind. Physical activity was measured using GT1M ActiGraph accelerometers while selected theoretical constructs were measured through questionnaires. Data analysis included descriptive statistics, visual analysis of graphed data, total time spent in leisure time physical activity and total time spent in moderate to vigorous physical activity. Results showed that the intervention exerted a functional control over the target behavior (i.e., time spent in a bout of leisure time physical activity). Moreover, changes in time spent in total leisure time physical activity suggest that the intervention had positive effects on participants’ physical activity behavior. For moderate to vigorous physical activity, only three participants appeared to engage at that level of intensity. Changes in scores for selected social cognitive constructs, in particular for outcome expectancy value, may suggest a positive relationship between those constructs and physical activity behavior. It was concluded that school-based physical activity interventions based on sound theoretical frameworks show promise increasing leisure time physical activity among sedentary youth with visual impairments. With the paucity of physical activity research among youth with visual impairments and the continuous national efforts to promote physical activity among children and adolescents with disabilities, additional physical activity intervention research is warranted.
Body image is a complex synthesis of psychophysical elements that are perpetual, emotional, cognitive, and kinesthetic (Thompson, 1999). The desire to achieve and maintain an ideal weight is a prevalent goal among females and research has demonstrated that females utilize excessive bouts of exercise and calorie restriction as a means to pursue the ideal appearance. The purpose of this study was to examine the body image and eating characteristics of a selected female population. A total of 51 (30 dancers, 10 fitness, and 12 control) subjects completed the MBSRQ-AS, EAT-26, a Physical Activity Questionnaire, Stunkard Figural Silhouettes, a demographics sheet, and body fat measurements. All three groups were dissatisfied with their body (98% of dancers, 92% of fitness cohort, and 88% of control). A MANOVA was conducted to determine group differences and showed a significant relation Wilk’s Lambda =.106 ($F=8.735$, $p<.001$) for the groups. Significant differences exist between the groups for the subscales of Appearance Orientation ($F=3.97$, $p=.025$) and Weight Perception ($F= 3.583$, $p=.036$). A significant difference existed for the EAT-26 ($F= 21.885$, $p <.001$), percent body fat ($F=14.754$, $p<.001$) and overall physical activity ($F=13.945$, $p<.001$) as well. Post hoc tests showed that the dancers scored significantly higher on the Appearance subscale ($p=.034$) with no difference between the control and fitness cohort. Dancers also significantly perceived themselves to be overweight ($p=.048$) with no difference between the other two groups. EAT-26 showed both the dancers ($p<.001$) and the fitness cohort ($p<.001$) exhibited disordered eating patterns. Dancers had significantly lower percent body fat ($p<.001$) compared to the other two groups and both the dancers ($p<.001$) and the fitness cohort ($p<.001$) were significantly more active than the control. Even though the dancers had a low percent body fat ($m=17.6$), they perceived themselves to be overweight and engaged in disordered eating patterns. These perceptions and behaviors are disturbing, but not surprising since dancers exhibit a drive for thinness (Wood et al., 1996). To better understand the psychological factors that accompany the quest for achieving a certain appearance, future research should include other female cohorts such as elite athletes, obligatory exercisers, and sedentary females.
In 2008 (at the annual TAHPHERD convention), the researchers presented findings from Texas teachers on what characteristics Physical Education (P.E.) teachers should possess. In an attempt to compare those results to teachers in other states, the researchers expanded the investigation to the entire U.S. The purpose of this study was to examine whether NASPE attributes accurately reflected what current successful teachers thought were important behavioral and managerial characteristics of quality P.E. teachers and compare that to Texas P.E. teachers. Electronic surveys were sent to P.E. teachers across the United States. Five hundred and thirty seven teachers completed the survey (n=279 elementary, 111 middle, 82 high school, 46 K-12, and 19 university; male=150, female=387). The respondents had been teaching for an average of 18 years, 56 percent (n=301) held a master's degree, 18 percent (n=97) were nationally board certified, and 77 percent (n=412) had successfully passed the Praxis II content exam for physical education. An ANOVA demonstrated no significant difference among the respondents. P.E. teachers across the U.S. identified developing appropriate lessons as a top priority. These teachers also identified safety as their top Managerial Characteristic. Other characteristics cited were organization and rules/consequences. Comparing data over two years, the only difference among teachers across the U.S. for Behavioral Characteristics was that developing appropriate lessons was chosen ahead of Energy Level. Interestingly, the Managerial Characteristics were the same. Considerable attention is always placed on the differences in the way the teacher candidates are trained. This study found that across all states, teachers surveyed agreed overwhelmingly with NASPE for identifying top behavioral and managerial priorities. Ongoing discussions in PETE programs across the U.S. have tended to polarize regions of the U.S. as being able to better train future teachers. This research demonstrates that no matter from which PETE program a teacher graduates, the expectations for all teachers are the same and in accordance with NASPE standards for identifying commonalities for promoting physically active youth.
Results of Using Social Marketing to Address Underage Drinking on a College Campus
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The purpose of this assessment was to evaluate a social marketing media campaign implemented to reduce alcohol use and abuse in a mid-sized university. The campaign was funded by a grant and the primary goal was to reduce alcohol use and abuse in first-year university students and athletes by changing the perception of the social climate at the university. The development of the campaign began in the summer of 2005 and concluded in 2008. During each of the following semesters, fall 2005, fall 2006 and spring 2007, two sets of focus groups were used to identify preferred methods of communication and possible logos/slogans for the campaign. Participants in the focus groups were first-year students and athletes living in university residence halls. Each focus group ranged from 7-12 participants. Based upon the focus group results the media campaign was designed and implemented. At the end of the three academic years, a survey to assess the social marketing campaign’s effectiveness was developed and implemented to first-year students and athletes living in the residence halls. The final instrument contained 23 items, and reliability was estimated at .94. All responses were anonymous and confidential. Seventy-eight percent of the participants were under 21 years of age, and 62% of the participants indicated they had seen the social marketing media on campus. More than 60% of the participants indicated that they “strongly agreed” or “agreed” the media campaign “had a positive impact on students.” In addition, approximately 60% indicated that they “strongly agreed” or “agreed” that the use of banners and posters in residence halls was an effective media for the social marketing campaign. In conclusion, to design and implement an effective social marketing campaign to reduce high risk behaviors, i.e. alcohol use/abuse, the entire university community must take an active part in the campaign.
Reliability of FITNESSGRAM® 20-Meter PACER and Body Composition Measures
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Texas’ Senate Bill 530 mandated statewide health-related physical fitness testing in grades 3-12. The FITNESSGRAM® was selected as the health-related test because of its criterion-related Healthy Fitness Zones (HFZ). During the 2007-2008 academic year, greater than 2.5 million children were tested. Similar, or larger, numbers are expected to test during the 2008-2009 academic year. Various strategies were used to administer test in schools as all students are not enrolled in physical education. Questions arise regarding the quality of the data collected. **Purpose**: To investigate reliability of FITNESSGRAM® HFZ achievement for aerobic capacity (20-Meter Shuttle Run [20MSR]) and Body Composition (BMI) with repeated testing in schools. **Methods**: Students were tested twice in one of four conditions: 1) teacher-teacher (n=298); 2) testing expert-testing expert (n=154); 3) teacher- testing expert (n=137); or 4) trained teacher-testing expert (n=49). Results were converted to HFZ achievement (0= Not Achieved; 1= Achieved) and congruency of achievement was interpreted as reliability or validity, depending upon the condition completed. Percent agreement, Kappa, phi, and X2 were used to interpret results. **Results**: Teacher-teacher results indicate that repeated BMI measurements are reliable with reliability estimates exceeding .90. 20MSR values were lower with Kappa and phi ≈ .65. All reliabilities exceeded .84 for expert tester reliability. Teacher-expert values were excellent for BMI but less for 20MSR. Trained teachers were asked to complete on-line fitness test training and review FITNESSGRAM® test administration materials. Trained teacher-testing expert values were > .88 for BMI and adequate (% agreement = .82) for 20MSR. **Conclusions**: While teacher administered tests are sufficiently reliable, they are not as reliable as more highly skilled testers and testing reliability increases with training 20MSR.

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One frequently studied social decision in sport is an athlete’s decision to engage in unsportsmanlike behaviors. Previous research has demonstrated the social culture surrounding an individual’s sport participation is likely to influence the social decisions an individual makes in that setting (Lee, Macdonald, & Wright, 2009). The purpose of this study was to examine geographical location as a moderator in the relationship between sport and moral decision-making (i.e., moral functioning). Athletes from Indiana, the “Hoosier state”, and Texas, the land of “Friday Night Lights”, were studied in an effort to understand if the social climate of participating in a geographically high-profile sport related to athletes’ moral functioning in sport. Participants were male high school basketball, football, and soccer players in Indiana and Texas (N = 486, M age = 16.7 years). Participants’ moral judgment, intention, reasoning, and behavior were measured using an adaptation of the Prosocial Play Behavior Inventory (Gibbons, Ebbeck, & Weiss, 1995; Horrocks, 1979). Results of multiple regression analysis indicated that moral judgment, intention, and reasoning were significant predictors (p < .05) of athletes’ self-reported moral behavior. A series of hierarchical regression analyses revealed the interaction between sport and geographical location was a significant predictor (p < .05) of all four moral variables, such that lower moral functioning was associated with participation in the high-profile sport of each state. Specifically, for all four moral variables, Texas football athletes and Indiana basketball athletes reported significantly lower moral functioning scores than Texas basketball and Indiana football athletes. Moral functioning scores of soccer players in both states were not significantly different than the low-profile sports in that state. These findings suggest the social culture surrounding sport participation plays a role in athletes’ moral functioning in sport.
Background and Problem: Past research indicates that sport participation has a positive influence on educational aspirations, achievement scores, grades, and self-esteem (e.g., Nelson & Gordon-Larson, 2006). Although research is still scarce, there have been some efforts to investigate the impact of acculturation on perception of achievement and sport participation specifically in the Mexican-American population (e.g., Ryska, 2001). Purpose: The purpose of this study is to examine the relationship between sport participation, acculturation, and perceived competence in a group of Mexican-American fourth and fifth graders ($N = 106$) who ranged from 9 to 11 years of age. The schools were of predominantly Hispanic population located in low socioeconomic status neighborhoods. In addition to demographic and background information, students’ reported their perceived acculturation, physical activity levels, mental health, self-motivation, and self-esteem related to scholastic competence, social acceptance, athletic competence, physical appearance, and behavioral conduct, as well as global self-worth. Results: A one-way ANOVA revealed significant differences between the grades of those who participated in school sports as compared to those that did not. Results also indicated significant differences between those with high grades and low grades for scholastic competence, social acceptance, acculturation, and self motivation. Results also indicated significant differences between those who participated in sports for athletic competence and acculturation. Conclusions: Students that reported having higher GPAs were among those who participated in sports and had higher levels of perceived scholastic competence, greater self-motivation, and greater levels of acculturation. Future research studies using longitudinal research designs are needed to determine the relationship between self-esteem, acculturation, motivation, and sport participation so that effective strategies and interventions can be developed to enhance academic performance.
An Examination of Fitnessgram® Healthy Fitness Zones BMI and Percent Body Fat Classifications of South Texas Hispanic Youth

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The Texas State Legislature recently mandated Texas schools utilize the Fitnessgram® in the annual fitness testing of all students. The present study was designed to examine classifications of BMI and Percent Body Fat (PF) in relation to the Fitnessgram Healthy Fitness Zones (HFZ). BMI and PF were measured on 630 south Texas students in grades PK-12. For purposes of this study, only results of Hispanic students (n= 487) are presented. Skinfold measures were determined by an experienced tester using established procedures. Height and weight were measured with a portable medical grade stadiometer and digital scale. Analyses were performed on all Hispanic students, and then separately by gender. BMI and PF means for the total sample were 22.46 (6.59) and 22.88 (9.29), respectively. BMI and PF means for females were 22.19 (6.50) and 24.92 (8.07), while for males, 22.75 (6.69) and 20.77 (9.99), respectively. Fitnessgram HFZ ranges were used to classify students into HFZs for BMI and PF. Classification of outcome probability for BMI and PF was high (C=.84). For all Hispanics, of the 108 not achieving the HFZ for PF, 12 (11.1%) achieved the HFZ for BMI. Of the 164 in the unhealthy HFZ for BMI, 68 (41.5%) were in the healthy PF classification. For females, of the 46 not achieving the HFZ for PF, only 8 (17.4%) achieved the HFZ for BMI. Of the 70 in the unhealthy HFZ for BMI, 32 (45.7%) were in the healthy PF classification. For males, of the 62 not achieving the HFZ for PF, only 4 (6.5%) were healthy for BMI. Of the 94 who were not healthy on BMI, 36 (38.3%) were healthy in PF classification. Results of this study show gender discrepancies for classifying Hispanic youth into Fitnessgram healthy and unhealthy fitness zones for BMI and PF.
Determinants of Subjective Well-Being in Female Mexican Americans
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The subjective well-being (SWB) construct is composed of the affective and cognitive components. The cognitive component, referred to as life satisfaction, is the evaluation of one’s life as a whole (Pavot & Diener, 1993). In this manner, life satisfaction is considered to be a state variable in that it does not capture a permanent trait but rather something present and contextual. Influences on life satisfaction include race, socioeconomic status, and personality traits (Hutchinson et al., 2004; Lucas et al., 2004). Additionally, life satisfaction may be influenced by whom one is comparing his or her life to, experiences over the past few years, expectations of the future, as well as mediated by cultural and societal factors (Diener & Diener, 1995; Kang et al., 2003). Furthermore, one’s degree of life satisfaction is a predictor of longevity, physical and psychiatric morbidity, and is strongly associated with all-cause mortality (Koivumaa-Honkanen, 2004). Much of the SWB research in the U. S. has focused on general population older adults and persons with chronic illness; however, little investigation has been conducted solely among female Mexican Americans. Therefore, the purpose of this study was to extend the research on SWB determinants through identification of variables which distinguish between those Mexican American females having high life satisfaction and those who do not. Data were gathered through a self-report survey instrument, in both English and Spanish, composed of a life satisfaction scale and acculturation, age, ethnicity, health, physical activity, education, and marital status measurement items. Three hundred seventy-five women (M age 35.8 years; age range 21-66 years) served as study participants. To identify factors that distinguished persons with high versus low life satisfaction, the polar extremes approach (Hair et al., 1998) was used to group participants into satisfied and dissatisfied categories and descriptive discriminant analysis employing stepwise regress ion was used to ascertain what variables made the greatest contribution discerning between the two groups. The discriminant function model produced a statistically significant Wilks’ lambda, .87 (alpha=.001), indicating a difference between groups. The analysis retained marriage, health, and education as the only statistically significant discriminators of membership in the satisfied and dissatisfied groups. In other words, among the Mexican American females studied, those who were married, considered themselves to be in good health, and had higher educational attainment tended to have greater satisfaction with their lives than those unmarried, in poorer health, and less educated. Findings suggest enhancement of the SWB of female Mexican Americans is a function of being in a stable, supportive marital relationship accompanied by the complex interaction of education affecting health status.
Cross Cultural Coaching: Possible Impacts on Developing Swimmers in Denmark.

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In international sport, expatriate coaches often work in sport development. At the elite level these exchanges pose minimal problem to highly motivated international competitors while a developing athlete may not be as resilient to substantial cultural differences. We sought to determine whether an American had a negative impact on developing Danish swimmers by comparing preferred coaching behaviors between Swimmers matched for age and grade and trained by the same coach during adjacent time periods. We obtained informed consent from the Americans and from the Danes using recognized translation procedures for the forms written in Danish. Danes (D) and American (A) swimmers preferred coaching behaviors were compared using the Mann-Whitney Test. We found there were no significant differences in Technical Knowledge, (D 9.0 A 9.0 P>05), Suitable Personality (D 8.75 A 9.4 P>05), Communication Skills (D 8.75 A 9.5 P>05), Participates in Group Activities (D 6.3 A 5.5 P>05), Rule structure (D 7.8 A 7.2 P>05), Communication of Racing Strategy (D 8.9 A 9.3 P>05), Communication of Tactics (D 7.9 A 8.3 P>05), Communicates Training Instructions (D 8.6 A 8.75 P>05), Expertise Communicated (D 9.6 A 9.2, P>05), Communication of Authority (D 7.8 A 9.6 P>05), Demonstration of Leadership (D 7.1 A 9, P>05), Example for Pursuit of Excellence (D 7.8 A 9.1, P>05), Danes’ evaluations of the American coach in the language and cultural contexts were: Enjoyed American Coach (9.1), Made Significant Progress (8.4), Developed English Skills (9.8), Influenced my outside activities, (7.5), Would enjoy an international coach again, (9.6), Influenced my ability to learn, (7.9), Influenced Strong Relationship With Coach, (7.5), Influenced my ability to communicate, (8.0), Influenced outside activities,
Comparing Pulmonary Function and Resting VO2 On Swimmers With Relaxed Versus Contracted Abdominal Muscles.

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Introduction: Pulmonary function has not been shown to limit exercise capacity because associated postures and segmental movements do not impede the ventilatory muscles and there is time between segmental movements to ventilate the lungs adequately. In the competitive swimming Crawl Stroke (CS) the position of the head in the water and movement sequence permits adequate pulmonary ventilation and has not been shown to limit CS performance. Some sport theorists have suggested that posture should be altered during CS to decrease the hydrodynamic resistance and theoretically increase speed. However postural alteration has never been documented to alter resistance and may impose limits on the cardiorespiratory system. The postural changes involve contracting the abdominal muscles, obliques and muscles controlling the lumbar spine to hypothetically straighten the lumbar spine. We hypothesized that this posture interacts with the coordination of movement between the abdominal muscles and the diaphragm while working in direct opposition to the accessory respiratory muscles limiting the swimmer’s ability to ventilate air and consume oxygen. The Purpose of this pilot study to determine if contracted abdominal muscles negatively affected pulmonary ventilation and oxygen consumption measured in a controlled laboratory setting. Methods: Thirteen subjects involved in swimming activities (8 Males, 5 Females) ages 22-60 ± 6.9 y volunteered to participate. We measured Vital Capacity (VC), Maximal Ventilatory Volume (MVV), Forced Vital Capacity (FVC) and Resting VO2 (RVO2) under Controlled (CON) normal seated posture and Experimental (EXP), abdominal muscles contracted in a seated posture using a Flowmate III Spirometer for pulmonary function and a metabolic cart for RVO2 with 3 minute rest periods between counter-balanced trials. Pulmonary functions and RVO2 were expressed relative to age, weight and height. A repeated measures t-test was used to compare CON and EXP conditions. Results: Significant differences between EXP and CON on all pulmonary functions and RVO2 were found. [VC (4.1±1.05, 5.2±.97, p < .01), MVV (87.6±34.4, 127.1+44.3), p < .01), FVC (4.1±.92, 5.1±.98, p <.01), and RVO2 (6.7±1.1, 5.13±.97), p < .01)]. Conclusions: There was a negative effect on pulmonary functions and an increase in energy cost to maintain posture, resulting in less oxygen being available to the propulsive muscles and offsetting the hypothesized benefits. Discussion: These findings indicate that contraction of abdominal musculature to alter posture has a negative effect on pulmonary ventilation and oxygen consumption potentially limiting maximal swimming performance.
In June 2009, a group of 28 kinesiology students undertook a project to determine if the general public believed that kinesiology, physical education, athletics, and recess were one in the same. A questionnaire containing twelve questions was developed and administered to the Kinesiology students. After completion, students discussed the format and revisions were made. Some questions were open-ended requiring the participants to write descriptors. The remaining questions were closed-ended. A week was given for the students to gather the data at which time tabulations began.

The questionnaire was completed by 284 participants. Forty-two percent were males and fifty-eight percent were females basically in the twenty-six to thirty-five age category and Hispanic. For the open-ended questions, code words were listed to determine the top themes or patterns and percentages were calculated. Percentages were also calculated for the remaining closed-ended questions.

The top ranking (44 percent) definition for Kinesiology was "the study of movement". Seventy percent of the participants defined athletics as "sports related" and 30 percent of the participants defined physical education as "teaching about the body and health". Recess was defined as "play with physical activity" by 55 percent of the participants. When asked what duties a kinesiology specialist should perform, 45 percent said "teach" and 44 percent responded with "coach". However, when asked what a physical educator should do, 68 percent responded "teach" and 28 percent said "coach".

Kinesiology specialists, according to the general public, are responsible for both teaching and coaching whereas a physical educator is only responsible for teaching. Recess was not viewed as a part of athletics or physical education. Therefore, none of the areas examined were viewed as the same.
Fitness Facilities in the DFW Metroplex: Are They Size-Friendly?

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Background and Problem: Although physical activity is often encouraged for weight loss and management, as well as for improved health, overweight individuals report feeling self-conscious and intimidated in physical activity settings (Miller & Miller, 2008), which may lead to avoidance of physical activity (Vartanian & Shaprow, 2008). The design, physical environment, programming, and staff of fitness facilities may impact the “size-friendliness” of the facility (Chambliss & Blair, 2005; Smeltzer, Greenleaf, & Martin, 2006). If the promotion of physical activity is to be effective, assessing physical activity environments seems an important step. Purpose: This project extended the work of Smeltzer et al. (2006) by comparing the “size-friendliness” of college fitness facilities with private fitness clubs and public/community fitness facilities. The Weight-Friendly Fitness Facility Evaluation (WF3E), adapted from the ICCA checklist (Chambliss et al., 2004), was used to evaluate 6 college, 6 private, and 11 public facilities. The WF3E includes four main sections: facility and operations, equipment, programming, and staff training and knowledge; with a total score ranging from 0 (not at all size friendly) to 100 (very size friendly). Results: Cardiovascular equipment and areas were more likely to be “size friendly” in public, versus college and private, facilities. Lack of visible weight restrictions on equipment and inadequate space between equipment were common problems. Stretching and balance equipment and areas were more “size friendly” in private facilities, compared to college and public facilities. Private facilities also were more likely to have staff knowledgeable about weight-related health issues. All three types of facilities demonstrated adequately “size friendly” strength equipment and areas. Conclusions: Several differences were found between type of fitness facilities that should be further examined in subsequent research. Future research is needed to determine if and how facility size friendliness influences overweight individuals’ membership, attendance, participation, comfort, and satisfaction.
The purpose of this investigation was to determine whether light to moderate vibration (stochastic resonance), has an acute affect on maximal lower back static strength (lbs.) among male and female college subjects (ht.=69.2”±3.2, wt.= 158.4lb.±33.9). The Soloflex Corporation claims that performing stretching, callisthenic and weight lifting routines on their Whole Body Vibration Platform (WBVP) may magnify the conditioning effects and help promote faster muscle growth. Subjects performed a series of recommended flexibility exercises while positioned on the WBVP on alternate days with three trials at differing vibration intensities (0Hz-0g, 29Hz-.3g, 45Hz-.8g). Subjects performed a total of 14 recommended flexibility exercises, at 15 seconds per exercise, prior to having static lower back strength evaluated on a Lordex Spinal Rehabilitation System (LSRS). Mean lower back static strength from five differing back and hip angles were evaluated on six male and eight female college students who volunteered to participate in three randomized conditions. A repeated measures ANOVA was used to determine whether vibrations from the WBVP elicited an acute effect on static lower back strength. There were no significant differences on acute lower back static strength between experimental conditions of 0g’s (139.67±11.99), 0.3g’s (131.35±9.23) and 0.8g’s (138±10.89), F(2,26)=0.99, p>.05. These results indicate that performance of flexibility exercises on the WBVP at differing vibration magnitudes did not have an acute effect on lower back static strength, as measured by the LSRS in this experiment. Non-significant findings in this investigation does not support advertised claims that strength will improve while performing flexibility exercises on a Soloflex WBVP system for 10 minutes a day.
Ancillary Space Analysis of High School Physical Education Facilities  
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The indoor ancillary spaces utilized for physical education are vital to the overall success of the program. These four ancillary spaces (locker rooms, classrooms, offices, and equipment storage) provide the support needed for the primary activities that occur in the gym, field, or court. A problem exists when schools are constructed without sufficient planning to provide adequate ancillary spaces for the physical education program, and these problems typically persist over the building’s lifespan. In order to develop planning guidelines, this study examined the existing ancillary spaces in 60 high schools and compared the actual space with the perceptions of the physical education department chairperson (PEDC) regarding the space needed. A stratified random sample by school enrollment level was evaluated through direct measurements of all existing ancillary spaces combined with structured interviews with the PEDCs regarding space needs. Inadequate ancillary space in one or more of the four components was reported by 85% of the PEDCs. A paired-sample t-test of the mean square footage revealed a significant difference between the actual space ($M = 13,363$) and the recommended space ($M = 15,010$), $t(59) = 8.159, p > .001$. An overall ancillary space guideline was determined in relation to the total activity space via regression analysis. The total ancillary space should range between 38%-42% of the total indoor activity space. The planning guidelines for the ancillary space subcomponents based upon the data collected include: locker room space = 54%-60% of total ancillary space, classrooms = 5%-10% of total ancillary space, offices = 10%-12% of total ancillary space, and storage areas = 18%-22% of total ancillary space. These recommendations create a baseline for the initial planning phase of facility construction or renovation to ensure that high school physical education programs have adequate ancillary spaces to support their efficient operation.
Relationship between Health-Related Fitness and Academic Achievement in Fourth and Fifth Grade Hispanic Students
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Background: Research has shown positive relationships between academic achievement and both physical activity and physical fitness. However, none of this research has focused on students from Hispanic backgrounds. Therefore, it is important to investigate the contributions of health-related fitness on the Hispanic students’ academic performance. Purpose: The purpose of the study was to examine the relationship between health-related fitness measures and academic achievement in Hispanic elementary school children. Methods: Participants in the study were Hispanic school children (N = 155; boys = 84, girls = 71), 9 to 13 years of age in the fourth and fifth grade at an urban elementary school in southeast Texas. Health-related fitness variables were: Aerobic Capacity, Body Mass Index, and Percent Body Fat. Academic achievement variables were: Reading and Math final grades. Correlations and stepwise multiple regression analyses were performed to analyze the relationship between the variables. Analyses were conducted on the whole sample and by gender. Results: Pearson correlation revealed no significant relationship between health-related fitness and academic achievement. However, when the correlation analysis was performed by gender, aerobic capacity showed a significant positive relationship r = .26, p < .05 with math performance. Stepwise multiple linear regression analysis revealed that aerobic capacity was a significant predictor of math performance in girls F(1,69) = 6.15, and yielded the following equation to predict the math grade: MATH = (78.03) + (.26) (AC); R² = .08; adjusted R² = .06, SEE = 7.31; p <.05. Conclusions: These findings suggest that aerobic capacity may be positively related with math performance especially in fourth and fifth elementary school girls. In addition, these findings become more relevant as girls have been found to perform lower in math than boys.
Comparison of FITNESSGRAM® Healthy Fitness Zones for Percent Fat and BMI in South African Children

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Background: As a result of SB530, the FITNESSGRAM® is used in statewide health-related fitness testing across Texas. Additionally, it is used internationally to determine if children and youth achieve sufficient health-related fitness to be at reduced risk for morbidities. FITNESSGRAM® users can choose optional items from each of the health-related fitness components: Cardiorespiratory Fitness (CRF), Body Composition (BC), and Musculoskeletal Fitness (MSF). Options for BC are BMI and percent fat (%fat) from skinfolds. It is desirable that students be consistently classified into a “Healthy Fitness Zone” (HFZ) regardless of the BC measure used. Purpose: The purpose is to determine the relation between categorization into HFZ from each FITNESSGRAM® BC measure. Methods: 1969 (M = 1,051; F = 918) South African school-age children (5-13; M = 9.5 ±2.5 yr) completed health-related fitness testing with the FITNESSGRAM®. Triceps and calf skinfolds and height and weight were taken according to FITNESSGRAM® specifications. HFZ achievement was determined based on age- and gender-specific criteria and defined as any BC measurement within the HFZ and below. A contingency table was developed. Percent agreement, chi square, phi coefficient, and kappa were used to determine agreement between BC classification methods. Results: Generally, the two BC measures resulted in similar HFZ classifications; percent agreement = 92%; chi square = 884.7, p < .001; phi = .66; kappa = .64. 215 students were not in the BMI HFZ and 299 not in the %fat HFZ. Of 299 not achieving the %fat HFZ, 122 (41%) were classified in the HFZ on BMI. Of 215 not achieving the BMI HFZ, 38 (18%) were categorized in the %fat HFZ. Conclusion: While there is generally good agreement between the BC HFZ classifications, a substantial percentage of children identified as within the BMI HFZ are not classified within the %fat HFZ. This misclassification could lead to mixed messages for parents, students, administrators, and health care providers. Students tested with both BC methods and found to have different classifications should be further tested to determine the exact nature of BC classification.
FITNESSGRAM Friday: The Saegert 6th Grade Physical Activity Initiative
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Texas Senate Bill 530 (2007) mandated fitness assessment as part of the annual K-8 Physical Education (PE) curricula. Problem: In 2008, students (>60% Hispanic and economically disadvantaged) in PE classes at the Saegert 6th Grade Center in Seguin, TX scored very low on the mile run (N=534 students; mean time ~16:33 minutes; mins) as compared to the recommended FITNESSGRAM Healthy Fitness zone (8 - 10:30 mins for boys and 9 - 12 mins for girls). Purpose: The purpose of this study was to determine if a semester long multiple component intervention could improve FITNESSGRAM mile run times in 2009 Saegert 6th graders. Methods: Students (N=472; 235 females, 237 males, aged 11.9 years, mean BMI>90%-tile) participated in regular PE classes with a once a week focus (FITNESSGRAM Friday) on improving mile run scores and other assessment scores. Students were provided random drawing incentives for MP3 players, and the school staff, and local university students (TLU) served as cheerleaders for students, as well as their running partners. Students practiced and learned individual pacing techniques with their instructors on a school trail developed by the Sequin ISD to promote increased school and community levels of physical activity. Results: Both female and male students had significantly (p<0.05) better mile times (female mean = 11.96 mins and males mean = 11.19 mins) than their 2008 classmates. Males on average did not reach the FITNESSGRAM Healthy zone (~40 seconds slow), while the females did achieve the Healthy zone. Conclusions: Female middle-school students, at high risk for failure, who participated in a multiple component PE fitness intervention achieved the Healthy zone for the FITNESSGRAM mile run, while their male classmates (also at high risk for failure) ran faster, yet missed the healthy zone by <1 min.
Year One Evaluation of the Dreams For Youth – Athlete and Wellness Development (DFY-AWD) Study

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San Antonio Sports (SAS) in San Antonio, TX developed the Dreams for Youth Program in 1993, and the new generational DFY-AWD Study (2008) to provide sport participation opportunities, via in school and after school programming, to disadvantaged youth in San Antonio (SA). The DFY-AWD study is designed to encourage students to develop the physical and social attributes required to participate in sports and regular physical activity as adolescents. **Purpose:** To report the first year pilot qualitative results of the DFY-AWD Study that was conducted in 10 SA elementary schools, representing two school districts, in 2008-2009. **Methods:** Students in the DFY-AWD Study (N=181, 3-5th graders, 50% boys/girls) were evaluated qualitatively by trained coaches (N= 5, via in-services) based on their catching, throwing, kicking (object control) skills (pre/post) for soccer, tennis, and track & field. The 3-4 week units with competitive sessions were delivered in afterschool programming that included a healthy snack, homework assistance, and ~1 hour of MVPA (skill-based sports). Parental feedback (N=5) about the program was also acquired via a focus group interaction. **Results:** Coaches from both districts felt that the participants in the pilot improved their sport skills from 50-100% vs. baseline following each sport unit. Previously (TAHPERD, 2008), we reported that coaches (N=28) all supported the initiation of the program themselves. Parents in the focus group reported that the program: 1. “Activated their children’s social skills,” 2. “Increased student fitness awareness,” 3. “Decreased home discipline problems,” 4. “Made their kids better students in school,” and 5. “Improved student attitudes and behavior.” **Conclusion/Summary:** Although the first year DFY-AWD Study quantitative results are pending, the year one qualitative results revealed that SA coaches, students, parents, and the community all were very supportive of the program and study. The DFY-AWD Study via SAS will continue through 2011.
The Sex Education Confidence Scale (SECS)

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**Statement of the Problem**
Sex education is a highly discussed, controversial topic in the literature. Instruments measuring knowledge about sexual health exist, but none measure how comfortable educators are teaching sex education.

**Purpose**
The purpose of this study was the development and validation of items for the Sex Education Confidence Scale (SECS).

**Methods**
The SECS was developed to determine current knowledge and confidence in teaching sexual health topics. The Scale was targeted toward elementary, secondary, and college health and physical education teachers, as well as those who were training to become teachers. Data were gathered from 325 participants from across the United States. Responses primarily came from university faculty; undergraduate and graduate students; and practitioners (teachers) whose job or education focused on health, physical education, or a closely related field. Males and females were almost equally represented as undergraduates; but females were more highly represented in the graduate, K-12 health and physical educators (HPE), and university faculty.

**Instrumentation**
The SECS contained 22 topics related to sexual health. Participants were asked to respond to each item regarding confidence in their own ability to talk about the topic in the context of classroom teaching, using a 7-point Likert scale.

**Results**
According to the results of this study, the Sex Education Confidence Scale (SECS) should be useful in screening school employees who may teach sex education to determine their knowledge and willingness to cover a required sex education curriculum. Overall, the psychometrics of the SECS were quite sound, with evidence for internal structure demonstrated through strong factor loadings. Strong reliability estimates were evident on the three scales across a representative and diverse sample.

**Conclusions**
More research should be done with a variety of populations (such as school counselors) with larger sample sizes and with broader ethnic diversity.
Increasing Physical Activity Levels in Exercise and Sports Science Majors With Behavioral Messaging

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The 2008 Physical Activity Guidelines (Guidelines) for Americans provide science-based guidance to help Americans aged 6 and older improve their health through appropriate physical activity (PA). **Problem:** Exercise and Sports Science (ESS) majors in Texas should become familiar with the new Guidelines to help their clients maintain or increase their PA levels for good health. **Purpose:** The purpose of this study was to determine the effects of twelve weeks of behavioral messaging about the Guidelines on ESS student self-reported PA levels. **Methods:** Two, undergraduate, exercise physiology laboratory classes from Texas State University (2009) were evaluated as part of a normal semester relative to their PA levels and their knowledge about the Guidelines. Subjects (N=85 students, 47 males and 38 females) were classified as a control group (n=38; 22 males, 16 females) or an intervention group (n=47; 25 males, 22 females). The intervention group was given weekly behavioral messages about increasing PA levels for 12 weeks, and subjects provided their self-reported pre- and post PA levels based on a non-exercise equation for predicting VO2 max (UHNEPVO2). The control group also provided their self-reported pre- and post PA levels, but received no behavioral messaging about the Guidelines. **Results:** Females and males in the control group had significant decreases in their self-reported PA levels (females mean 4.75-pre to 4.56-post and males 5.95-pre to 5.45-post. The intervention groups had significantly higher self-reported PA scores, female mean = 5.00-pre to 5.27-post and males mean = 4.92-pre to 5.45-post based on 2x2 ANOVA results (p<0.05). Predicted VO2 max levels (ml·kg⁻¹·min⁻¹) increased over the 12 week period for the intervention group, mean = 43.2-pre to 45.70-post vs. controls, mean = 46.56-pre to 44.14-post. **Conclusions:** Behavioral messaging about The 2008 PA Guidelines to Exercise and Sports Science majors was associated with increases in self-reported PA levels.
Essential to ME framework are lessons fostering success. A goal of a sound physical education program is to promote a lifetime of physical activity (PA). The Council for Physical Education for Children suggests children accumulate 60 minutes of age-appropriate PA most days of the week, including moderate and vigorous physical activity (MVPA), with the majority of time in intermittent PA. Healthy People 2010 calls for increasing to 50% the amount of PE time in which students are PA. **Purpose:** To measure number of steps, PA, MVPA, and 5-min bouts of MVPA during ME lessons. **Methods:** 119 children, grades K - 5 participated in 4 ME lessons (Dance, Gymnastics, Games). Lessons included balancing, body shapes, creative movement, and striking. Approximately 20 min was available for ME lesson activities. Each child wore a Walk4Life MVP® pedometer assessing steps, PA, and MVPA based on steps per min. Analysis included % time in PA, MVPA, and tests of significance for steps, PA, and MVPA across gender and grade. **Results:** Steps, PA, and MVPA varied as a function of activity content, gender, and grade level. No child achieved a 5-min bout of MVPA in any activity, suggesting the intermittent nature of childhood PA. Based on 20-min PE period, PA min (% class time) were dance 6.4 ± 2.4 (32%), gymnastics 6.4 ± 2.4 (30%), game-1 8.7 ± 3.4 (44%), and game-2 9.4 ± 3.7 (47%). Maximum MVPA was in game-2 3.9 ± 2.5 min (20%). MANOVA indicates boys were more active than girls (p< .001) in steps, PA, and MVPA. Gender by grade interaction was not significant. **Conclusions:** ME framework provides a content base and has the potential for achieving >50% of class time in PA. Games lessons represented a greater potential for achieving >50% goal, whereas dance and gymnastics lessons were less so. Comparisons are needed between PA in ME and traditional PE delivery.