KINESIOLOGY

ABSTRACTS

Oregon Microform Publications in Sport and Human Performance
Eugene, Oregon
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KINESIOLOGY ABSTRACTS

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There remains one set of the entire collection, available by special arrangement to a well-situated library, on consideration. Interested libraries should please contact us.
Editor's Note

The variety of studies in this issue will please even the non-athleticist. The physiological and cultural health of our species is monitored at many interesting points. For an exhilarating run through the coolness of Alpaki, see Ever Lamborn's *Somegyn More than Naked* (PE4825). Even wondered why you liked or disliked a team the instant it stepped into the arena? See Jude LeMaire's *The Effect of Uniform Color* (PSY2411). Have a beef with the play-destructive disposition of modern sports? Robert Ditzer brilliantly excuses us in and out of Sorzano's dazzling dilemma in *The Allergy of the Stadium* (PE4849). An issue doesn't go by without at least one examination of the synergistic mechanism of bone growth in youngsters (the reluctance of some school districts to let kids play tag, for fear of injury, notwithstanding). Sarah Brand's *Boer Properties and Metallic Matter* (PE4814) adds one more attestation, and might have parents lining up to enroll their kids on the local hockey team. Speaking of physiological impact, much serious attention has recently been brought to bear on treatment of concussion. For an absolutely revelatory look at the financial view we take of sports concussions, and how getting your "bell rung" in not in your team's (or your team doctor's) best interest, see Caroline Sauer's assessment of how well our schools are geared to deal with it. On the other hand, for statistical support of the idea that school athletics impress, rather than interfere with, academic performance, attendance, and conduct, take a look at Jeffrey Zoll's generous sampling of Georgia middle schools (PE4829). For a look at one of the ironies of Title IX's implementation in 1972 (how combining women's with men's sport more often than not resulted in a single male administrator replacing one of each), and for an increasingly expressed concern over the stereotype-motivated prevarication of men in sports leadership and administrative positions, see Jennifer Fekete's *Inside the Huddle* (PE4830), Josie Mandel's "It's a Long Hard Road to the Top" (PE4830), and Stephanie McAllister's evaluation of the contribution of recreational sports-participation experience to upward career mobility among women (PE4836). Criticism of male dominance in the sports world won't go away any time soon, but Jennifer Fredricks' alarming of the math and sports in primary schools offers us an intelligent strategem for making inroads (Girl-Pranking Family Contacts, PE4816). The personal liability of fire fighters has never been more in the public mind. To help expedite determinations of fitness for combat, Katie Sell has developed a quick-measure of seventeen-inch vertical jump to help captains determine the likelihood of their companies' passing the high bar. (PE4840). And how much protection do individual athletes get against the city hall of organised sports? Anastasia Katskinis takes a look at how American university standards of anathomy and professionalism, sometimes ambiguous, come into play in determining eligibility of athletes from other countries who want to qualify as student-athletes here (PE4830), and Jan-Willem Soek, in *The Tort Liability Principle and the Human Rights of the Athlete in Doping Cases* (PE4850), points out how the normal procedure of the criminal prosecution of drug users is somehow not in place for the individual athlete, sports organisations sometimes
forming a law unto themselves. Not yet under that kind of scrutiny is acupuncture, which Suzanne Kim finds a particularly useful recovery strategy for athletes competing in more than one event on a single day (PE4432). The importance of the last century of athletics on national identity in Germany is dramatized by Laurel Berkel (PE4433), who notes the participation of falsifiers in a sporting event is testament by John Peter Trask (Working the Crowd: The Power and Pleasure of Wrestling Fanfare, PE4442), and the objectivity of referees under the best of circumstances, is shown to substantially involve the imagination (Class MacMahon, PSY2412). On the very practical side, asthmatics who want to push the envelope just a bit more may be interested in Sandra Tacke's finding that "high dose inosorbic acid supplementation reduces the severity of exercise-induced asthma" (PN1465). The scoring body nuances every element of individual and collective health. In a very interesting transition, Nick Curry shows how the conditioned stance of a dinner in the blocks, awaiting the start of a race, resembles the stance of a culled in-performance (Body Mind, PSY2422). In this issue, you will find another safety dissertation not specifically mentioned here.

In our next issue, details will be announced respecting the first Bowman Award for Best Thesis, winner to be named in our October 2007 issue (vol. 20, no. 2), for which all submissions included from October 2006 until October 2007 (three issues) will be considered, thereafter annually. Coach Dick Brown will take a look at what our collection of studies shows about obesity, and we will examine the propriety of including Web addresses in scholarly bibliographies, as well as some of the most common flags to watch out for when preparing the kinesthetics abstracts.

Michael Powell

Editorial Policy

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Microfilm: Still My Top Choice
for a Preservation Medium

by

Suzanne Cates Dodson
Vancouver, British Columbia
July, 2001

Microfilm seems, to many, outdated and behind the times. In our
computer-driven society, electronic imaging must, surely, be the way to go
if one needs to preserve information for posterity. I disagree, and here’s
why microfilm is still my choice of preservation medium for any
information that needs to be around for a long, long time.

Microfilm possesses two simple advantages over most other media used
for recording information: it is long-lived and it is readable by humans.
These are pretty basic attributes, but they are also crucial. Information
required in an electronic format is only retrievable when you have the
appropriate hardware and software to do the retrieving, and few will argue
that all the equipment we have today will still be around tomorrow. Even if
appropriate equipment is available in ten or twenty years, the electronic
medium chosen to carry some specific information could well, by then,
have deteriorated to the point of being unusable. Unfortunately, we have
many examples of this kind to reflect upon.

Proponents of electronic imaging make keeping up with advancing
technology sound easy. One simply “refreshes” the files, transferring them
to the latest version, in order to assure that the data are not lost.

I worked in a large university library, and the prospect of transferring our
collections from one format to a new one was daunting. If your collection
consists of a small number of files, perhaps you could contemplate re-doing
them every few years; but for collections of any large size it’s close to
impossible. Furthermore, I suspect that in many cases people would forget to do anything until it was too late.

Microfilm, on the other hand, is a medium proven capable of lasting in excess of one thousand years, given reasonable care. And, equally importantly, the information on microfilm can, in a pinch, be retrieved with an instrument that has been around for centuries and will continue to exist for as long as humanity exists—the magnifying glass.

Microfilm is available in a number of types, and it's important to differentiate among these. Each type suits the purpose for which it was manufactured, but I have found that many people fail to understand the differences between film types and, as a result, may choose the wrong film for their application. Since you cannot always rely on vendors to be as knowledgeable as you might expect about which film type is the best choice for your application, it's important for you, as a consumer, to be educated in the characteristics of each type. By choosing appropriate film, and by being aware of the hazards to the longevity of each type of film, users can assures themselves of a successful outcome.

Preservation of Microforms in an Active Environment: Guidelines, ANSI/AIIM TR13-1998, of which I was the primary author, is published by the Association for Information and Image Management International. It gives (I hope) the reader the basic information needed to make an informed choice of which film type to use and how to look after it. The following information is taken from that report, and I would urge anyone responsible for a microfilm collection to buy a copy, because there is a great deal of additional information in it which isn't repeated here. I can assure you that I have no ulterior motive in suggesting this, because I have never received, nor will I ever receive, one cent for the work I put into the report. People who work on standards do so because of their interest in the subjects, not for any material gain!

Three types of microfilm are currently most commonly in use: silver halide, diazo, and ventricular. Of these, only silver halide is considered by the preservation community to be suitable for preservation purposes. Diazo and ventricular films can be used for the retention of records for varying periods of time, but only silver halide film on a polyester base, processed and stored in accordance with the existing standards, has been proven to be
capable of lasting more than 1,000 years. In the past, cellulose acetate was used as a base for microfilm, but since the mid-1950s nearly all microfilm is on a polyester base, which contributes to the durability and longevity of the film. "The longest accelerated aging studies to date on polyester base films have now been completed. Under reasonable storage conditions, film life greater than 1,000 years is expected" (Reilly et al. [1994], p. ii).

In considering the three film types (and assuming that they are all on polyester bases), only silver halide, as I have already mentioned, is suitable for long-term preservation of information. Most films used to create a microfilm original (the camera film) are silver halide films. In addition, duplicates of the original film can be made using silver halide film, although many prefer to use less expensive diazo or vesicular films for working copies. Silver halide film is quite resistant to heat and to light, unlike its two main alternatives, as I've noted below. Most standards governing the manufacture, processing, and storage of silver halide film exist, which means that the purchaser of this film type can be assured that, if the standards have been adhered to, the film will meet expectations. ANSI/AIMM TR13 includes a list of the most important standards. It is important to note that standards are always evolving, and although those cited in TR13 were current in 1998, one should check for the current version of any standard, as well as for new ones which may have appeared since.

The two other film types often used are diazo and vesicular. Each of these films has its strengths and weaknesses and each can be a wise choice for an application where the records are not expected to be kept for a long time, or where a duplicate working copy is needed. These films are usually less expensive than silver halide films, so using them makes sense where the films are expected to be expendable.

The main weakness of diazo film is that the images on this film fade. Depending upon the type of diazo you use, the rate of fade varies considerably. In one test, the time in which individual diazo films from different manufacturers failed to the point of being unusable when exposed to the light of a reader ranged from thirty hours to three hours (Jones, p. 12). Diazo films are manufactured for different purposes, but in my experience, when they used diazo films, microfilmmakers' choices often reflected an ignorance of the appropriate type for their specific application.
Since most consumers have no idea of what they should be getting, the result can be disappointing, if not disastrous. To further compound the problem, diazo films can vary in colour from blue to black, and some hapless customers have undoubtedly thought they had silver halide film when, in fact, they had black diazo. (A quick check of both sides of a film can let you readily distinguish between the two: silver halide film has one shiny side and one dull side [emulsion], whereas black diazo is shiny on both sides.)

Vesicular film gets its name from the fact that the image is made up of many tiny bubbles (or vesicles). Its two main drawbacks are that it is sensitive to pressure damage and that it can be easily scored by dirt on a reader (a special hazard for roll film), leaving streaks, or what looks like scratches, where the image used to be. Also, if it gets too hot, the bubbles burst and the image is gone. With respect to the former problem, I have seen vendors of vesicular film claim that it is superior to silver halide film because it is not as prone to being scratched. Perhaps, technically speaking, it doesn’t get scratched as easily, but it is very easily scored, and although the film itself may not look scratched, the projected image certainly does. I have seen examples of silver halide, diazo, and vesicular films which were tested in a special device designed to scratch film, and in this instance the vesicular film was most damaged, followed by the diazo, with the silver halide the least damaged. Since emulsion on silver halide film is vulnerable to scratching, this result was somewhat unexpected, but the damage to the vesicular film was exactly what I have observed in our own collection.

As far as overheating goes, again the problem varies depending upon the particular vesicular film you have. Some are more heat resistant than others are, but no purchaser of vesicular film I ever met had any idea of how heat resistant his or her film was. Many film readers reach film gate temperatures beyond the resistance limit of any vesicular film. “The essential fact to keep in mind about vesicular film stability is that even very short exposure times to elevated temperatures will destroy the image” (Adelstein, p. 336)

In libraries, patrons often forget to switch off the readers, and wander away, leaving the film to bake. After a few hours, if the film is diazo or vesicular, the images in the area exposed to the light and heat may be gone. I’m sure this kind of thing can, and does, happen with office records.
Microfilm is subject to damage from a variety of sources, including atmospheric pollutants. Such things as sulphur-based gases (which are especially prevalent in urban and industrial atmospheres) can produce detrimental effects. Peroxides (given off by some papers) are harmful to microfilm, as are ozone and ammonia, out-gassing from wood and particleboard, adhesives, paint fumes, and other gaseous impurities. High humidity and high temperatures are harmful and can lead, among other things, to mould. However, among the main threats to the longevity of any film types are improper storage and careless handling. Users of microfilm represent one of the worst environmental hazards: careless handling results in scratches, tears, and surface pollution. To preserve microfilm for as long as possible, good housekeeping and cleanliness are, obviously, of prime importance.

Proper storage is crucial to the longevity of all film types. ANSI/AIIM TR13 gives specific advice for Extended-term storage (LE-100+), and Medium-term storage (LE-10). LE stands for “Life Expectancy,” and the numbers represent the minimum years a film should last. The temperature and relative humidity required for extended-term storage are, however, not that difficult to achieve: temperatures for extended-term storage must not exceed 21 C (70 F), and the relative humidity range must be 20% to 50%. Conditions are somewhat stricter for colour films, but in any case these are shorter-lived than black and white films.

ANSI/AIIM TR13 explores, in some detail, the topics I have mentioned, and explains how to store your films correctly and how to inspect them for signs of deterioration. It includes a list of sixteen signs of deterioration and the probable causes. One of the worst problems in older collections is the deterioration of the cellulose base in cellulose acetate films. This is known as “vinegar syndrome,” because the breakdown of the film base produces acetic acid (vinegar). Any films found in this condition must be removed immediately, because once the process begins it can infect other cellulose acetate base films stored in the same area, to great care must be taken to detect the problem as soon as it begins. Another problem that is common in silver halide films is redox blemishing (reduction-oxidation), sometimes known as “mosaics,” “red spot,” or “merrington.” These blemishes are caused by the oxidation of the silver in the film, but now, thanks to the Image Permanence Institute (IPI) at the Rochester Institute of Technology,
there is a way to prevent these or to halt their progress. The IPI has produced an invaluable publication entitled IPI Storage Guide for Acetate Film (Reilly 1993), which, although it is directed to films with cellulose acetate base, provides information relevant to the storage of all film types.

Microfilm is, in my opinion, an eminently suitable medium for the preservation of information. It is durable (depending upon the type of film you choose), long-lived, and relatively inexpensive. But most of all—and I don’t think this can be stressed too often—the information on it is retrievable by the human eye. Only printing or chiseling on stone can match this!

References

Adleten, Peter Z. “Preservation of Microfilm.” Journal of Micrographics (Silver Spring, MD), 11, No. 6 (July-August 1978), 333-337.


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HE875

This study aims to look into reasons for, and impact of, negative self-perceptions of obese and overweight adolescents who have low self-worth. The sample was obtained from twenty-eight "Sports and Fit" club members (40 males and 62 females) from a single neighborhood secondary school.

A survey among participants' self-worth was used to assess participants' self-worth. Ten individuals with the lowest self-worth scores were interviewed. A semi-structured interview guide was employed, containing a list of questions formulated in accordance to the domain. Analysis of answers was triangulated with analysis of self-perception profiles. Findings enabled a better understanding of low self-worth among obese and overweight adolescents in Singaporean neighborhood schools. Detailed thoughts and experiences shared by participants brought forth insights on specific incidents, underlying issues and possible consequences of their low self-worth in the current domain. In cases where conditions are akin to those found in the study, current practices or interventions may be reviewed to provide a more positive, encouraging, and less judgmental environment for such individuals.

HE876
Conception, Rebecca Y. Weight Stigma Consciousness and Perceived Physical Appearance: Their Key Precedents and Relationship to Health Behaviors (Ph.D.). Oregon State University, 2007; Vicki Eibbeck, chair, 286, 1165.

This study is to explore the relationships between weight stigma consciousness, perceived body appearance, social physique anxiety, and the health outcomes of physical activity levels and eating behaviors. Selected precursors were also examined. These considerations were based on 5. Hanra’s model of self-worth (in Contemporary Topics in Individual Psychology, ed. N. Eriksen, 1997). 235 adults with BMI of 20-30 participated in a self-report questionnaire. Structural equation modeling was used to examine the relationships of interest. Weight stigma consciousness (7) loaded from low- to high on social physique anxiety than did perceived body appearance (30). The variance explained for total physique anxiety was sixty-two percent. Fifty-five percent of the variance was explained in disordered eating, but only five percent of the variance explained in physical activity. The study demonstrates the powerful impact of weight discrimination on the health behaviors of people with excess weight.

HE877
Dennett, Christopher P. A Comparison of Different Habitual Based Starch Techniques on Range of Motion (M.S., Springfield College, 2006; Charles Redmond, chair), 296, 1875.

To assess which of three different static mechanical load (STB) weight techniques would lead to the greatest increase in STB flexibility in college-aged subjects after a 10-week stretching program, thirty-seven subjects (seven males, twenty females) were randomly assigned to one of three static STB stretch techniques: standing STB stretch, sitting STB stretch, and semi-press STB stretch. Pre- and post-150-degree range of motion (ROM) measurements were obtained for use of a standard...
HEB78 
Deaton, Karen Cecil
Influence of the Healthcare Provider on Patient Behavior
Related to Weight Management (M.S., Purdue University, 2006; Gerald Huyett, chair), 299f, 1256.
The purpose of this study was to examine the efficacy of a physician- and nurse-practitioner-based intervention, designed to help college students identify and bring about change. Participants included fifty-eight male and seventy-six female patients who had referred themselves to a physician or nurse practitioner at the University’s health center. The physicians and a nurse practitioner voluntarily followed a health weight protocol (HWP) for five days. The HWP included measures of patients’ height and weight to determine body mass index (BMI), measures of diet consistency, and determination of the patient’s co-morbidities. The use of a guide to weight assessment and a treatment decision matrix, health weight recommendations were made by the physician or nurse practitioner based on the aforementioned measurements. Recommendations included reading a healthy weight plan booklet, attending a healthy weight workshop, and/or consulting with a registered dietitian. Using a pre-survey, participants’ comfort and perceptions of satisfaction with the HWP was assessed immediately following the provider-patient visit. Participants with elevating weight measurements and BMI reported a significantly different comfort score from patients who did not have elevating measurements (p < 0.05), indicating that participants with elevated measures were not as comfortable having their circumstances measured as were patients without. Participants’ BMI and Scales of Motivational Readiness to Change (SMC), with respect to weight loss, were also assessed in order to evaluate changes over a six-month period. Eighteen male and thirty-one female participants completed the post-survey. Participants’ comfort and perception of satisfaction with the HWP did not affect compliance with weight management recommendations. Compliance did not influence participants’ adoption of behaviors related to weight change; there was no significant difference in change in BMI and SMC from pre- to post-intervention between compliant and non-compliant (p > 0.05). Participants’ change in BMI from pre- to post-intervention was not influenced by the adoption of weight management behaviors.

HEB79
Hancy, Donna Anne
Common Characteristics of Successful Female Exercisees (M.S., Purdue University, 2003; Gerald C. Hynes, chair, Imel, Ia).
To investigate common characteristics and patterns of successful female exercisers, women were distributed at six different “Shape Total Fitness for Women” fitness centers in Tampa Bay, Florida. A total of seventy-one women (22-79 yrs) met criteria for successful exercisers. Exercise participation, motivation, exercise practice, maximize practice, and social support were assessed from a self-reported exercise history and a “Motivation for Physical Activity Questionnaire” (1995). Demographic information, educational level, marital status, type of training, environmental factors, and self-efficacy were also measured. A profile of successful female exercisees was generated based on survey data. Subjects described themselves as highly confident they would maintain active lifestyles. Self-determination theory was supported in the model that described successful exercisers. The univariate and multiple characteristics of successful exercisees in a maintenance or termination stage.
between the use of alcohol and the use of marijuana has been reported in the literature, but the role of cognitive factors has not been adequately studied. The role of perceived access to alcohol and marijuana was evaluated, as was the perceived harm associated with alcohol and marijuana use on marijuana use. Data were collected from 11,542 eighth- to twelfth-grade students in 1998, 2000, and 2003 and evaluated via two sets of logistic regression models, investigating (1) the role of alcohol use, and access to alcohol and marijuana, in past-month and lifetime marijuana use and (2) the role of alcohol use, and perceptions of harm associated with alcohol and marijuana use, in past-month and lifetime marijuana use. Results revealed that (a) perceptions regarding alcohol use were more likely to report past-month and lifetime marijuana use, and (b) among older students, access to marijuana played a role in past-month and lifetime marijuana use only when access to alcohol was limited, and (c) perceived harm associated with marijuana played a role in lifetime marijuana use only when perceptions of harm associated with alcohol were low.

HEB84
Coffey, Kathleen E. Selected Factors Related to a Childfree Woman's Decision to Remain Childfree and Her Self-Identified Sexual Orientation (Ph.D., Indiana University, 2000; William Yarbrough, chair), 264, 1616.

Most women in the United States become mothers, at some point in their lives, but there is a small group of women who choose to remain childfree. This choice not only oxieres the norms of society, but also brings with it personal and social stigma. The problem of the study was to compare selected differences between self-identified heterosexual, bisexual, and indonan women who choose to remain childfree. Specific differences in user-type perception of childless women, dyadic relationship satisfaction, and life satisfaction were used to determine variations in these women. This nationwide on-line survey was completed by a non-random sample of 468 childfree women. Recruitment was mainly through advertisements on online sites, lesbian, and bisexual-related Web sites. A quantitative, non-experimental descriptive design served to assess differences in these factors among the three groups of women using previously developed instruments. The questionnaire was made available online for four weeks, and analytical validity had been provided to provide equal representation from members of each subgroup. One-way ANOVA and chi square tests were used to differentiate social orientations and selected factors. There were significant differences between self-identified heterosexual, bisexual, and lesbian childfree women in stereotypes perception, relationship, and life satisfaction. All groups reported more perceived stereotyping from relatives as opposed to friends, and heterosexual and bisexual women perceived themselves as being more negatively stereotyped than lesbian women. Heterosexual women were more satisfied in their relationships when compared both to bisexual and to lesbian women. Lesbian women reported the highest level of life satisfaction, heterosexual the second highest, and bisexual the lowest. This study can be used by health practitioners, educators, and community organizers to recognize and leverage the importance of a woman's decision to remain childfree.

HEB85
Fuller, Judy S. Stress and the Transition to School: A Study of Childreared and Contextual Factors Related to Conceived Development (M.S., Indiana University, 2005; Kathleen R. Gilbert, chair), 164, 676.

Transitions to school represent a major life event for a young child. The maternal-stress theme has been used to study one of children's physiological responses to stress, production of the hormone cortisol. High levels of cortisol have been associated with higher rates of illness in school-aged children. The current study was designed to identify individual and contextual characteristics of children with high initial cortisol response in the start of school. On three mornings before school, samples of saliva were collected from twenty-five preschool and kindergarten-age children, then analyzed for the presence of cortisol. Comparison of children with highest cortisol levels to those with lower crisis showed the high cortisol attending school significantly more hours per week than during the previous school year. Changing routine by extending the school day appeared to evoke cortisol production. Though no further statistically significant relations were found, children with highest cortisol levels also tended to be
more agreeable to be less physically active, to score higher on a test of cognitive flexibility, and to be sedentary in kindergarten.

WE866

The problem of this study was to explore the interactive role of leisure activities in the process of coping with stress among women with rheumatoid arthritis (RA). Under the framework of Lazarus's multiple-strategy research, the interview method was used to collect data, descriptive data. Focus group participants with RA were recruited. Through open-ended questions, participants were asked to describe their leisure activity as well as their corresponding leisure history. Data analysis was guided by the quantitative comparative method proposed by B.G. Glacier and A.L. G drawn, who developed grounded theory in 1967 (The Disease of Challenging Therapy: Strategies for Qualitative Research). This study showed that RA had influenced about 70% of the participants' lives and had caused a great deal of illness-related stress. RA had both positive and negative impacts on leisure. In the process of coping with stress, those with RA, leisure played an important role. Participants reported that the leisure activities they engaged in were fun and enjoyable, which helped them adjust and release stress. Leisure could be used as a means to reduce stress through coping, expressing positive emotions, relaxing, reducing mood, mind-off, and being with friends and other people. While the negative impacts of RA on the participant's lives and stress, positive growth from coping with RA has been observed. Although most of the participants expressed a reduced level of satisfaction and increased participation in leisure activities, leisure facilitates expansion and relaxing experiences that provide the opportunity for positive improvements of stressful circumstances to reduce the perceived costs from negative life events. Therefore, leisure before and after stress through facilitating positive adaptation of the highest level of stress.

WE857

To evaluate the effects on pelvic floor score of a low-cost four-week progressive preconception training program for the asthmatic, nearly four healthy subjects with no history of lower extremity injury within the last five years, and no vestibular condition, were randomly assigned to a control group or a training group. Pretest was performed for both groups in single-leg balance using an AMTI force plate. A single-leg balance score was done on the dominant limb in an open-end and eye-closed condition. Each condition included three non-second trials. The training group received a four-week home exercise program of progression difficulty. Exercises included exercises of single-leg balance tasks, such as single-leg balance with eyes open and with eyes closed, single-leg stance with ball toss-catch, and single-leg stance with0850
HE868
Perera, Richea. Compositional Relationships in Sexuality among Undergraduates: Understanding the Concept and Behavioral Correlates (Ph.D., Indiana University, 2006; Robert Billingshaw, Jr., chair), 2nd, 1566.

To examine biological, personal, and socio-environmental correlates of dispositions toward out-of-control sexual behavior of college students, to investigate cognitions and behavioral impact of sexual behaviors of respondents, a cross-sectional survey on a sample of 539 undergraduates in a large Midwestern university was conducted, using a self-report anonymous questionnaire that consisted of several scales, including the Sexual Compulsivity (SC) Scale, the Sexual Sensation Seeking Scale (SSS), the Dysfunctional Sexual Copper (DSC) Scale, and the Depression Toxicity Scale (DTS). In addition, a two-step based on a set of six criteria—social, legal, financial, educational, psychological, and physical—produced by the National Council on Sexual Addiction and Compulsions (NCSAC, 2006), were developed to measure the cognitive and behavioral impact of sexual practices. SC and SSS, two personal dispositional associated with high-risk sex, were examined. Pearson and Spearman correlation, chi-square, “ANOVA, multiple regression,” and structural equation modeling were used to analyze data. The prevalence of sexually dysregulated relationships was higher among men than among women. More reported higher mean scores on SC and SSS. Stimulant drug use was positively associated with SC, while alcohol use and mood-altering drug use were positively associated with SSS. Frequency of sexual practices and number of sexual partners were positively associated with SC and SSS scores. There was also a strong positive association between SC and SSS. Compared to SSS, SC had a much stronger relationship with childhood sexual abuse and peer childhood family environment. A positive relationship was found between SC scores and the negative cognitive and behavioral impact of sexual practices. Such a relationship, however, was not found between SSS and the negative cognitive and behavioral impact of these sexual practices. Furthermore, SC and depressive symptoms were found to have direct effect with negative cognitive impact of sexual practices, and SC and impulsivity was found to have direct effect with negative behavioral impact of sexual practices. Gender-specific and personal-dispositional-specific strategies that take into consideration NCSAC's six-criteria framework, related to cognitive and behavioral impact of out-of-control sexual behavior, may yield better results in programs targeted at reducing adverse consequences of sexual behavior. Co-occurrence of uncontrolled behavior of college students warrants further investigation.

HE898
Sipilä, Tausikki. Effect of a Workplace Physical Exercise Intervention on the Functioning, Work Ability, and Subjective Well-Being of Office Workers—A Cluster Randomized Controlled Cross-over Trial with a One-Year Follow-up in the Workplace (Ph.D., University of Jyväskylä (Finland), 2006; Esko A. Mäkiälä and Mattila T. Gynttilä, chairs), 2nd, 1008.

The main aim of this study was to investigate the feasibility and the effects of workplace physical exercise intervention on physical and psychosocial functioning, work ability, and general subjective well-being. Data of exercise, and other physical activity outside the intervention, were collected by means of electronic diaries for 12 months. In addition, the work ability index (WAI) and the shorter version of the World Health Organization's (WHO) quality of life questionnaire (WHOQOL) were used. Volunteer workers from four municipal administrative departments as part of eleven women's clubs randomized cross-over design intervention, consisting of light resistance exercises (30% · BMI) and Pilates, and fifteen weeks with no training or exercise. During the first fixed-work period, training was performed once a week working days, and during the second and third fixed week, every other week. Physical and psychosocial questionnaires, as well as physical measurements, were used. Follow-up questionnaires were mailed to volunteers, of whom seventy-two (80%) returned them. The average training time of the measure per working day decreased the prevalence of headache (p = 0.04, 0.04), neck (p = 0.05), shoulder (p = 0.05), and low back (p = 0.05) symptoms, and decreased the intensity of headache (p = 0.05), neck (p = 0.05), and low back (p = 0.05) symptoms among the
outgroup of symptomatic office workers. The intervention improved subjective physical well-being (p = 0.017), but did not affect other psychosocial functioning and general well-being variables. After media+ results, the prerequisites of functioning, work ability, and general subjective well-being were at a higher level than at the baseline measurements. Physical prerequisites of functioning bothered better to work ability, whereas prerequisites of psychosocial functioning related better to general subjective well-being. A better understanding of physical exercise interventions, and of interrelations between human functioning and contextual factors, can be helped in mastering work ability and preventing impairment to work ability among persons in sedentary occupations, particularly at older ages.

HE890
Thakurajah, Krishna. Validating the Food Behavior Questionnaire from the FAI School Physical Activity and Nutrition Questionnaire (Ph.D., Indiana University, 2005; Alyce D. Hy, chair, 2nd, 03/06).
To evaluate the validity of food consumption items from a mixed-physical activity and nutrition (SFAN) questionnaire for investigate, data were collected from 54 first-grade males at five Indiana elementary schools during Tuesday through Friday. Validity was estimated by comparing foods selected on the questionnaire with foods reported from a single twenty-four-hour recall covering the same reference period (tertiary). Trained investigators recorded recall data using Nutrition Data System for Research (University of Minnesota), leaving at least two hours between recall and SFAN administration. Recall data were read/entered onto the questionnaire's tertiary food intake. Statistical Package for the Social Sciences and Statistical Analysis System were used to analyze data. Validity of each food question was tested using percentage agreement, kappa agreement (one-statement agreement corrected for chance), and kappa+ correlations. Prevalence, sensitivity, specificity, and positive and negative predictive values also were used to explore the ability of SFAN to assess children's compliance with national dietary guidelines, matching United States Department of Agriculture food guidance from aggregated recall data and appropriate questionnaire items.

HE891
Woodbury, Lisa J. Impact of Professional Preparation on Physician Assistants' Attitude and Expressed Impact to Work with Geriatric Patients (Ph.D., Indiana University, 2005; Alice K. Lueckman, chair, 2nd, 11/06).
A multiple-method study explored the impact of age, sex, and professional preparation in geriatric medicine, on the perceived stress of physician assistant (PA) students to work in geriatric medicine, and on their attitude toward geriatric patients. Participants consisted of 168 PA students (78 cases of 2005 and 2006) and 279 alumni (78 cases of 2005–2006) from Methodist University's PA program. A descriptive, retrospective, survey of self-reported medical and clinical components of each class year's geriatric medicine course was administered. A composite geriatric medicine scale was developed. Comparison of medical and clinical components of the classes of 2005–2006 were completed. The significant difference (p = 0.004) found between examination scores for the classes of 2005 and 2006 was believed to be partially due to inclusion of a new geriatric clinical rotation site for the class of 2005. The data indicated that older persons' self-confidence in geriatric medicine ("Development and Validation of a Geriatric Attitude Scale for Primary Care Patients," journal of the American Geriatric Society, 1998). Completed surveys were returned by 250 students and alumni (80% response rate). Students and alumni born between 1959 scored significantly higher in their likelihood to participate in geriatric medicine than those born between 1970 and 1979 (p = 0.031), and participants born between 1970 and 1979 scored significantly higher than those born after 1979 (p = 0.001). Participants born before 1959 but born outside trend toward working with the elderly thereafter born after 1959 (p = 0.035). Age appeared to be the most important factor in determining the respondents' willingness to work with older patients.
HEB02

A study to investigate stages of exercise change, levels of physical activity, and barriers to exercise among Kuwaiti individuals with and without disabilities was conducted on 105 participants (55 males and 55 female aged eighteen to fifty-five years). Stage of exercise change scale was used to assess exercise behavior and behavioral intention among participants. To assess physical activity, the short version of the International Physical Activity Questionnaire was used for individuals without disabilities, and the Physical Activity Scale for Individuals with Special Disabilities for individuals with physical disabilities. Barriers to Physical Activity and Disability Survey was used to identify top barriers to exercise. Results from the 2 x 2 (NOVA showed a significant difference between the two groups (with and without disabilities) and individuals with physical disabilities on the level of physical activity, F(1, 10) = 0.15, p < .05, η² = .032. There were no significant differences between male and female participants on levels of physical activity, F(1, 10) = 1.38; p = .26, η² = .06. Chi-square tests showed no significant associations between stages of exercise change distribution and gender, χ²(4, N = 100) = 3.50, p = .66, or with and without disability groups, χ²(4, N = 100) = 4.66, p = .09. The 2 x 2 chi-square (gender x barriers) showed significant differences between gender on the lack of time barriers. There were also significant differences between genders on the lack of energy barriers, females reporting higher percentages than males. The 2 x 2 chi-square (group x barriers) showed that lack of transportation was significant for individuals with disabilities. Individuals without disabilities reported higher percentages for lack of time and finding time when exercising than did individuals with physical disabilities. Kuwaiti customs were not barriers to exercise. His weather was reported as an environmental barrier to exercise, and the need for mass-media-based campaigns to promote physical activity was also reported.

HEB03

Dopson, Sandy. The Impact of Tobacco Control Policies on University Students' Smoking in Ontario (M.Sc., Brock University, 2017). Kellis, W. Lawrence, chair, 3rd, 15(6).
Despite steady declines in the prevalence of tobacco use among Canadians, young adult tobacco use has remained stubbornly high over the past two decades. Currently, in Ontario, young adults have the highest proportions of smokers of all age groups, at 26%. A growing body of evidence shows that workplace restrictions and other tobacco control policies can reduce tobacco use and cessation among adults, and some initiatives among youth, whether young adult university students' smoking participation is influenced by community smoking restrictions, campus tobacco control policies, or both, remain an empirical question. The purpose of this study is to examine the relationships between smoking status of students on university campuses across Ontario and various tobacco control policies, including clean air by-laws of students' home town, clean air by-laws of the community where the university is situated, and campus policies. A 286-286 item set titled "Ontario Use in a Representative Sample of Ontario Post-Secondary Students, collected by Brock University and the University of Waterloo provided information about tobacco use by 10,000 students from nine universities and colleges across Ontario. Data screening for this study cultured the sample to the 3,154 users to twenty-four post-secondary undergraduate students from nine universities. The second data set was retrospective-generally and included information about strength of beliefs of, and students' exposure to, home town, local, and campus tobacco control policies. Municipal by-laws (of students' home town) and campus by-laws were categorized as weak, moderate, or strong based on criteria. This study was an Ontario-based by-law report, campus policies were comprised a roughly parallel fashion. Duration of municipal and campus policies were calculated for length of students' exposure to the
policy was estimated. Multinomial logistic regression analysis was used to examine the relative-risk between students’ current smoking status (daily, less-than-daily, never-smoker) and the following four independent variables: (1) amount smoked: a measure of the number of cigarettes smoked per day, (2) amount of alcohol consumed: a measure of the number of drinks consumed per day, (3) amount of caffeine consumed: a measure of the number of cups of coffee consumed per day, and (4) amount of exercise: a measure of the number of minutes of exercise per day. The analyses were adjusted for age, sex, and race.

Results of the logistic regression analysis are presented in Table 1. The model included all four independent variables and age, sex, and race as covariates. The model was significant (p < 0.01) and explained 23% of the variance in the outcome variable (smoking status).

Discussion

These findings have important implications for public health. The results suggest that smoking initiation is influenced by a combination of personal and environmental factors. Public health interventions should focus on reducing the availability of cigarettes and other tobacco products, increasing the costs of quitting, and promoting the benefits of smoke-free environments. Additionally, interventions should target youth who are at higher risk for smoking initiation, such as those who are older, have higher levels of alcohol and caffeine consumption, and engage in less physical activity.

Conclusion

In conclusion, the findings of this study demonstrate that smoking initiation is influenced by a combination of personal and environmental factors. Public health interventions should focus on reducing the availability of cigarettes and other tobacco products, increasing the costs of quitting, and promoting the benefits of smoke-free environments. Additionally, interventions should target youth who are at higher risk for smoking initiation, such as those who are older, have higher levels of alcohol and caffeine consumption, and engage in less physical activity.
determinants of physical activity among college students attrition in a healthy lifestyle thus may have a positive impact on physical activity participation.

HE805


As children are becoming increasingly active and obese, there is an urgent need for effective early prevention and intervention programs. One solution is a comprehensive school health (CSH) program, a health promotion initiative aimed at educating students about healthy behaviors and lifestyles, which also provides a link between the school, students, families, and surrounding community. To explain the relationship between different components of CSH programs, as well as those determinants of health (gender, socio-economic status, and physical activity, on the one hand) and body mass index (BMI) of children, a newly developed and pilot-study survey deemed the North York's four-part CSH model (nutrition, social support, school environment, and health physical environment) was tested in elementary school principal. Data on gender, physical activity, parental education, and social support beliefs of students from three schools, were gathered from a questionnaire survey. Multiple regression procedures were conducted to explain the relationship between CSH programs, social determinants of health, physical activity, and BMI and accurate fitness values. These CSH components were significantly associated with BMI and accurate fitness values in children, but accounted for less than five percent of the variance in both variables. Physical activity partially mediated the relationship between significant CSH components, BMI, and, particularly, metabolic fitness. Furthermore, social determinants and physical activity explained partial independent roles in accurate fitness values. No moderating effects of social determinants were discovered.

HE806

Yamaghi, Sarah Marie. Dietary Acculturation among Oregon Latinos: Factors Affecting Food Choice (M.S., Oregon State University, 2005; Mary M. Claskey, chair), 2nd, 146ff.

This study sought to examine food choice motives and influence among Oregon Latinos, to gain a greater understanding of their dietary acculturation. Previous studies, relying mainly on qualitative methods to assess the relationship between acculturation and diet, have reported inconsistent results, though a general decline in diet quality is reported with increased acculturation. In contrast, this research used quantitative and qualitative methods, and revealed some positive dietary changes with increased acculturation. Quantitative surveys were used to collect data on frequency of consuming traditional Mexican foods, versus mainstream American foods, among self-identified Latino parents and their two to thirteen-year-old children. Interviews were then conducted to elicit both cultural factors on making traditional Mexican vs mainstream American food choices. Data from surveys suggest that parents are consuming traditional Mexican foods at a higher frequency than children, and few children are consuming mainstream American foods at a higher frequency than parents. Interviews elicited factors that include preference for Mexican foods, a value for ethnic identity, perceptions of eating both Mexican and mainstream American foods, a preference for fresh home-cooked food, and the main determinants of Mexican foods upon food choice, family network influence, increased health knowledge, and “healthy is healthy.” The qualitative piece of the study suggests that acculturation is highly complex, and that qualitative methods may prove worthwhile in achieving clarity in understanding the process.

HE807

Welt, Carmen Lynx. Exploring the Relationship between Ethnicity and Hypertension in Canada (M.Sc., Brock University, 2005; Deborah O’Leary and Terrance Wade, chairs), 2nd, 146ff.

Preliminary work, examining differences in hypertension across ethnic groups, employs two as the principal variable. While differences in hypertension have been identified across racial groups, there is
great variation between ethnic groups, are age-related groupings, that would mask differences in hypertension and cardiovascular disease (CVD) risk. In light of Canada's ethnic diversity, research aimed at identifying specific groups as a health disadvantage is essential in understanding the health of the overall population. This research would be beneficial for creating programs and policies aimed at reducing or eliminating these disparities. Since CVD is the leading cause of mortality in Canada, and hypertension is one of the most significant and modifiable risk factors for CVD, it is important to move past crude classifications based on race and to examine ethnic group differences. The purpose of this study is to examine the relationship between ethnicity and hypertension in Canada, while employing more narrow classifications for ethnicity than previous studies. This study used the 2004 Canadian Community Health Survey cycle 1.1, to compare twenty-one different ethnic groups in Canada as to whether they had high blood pressure diagnosed by a health professional. Associations were examined using logistic regression. Subsequent logistic regression analyses included socioeconomic status, physical activity, body mass index, smoking status, daily alcohol consumption, and immigration, in an effort to show the effect of each of these variables on the relationship between ethnicity and hypertension. Interestingly, Chinese, Portuguese, South Asian, Aboriginal, Black, Filipino, and South East Asian, were found to have significantly higher odds of having high blood pressure than Canadians (ORs = 1.50, 1.63, 2.72, 1.98, 1.36, 1.69, 2.25, and 2.34, respectively, p < .001). The only significant moderating effect was between socioeconomic status and Aboriginal, as well as obesity and Aboriginal. None of the other independent variables accounted for > 30% of the risk experienced by ethnic groups significantly associated with hypertension. The odds of having high blood pressure in Canada varies considerably across ethnic groups within major groupings, indicating previous research in not specific enough to inform policy and program development. Because this study was not able to explain the relationship using the sociodemographic and lifestyle factors mentioned above, future research should be done to determine what places certain ethnic groups at a greater risk in order to tailor interventions aimed to the specific needs of each cultural group.
Physical Education and Athletics (PE)


The purpose of this study was to investigate factors that motivate former students-athletes to donate to athletic foundations or to university development. While prior research has looked at motivations to donate to university development and athletic foundations, little research has examined the two areas simultaneously. In addition, research has yet to examine the motivations of former student-athletes who donate to athletic and university development efforts. The objective of the study was to develop a better understanding of why this select group of individuals elect to support the athletic programs of their former university. Using a balanced interview technique, one-on-one interviews were conducted with eight former student-athletes, focusing on their reasons for forming to either the athletic development or the athletic foundation of their alma mater. Analysis of the resulting data yielded insights into factors that influenced respondents’ donation behavior, and revealed emerging differences in motives for giving to athletic versus academic programs.


Three dances created by choreographer Heather Ahern were performed at the Martha K. Krizel Theatre at California State University, Long Beach. The first dance, entitled Utopia, was an exploration of gender roles and the changing of social norms over time. This dance was performed 6-12 October 2005. The second dance, entitled There’s a Good in Every Man, explored the relationship of masculinity, ethnic, and historical and was performed 19-22 February 2006. The final dance, entitled Max, explored each scenario, the phenomenon of “dilution of responsibility,” and other behavior observed by people in overcrowded situations. The final dance was performed 7-10 October 2006. The lengths of the dances were 2,000 minutes, 9,300 minutes, and 16,000 minutes, respectively. A common theme apparent in all three dances was the behavior of individuals in the context of a group.

PE4814 (Growth and Development) Bank, Sarah Anne. Bone Properties and Skeletal Mass in Adolescent Males, as Assessed by Quantitative Ultrasound (M.S.), Brock University, 2007. Barbara Fulk, chair, 2nd, 364.

Previous studies have implied that weight-bearing, intense, and prolonged physical activities optimize bone accrual during the growing years. The majority of past studies have used dual-energy X-ray absorptiometry (DXA) to examine bone strength, and hand-wrist radiography to determine skeletal mass in children. Recently, quantitative ultrasound (QUS) technologies have been developed to measure bone properties and skeletal status in a safe, noninvasive, and cost-effective manner. To compare bone properties and skeletal mass in corresponding male child and adolescent athletes with minimally active, age-matched controls, using QUS technology. 25 males were included in our study. The 115 pre-pubertal boys, aged ten to twelve years, consisted of control, minimally active children (n = 34), soccer players (n = 26), gymnasts (n = 25), and basketball players (n = 30). In addition, the 100 post-pubertal boys, aged fourteen to sixteen years, consisted of control, minimally active adolescents (n = 50), soccer players (n = 30), gymnasts (n = 17), and basketball players (n = 30). The athletic groups were elite-level players who predominately trained year-round. Physical activity, nutrition, and sports participation were monitored with various questionnaires. Anthropometrics, such as height, weight, and relative body fat percentage (BMI) were assessed using standardized measures. Skeletal strength and age
were evaluated using base QSU. Lastly, submaximal shimmer (FT) concentration was monitored using real-time oesophageal EGG. Within each age group, there were no significant differences between the activity groups in age and parental age. No age effect was apparent in all variables, as expected. A sport effect was noted in all physical characteristics: the child and adolescent groups were shorter and lighter than their same-sport groups. Adult age groups in the controls and in the hockey players. All children differed in parental age (t-test) or c, while adolescent subjects were parental age (t-test) in V. There were no differences in daily energy and parental height between sport groups. In both age groups, groups had a higher training volume than the female athletic groups. Bone mass of adult SBU was higher in adolescents compared with the children. Groups had significantly higher radial SOS than controls, hockey players, and soccer players in both age cohorts. Hockey players also had higher radial SOS than controls and soccer players in the child and adolescent groups respectively. Child groups and soccer players had greater cortical SOS compared with the hockey players and control group. Similarly, adolescent groups and soccer players had higher radial SOS compared with the control group. No interaction was apparent between age and type of exercise in any of the bone measures. Lastly, maturity was assessed by H and secondary sex characteristics (Timimi stage) was not different between sport groups within each age group. Despite the similarity in chronological age, among H and c, and total body mass, differences between activity groups were noted in skeletal maturity. In the younger group, hockey players had the highest bone age, while soccer players had the lowest bone age. In the adolescent group, girls were characterized by higher overall maturity compared with controls. An interaction between the age and sport type effect was apparent for skeletal maturity, reflecting the fact that, among the children, the soccer players were significantly more mature than the rest of the group, while in the adolescents the controls were the least skeletal mature. In summary, radial and total SOS were enhanced in the unique bonding pattern in adult sport (c. upper and lower extremities in gymnastics, lower extremities in soccer), with no consistent effect between childhood and adolescence. That is, the effect of sport participation on bone SOS was not apparent among the young athletes. Enhanced bone properties among athletes of elite sports suggest that participation in these sports can improve bone strength and potentially bone health. Athletes participating in sports in which a large body mass is required (e.g., hockey) or high muscle strength (e.g., hockey, gymnastics) were characterized by higher skeletal maturity. In hockey, this was apparent among the children, while in gymnastics this was apparent only among adolescents.

P54015 (Administration)
Bensley, Nancy A. *Title: Out of the Field: A Study of the Socialization Experiences of African American Women in Intercollegiate Athletics (Ph.D., Ohio University, 2006; Raymond McKeen, chair). 3rd, 247th.

Given a noticeable absence in the literature on the socialization of African American women in intercollegiate athletic administration, the qualitative study explores the lived experiences of eight African American women currently employed at DCAC Division I institutions, and six administrative levels. Data gathered from in-depth interviews with these women, who served as co-coaches, provide a deeper understanding of how mentorship relationships and administrative experiences shape their career mobility in a multi-racial, multi-ethnic atmosphere that is not as rarefied. The qualitative themes gleaned from the data reflect experiences of the African American women in this study. One such finding was the significant use of personal language on the part of the doctoral student and the fact that these women have an integrated, holistic, cultural world environment. Another important finding was the emotional labor each of the co-coaches experienced upon entering athletic administration, and moving through their careers. Specifically, the key to the co-coaches' ability to manage barriers such as the glass ceiling, personal, and career challenges is successful advancement in administrative careers. Data almost all of the co-coaches "pay it forward" approach to finding success as-athletes and moving on to coaching positions for other young African American women in intercollegiate athletic administration, regardless of co-coaches' level administrative experience. In essence, the success of the co-coaches is, to some extent, predicated, at least in part, on the success of the minority African American women in their positions or departments during their athletic administration careers. It is important to note that DCAC Division I institutions may not value racial and gender diversity within the higher administration ranks, given the present occurrence. Future research on co-coaches' efforts, including opportunities to learn more about the benefits to
cancer advancement for African American women in NCAA Division I institutions: comparative studies of Waup uniron, Menard American state, and other under-represented groups to make some of their socialization experiences in intercollegiate athletics; and consideration of the critical themes of the data across race and gender.

PE4816 (History and Philosophy)

The present study addresses the role of sport in the evolution of modern German nationalism. This work contains: (a) a historical analysis of nationalism, culture, and sport from the late eighteenth until the mid-twentieth century; (b) a case study of the 1936 Games/Games/Olympics as an example of national nationalism and modernism; (c) a case study of the 2000 World Cup in Germany as an example of national identity in the twenty-first century Germany, in the wake of privatization and globalization. Sport has been used to have Germans have seen themselves, from the end of the eighteenth century until the present. This work argues that an analysis of sports, societal politics, and diplomacy can offer those interested in nationalism in contemporary Europe a fruitful means of analysis of a form that remains powerful, despite the construction of the European Union. While an analysis of the evolution of mass sport indicates that Germany no longer apply the kinds of racist blood-and-soil nationalisms so violent in the early twentieth century, sport has shown a remarkable continuity as a source of German aspirations for their nation, which has changed dynami-cally in its realm of culture, society, and economy in the twenty-first century.

PE4817 (Coaching and Training)
Crowley, Jeffrey A. The Effects of Three Manipulated Rest Intervals on Accumulated Eclectic Bench Pressing (M.S., Springfield College, 2006; Margaret Jones, chair), 2nd, 135p.

To determine the effects of three manipulated rest intervals on accumulated eclectic bench pressing, ten subjects completed five testing sessions: a pre-test, a post-test, and three sessions of two working sets of 80% 1-RM with varied rest intervals. A significant interaction (p < .05) was found in heart rate between rest intervals and sets. Within each of the three manipulated rest intervals, statistically significant differences were determined between: (a) post-test 1 and pre-test 2, and (b) pre-test 2 and post-test 2. The mean RMPE of upper body force set 2 (M = 1.47) was significantly higher than for set 1 (M = 7.65). There was a statistically significant difference in the number of repetitions completed over two sets of 80% 1-RM among the three manipulated rest intervals. For a 1-min rest interval, the most number of repetitions completed (M = 9.9) was significantly lower than those completed through either a 3-min rest interval (M = 5.56) or a 5-min rest interval (M = 10.48). A significant difference in 1-RM bench press was observed, e.g. 5.13, p = .001.

PE4818 (Sociology and Cultural Anthropology)
Ferlinski, Jennifer A. Girl-Friendly Family Games: Socialization into Math and Sport (Ph.D., University of Michigan, 1999; Jacqueline S. Eccles, chair), 1st, 275p.

I examined the effects of mothers' and fathers' socialization, during elementary school, on children's motivation in math and sports. These two domains were chosen because they are traditionally dominated by males, gender differences have been documented in children's beliefs and participation rates, and compete gender differences exist among skills. The family is an important centre for gender role socialization, because children grow from first messages about appropriate roles for boys and girls to this context. Parents can convey "gender-friendly" messages that encourage children to treat traditional gender divisions and participate in math and sport, or they can create environments where traditional gender roles are enforced. J. S. Eccles' expectancy-value model was used as an overarching theoretical framework for Achievement and Achievement Motives. (al. J. T. Spence, 1985). This model is based on the assumption that achievement-related decisions are made in the context of a variety of choices, and it is important to understand how socialization, like parents, shape these decisions. I focus
on three dimensions of family context: role modeling, expectations and values, and behavior (time with child, level of encouragement, and provision of experience). Differences in the relation between parent socialization and children's motivation, by gender of the parent and gender of the child, are examined. A
used data selected as part of a "Childhood and Beyond" study (Gluck, 1986), a longitudinal study of the developmental of children's beliefs, values, and activity choices. Information was collected from those children of children's abilities and interests were strongly related to children's competence, value beliefs in math and sports, participation in organized sports activities, and math coursework. In the second study, hierarchical linear modeling was used to chart changes in children's perceptions of competence, beliefs, and importance of math and sports, from fall to twelfth grade. At each of these levels, children's competence and value beliefs in math and sports varied from first to twelfth grade. Parents' anxiety about children's ability helped explain mean level differences and variation in the sense of children's abilities, the effect being strongest in the sports models. In the third study, I used parent-rated anxiety to group together children who live in families using a similar constellation of family interaction practices. A cumulative score was created for each family, based on the number of negative factors that positively support children's achievement. Separate family types were found in math and sports. The number of negative factors in the home was positively associated with children's competence beliefs, value beliefs, and participation in math and sports. In the last study, questionnaire findings from in-depth interviews with adolescents and their parents, scaled from the larger longitudinal study because they were highly involved in sports, are presented. Qualitative analysis revealed that parents support children's involvement in sports by participating in athletics themselves, by holding high expectations, and by providing financial and emotional support. The four studies indicate that family environment can positively affect children's beliefs and participation in math and sports.

PE4619 (Coaching and Training)

Macchi, Melissa A. A The Use of Biofeedback to Improve Vertical Jump Performance (M.A., California State University, Chico, 2005; Jackie L. Hude-0w, chair), 2nd, 996.

The vertical jump is an important element of many sports. Biomechanics has identified a few characteristics of skilled jumping, but there is limited research examining the use of biomechanical feedback for improving performance. To investigate the efficacy of biofeedback in improving the process and product of the vertical jump, fourteen female college basketball players were randomly assigned to a control or a treatment group. All subjects completed five consecutive jumps with arm swing. Based on knee angle in the cv-feedback jump, subjects were placed into the deep knee bend, intermediate bending between 115 and 110, or shallow group above 115. Control subjects were told they were capable of jumping higher, regardless of their performance, whereas treatment subjects were given feedback as they bended their knees. Deep and intermediate groups were asked to reduce knee flexion and to be faster, whereas subjects asked to increase knee flexion and to not let their legs touch the ground. Each subject was also asked to view the jump on video, with treatment subjects saw a deep position with an overall desired knee angle. Following a brief period of practice, subjects completed five maximal non-feedback jumps. All pre- and post-feedback jumps were videotaped. Video analysis of repetitions pre- and post-feedback jump was completed for each subject. Differences scores for the pre-test and treatment groups were accordingly computed. Treatment subjects showed range of motion, compared to control subjects, but this was not significant (p = 0.09). Compared to the control subjects, treatment subjects made significant changes by reducing depth of descent (p = 0.05), decreasing time of preparation (p = 0.05), and increasing jump height (p = 0.15). Using verbal and visual feedback appears to be an effective means of improving both the process and the product of the vertical jump.
PE4820 (Administration)
Morissey, Joanna Lynne. A Revision of the CHAMPS (Challenging Athletes’ Minds for Personal Success/Life Skills) Program Content (M.S., Ball State University, 2007).
Catha Videnic, chair; 3rd, Univ.
In 1991, the National Collegiate Athletic Association created the Challenging Athletes’ Minds for Personal Success (CHAMPS) Life Skills Program to support student development initiatives of participating universities and colleges and to enhance the quality of the collegiate student-athlete experience in the university setting. The CHAMPS/Life Skills Program focuses on five core academic domains: athletic excellence, personal development, career development, and service. Few modifications have been made to the CHAMPS/Life Skills Program Educational material. The material is out of date and does not meet the standards of CHAMPS or collegiate student-athletes. Many university faculty members use various forms of technology to supplement their teaching methods. The current proponents of the CHAMPS/Life Skills Program content need in paper-and-pencil format. The purpose of this creative project was to update the existing CHAMPS/Life Skills Program material and transform it into an electronic format. This project focused on updating the personal development chapter, including updates to topics such as time management and self-efficacy. A sport psychology chapter was created to help CHAMPS/Life Skills Program institutions with knowledge applicable to a collegiate student-athlete population. Electronic and additional hard copy materials were created. The updated chapters, minus evaluation forms, were distributed to three CHAMPS-Life Skills partners with a creative project. Administrators were invited to provide feedback and to evaluate the updated chapters. The provided feedback were used during the final preparation of the CHAMPS/Life Skills Program Manual.

PS4821 (Administration)
Rafael Weimer, faculty. A Case Study of the Use of Risk Management in NCAA Compliance at a Division I Institution (Ph.D., Eastern Michigan University, 2004).
James Berry, chair; 3rd, Univ.
Institution face significant risks related to ethics. Most risk assessment has been a modified pair of compliance programs, which is high education, it has not been serving the needs of NCAA institutions. The project implemented a non-experimental-descriptive case study design to (a) identify the methods and scope of using risk assessment in institutional ethics; (b) evaluate the effectiveness of risk assessments on the ethics compliance operations, communication and decision making about compliance, interactions with the NCAA, and compliance outcomes. The research was a Case 1 research, purposefully selected on the basis of its staff’s experience with both risk management and NCAA ethics. As well as the presentable size, the data collected (i.e., data from the case-study analysis) were used. Two kinds of data were collected, interview data and documents. Interviews included (a) the principal, (b) ethics staff member, (c) an ethics council member, (d) institutional and one-off compliance staff member, and (e) conference compliance director. In this NCAA, over-20 compliance staff members. Insurance was primarily used to test face-to-face. Relevant documents were collected and reviewed. The risk-based compliance program was observed to include (a) risk management, (b) risk management, and (c) risk. Risk assessment included training the environment, identifying, rating, prioritizing, and reporting risks. Risk management included identifying specific risks in high-priority risk areas, developing risk-mitigation plans, and implementing the plan. Risk assessment included review of training guidance by outside parties to verify the controls. Findings indicated that risk management had been successfully accompanied on ethics compliance and had had positive effects on compliance function and on communication and decision making about compliance and other ethical risks. No changes were observed in the programs’ interaction with the NCAA. The ethics compliance program was seen as well-developed and effective. Risk management was effective at this institution, could be applied more widely in ethics compliance, and is a potentially powerful and beneficial approach for preventing situations against ethics risks.
PE4822 (Racism and Cultural Anthropology)
VanGorden, Jethy M. Psychosocial Development of Pre-Service Physical Education Teachers throughout an Early Field Experience (Ph.D., Springfield College, 2006; Stephen G. Coughlin, chair, 3rd, 251b).
A novel method was designed to examine teacher efficacy, value orientations, biases, assumptions, anxiety, and concerns of pre-service teachers throughout a pre-practicum field experience.
Seventeen seminar-only students and one instructor were participants in the study. Separately 2 x 3 mixed factorial ANOVA and MANOVA were used to analyze data collected using the "Physical Education Teacher Efficacy Scale" (P. E. H. Educational Research, 1987), "Student Teacher Anxiety Scale" (J. E. McInerney, Journal of Teaching in Physical Education, 1995), and "Teacher Concerns Questionnaire"-20 (D. Biddle and M. Gadzuric, Exercise and Sport Journal of Sport Sciences, 1997). Pre-practicum students exhibited learning process and sociocultural integration value orientations. Teaching efficacy was significantly (p < .05) from pre to post-practice, due to feedback of students and teachers. Sensor "weirdos" reported a significantly higher (p < .01) efficacy than those facing challenges of teaching in schools. At the start of the semester pre-practicum students had a significantly higher (p < .05) anxiety about being evaluated and explored than did seminar students, causing a significant group x test interaction. Qualitative theme emerged, illustrating the psychological "filter" counter and social influences that pre-practicums are experiencing during field work.

PE4823 (Sociology and Cultural Anthropology)
Zail, Jeffery J. The Role of Interscholastic Athletic Participation and Its Relationship to Educational Outcomes as Selecte in Middle Schools in the State of Georgia (M.Ed., University of Alabama, 1999; Rose Mary Newton, chair, 3rd, 1999).
The overall purpose of this study was to determine whether a relationship exists between participation in interscholastic athletics and academic achievement, student attendance, and student behavior at the middle school level. A secondary purpose of this study was to determine whether middle schools of nearly identical demographic composition, but with disparate levels of interscholastic offerings for students, perform similarly on standardized state assessments. For the current purpose, participants consisted of eighth-grade students enrolled at six middle schools within a medium-sized public school district in a southeastern state. Quantitative data were gathered and analyzed on 1,778 eighth-grade students enrolled in these schools during the 2004-2005 school year. For the secondary purpose, research participants included all eighth-grade athletes enrolled at these six middle schools in three different public schools within close proximity to the schools used in the primary research setting. Quantitative data were gathered and analyzed on 1,228 students enrolled in eighth-grade in these schools at one time of the Spring 2004 Georgia Criterion-Referenced, Compensatory Term administration. Individual eighth-grade students who participate in interscholastic athletics perform better in the areas of academic achievement, attendance, and behavior than do non-participating eighth-grade students. This finding held true for male and female eighth-grade students. While individual athletes fared better than non-athletes at all schools, school performance on standardization testing at the eighth-grade level was not affected by the number of interscholastic sports programs in place. Also, while results related to the secondary purpose of the study revealed that significant differences existed among the schools in the three different systems, they did not show a consistent pattern, suggesting that no single type of interscholastic sport model is the most beneficial in terms of standardized test achievement.

PE4824 (Sports Medicine)
Enforced muscle activation, especially of the proximal muscle group, has the potential to greatly reduce the occurrence and severity of inversion ankle sprains. Recent investigators have examined this topic with varying results. Some previous studies report that tape applied over the ankle may facilitate the dynamic stabilization of the ankle, while others do not. Very few experiments have observed the
of white tape during true functional activity, such as writing and cutting exercises. The purpose of this study was to examine the effects of different white tape techniques on postural muscle activation during two plants of a functional activity. Eighteen subjects between the ages of eighteen and twenty-five, from a quadrant active population, was selected for this study. Electromyographic peramplitude was measured for pre- and post-activation of the postural limb and trunk. Participants performed one manual task of the stance-unilateral task with application of a non-sustaining tape technique and three trials with no tape condition. Two different repeated measures analysis of variance (RM-Anova) were used to determine the different between the tape conditions, one for pre-activation and one for post-activation. Results of the RM-Anova revealed no significant difference in postural muscle activation for pre-activation (F(1, 15) = 5.85, p = .04, ES = .55, power = .13) or for post-activation (F(1, 15) = 1.12, p = .34, ES = .20, power = .23) among the three tape conditions. Application of white tape had no enhancing or diminishing effects on postural muscle activation. Biomechanical effects following application of white tape are probably due to its other properties; for example, range of motion restrictions. The application of a non-sustaining tape technique would have no preventive prepartion against the occurrence of hernial spinal pain.

PC4825 (Sociology and Cultural Anthropology)
Brothers, Rebekkah Jean. Sports, Christian Mission, and Evangelical Colleges: A Typological Analysis (Ph.D.), University of Notre Dame, 2006; Massa Ryan, chair, 4th, 14th.

Modern colleges and universities in the Evangelical tradition have developed different ethical orientations, values, and norms based on their interpretation of the tradition. The most pronounced difference concerns how they understand their relationships to the rest of society. Competitive sports are an important part of mainstream American culture, and the way in which schools choose to participate or not participate in sports provides insight into their relationship with society. In order to analyze these relationships, the dissertation examines four white-blue Bob Jones University, Baylor University, Oral Roberts University, and George Fox University. Their schools fall at different points on the Evangelical spectrum. H. Richard Niebuhr's typology from Christ and Culture (1951) is used in the analysis. Four of Niebuhr's types are used as lenses through which the schools' desires are examined. At one end of the spectrum is Bob Jones University, a non-denominational school in Greenville, South Carolina, which is located at the "Cultural" type. The opposite is Baylor University, a Baptist school in Waco, Texas. At the other end of the spectrum are Oral Roberts and George Fox, the "Culture" type. At the middle are Oral Roberts University, a non-denominational school in the Midwest, and George Fox University, an Evangelical Quaker school in Portland, Oregon. Oral Roberts University is located at the center of the "Culture and Church" type. The typical school is located at the "Culture and Church" type. The typical school is located at the "Culture and Church" type. The typical school is located at the "Culture and Church" type. The typical school is located at the "Culture and Church" type.

PC4926 (Sports Marketing)
Cocker, Fabrice. An Investigation into the Behavioral Effects of a Change in Sponsorship of a Sports Event on Consumer Perceptions of, and Attitudes towards, the Original Sponsor and the Event (Ph.D.), Leiden University of Technology (South Africa), 2006; Roger Mason, chair, 2nd, 14th.

This study examined the effects of a change in sponsorship on consumer perceptions and attitudes towards the original sponsor and the event. The study was conducted at the 2006 Winter Olympics. The study measured consumer perceptions of the event and the original sponsor. The study also examined the effects of the change in sponsorship on consumer perceptions.

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know the extent to which benefits continue to accrue after they have stopped sponsoring an event. Since almost no research has been carried out on muscular awareness and awareness about, this discussion should contribute to knowledge about the creation of sponsorships, as well as to the broader field of sponsorship.

PE4817 (Biomechanics)
Fuser, Kendy. The Effect of a Preprophetic Ankle Brace on Foot Torque during a Drop Landing onto a Stained Surface (M.S., Indiana University, 2005; Carrie Doherty, chair), 2nd, 11:15am.
To determine the effects of prophylactic ankle bracing on knee joint varus/valgus and internal/external rotation torque during a drop landing onto a stained surface, twenty-four healthy volunteers (17 male and 12 female, 175.0 ± 9.3 cm, 72.8 ± 14.3 kg; 37.5 ± 23.5 yrs) from a physically active population at a large Midwestern university participated in this study. Subjects were excluded if they had any history of ankle or knee injury within the past six months, or any previous history of a serious ankle or knee injury. Knee torque was measured during a unilateral drop landing onto a stain board using a force plate (AMTI) and a motion analysis system (Vicon). We expected to find changes in both the varus/valgus and internal/external knee torques during drop landing. Peak torque for each condition (no brace and no brace) was calculated using linear and ground reaction force data collected from the time the participant's foot touched the force plate until twenty four cycles after the initial force reading. Each participant performed 24 trials for both brace conditions; however, only the last three acceptable trials were used for analysis. Peak torque was calculated for each trial and the average of the trials was used for statistical analysis. We calculated a multivariate analysis of variance with repeated measures to determine any differences between the brace and no-brace conditions. The alpha level was set at P ≤ .05. Knee maximal reaction torque was significantly greater in the brace condition compared to the no-brace condition (P < 0.05). However, peak torque was similarly in the brace condition than in the no-brace, although this difference was not statistically significant (P > 0.05). Ankle bracing does not increase the risk of collateral ligament knee injury during an axial landing test. Although there was a statistically significant increase in internal varus knee torque, we are unable to confidently say whether this increase is clinically significant enough to place the collateral ligament at an increased risk of injury.

PE4828 (Sports Medicine)
Fox, Jason G. An Evaluation of Eccentric Strength Deficits in Patients with Functional Ankle Instability (M.S., Indiana University, 2005; Carrie L. Doherty, chair), 1st, 7:30a.
The ankle is one of the most frequently injured joints in the body. Following an ankle sprain, muscular symptoms often persist. These residual symptoms can lead to a condition known as functional ankle instability (FAI). Previous research has focused on exertor strength deficits as a potential cause of FAI. However, recent theories suggest that the amount of the ankle may also be resolved. Eccentric contractions of the invertor may assist in preventing overuse of the instable ankle. The purpose of this study is to examine eccentric muscular contractions of the ankle during isokinetic inversion, eversion, plantar flexion, and dorsiflexion movements in patients with FAI. Appropriately 40 volunteer subjects were recruited from academic clinics and physical training rooms located throughout the Indiana University community. Subjects were divided into two groups, a control group and an FAI group. Indiana patients for the FAI group included a history of at least one ankle sprain and an accident of giving way during the last six months. The inclusion criterion for the control group was no history of ankle inury, fractures, or osteoporosis to the lower leg. Subjects performed inversion/eversion and plantar flexion/dorsiflexion eccentric isokinetic movements using the Keleffo IS isokinetic dynamometer (Chattanooga Corp., Chattanooga, TN). Subjects performed one practice trial, followed by three sets of ten repetitions in each movement. A sixty-second rest period was given between each test. The peak torque values for each direction were standardized to each subject's body weight. The average of the three standardized values was used for statistical analysis. Separate independent sample t-tests were used to identify differences between the functionally unstable group and the control group in each direction. Due to the possibility of a type-I error with the use of multiple
tween, a Bonferroni correction was used. The alpha level was set at \( p \leq 0.013 \). Analysis revealed a significant difference between the FAU and control groups during isometric plantar flexors movements (\( \mu = 0.431, \rho = 0.013 \). Eccentric movements of inversion, eversion, and dorsiflexion did not reveal any significant differences between the groups. Eccentric velocities of the plantar flexors may contribute to FAU. The majority of ankle sprains occur with the foot in an inverted and plantar flexed position. The eccentric weaknesses of the plantar flexors may allow the stability of the ankle to be compromised and increase susceptibility to inversion injuries. Therefore, future rehabilitation of the ankle may want to focus on eccentric strengthening of the plantar flexors of the ankle.

PE4829  (Administration)
Title IX of the Education Amendments Act of 1972 is credited for increasing women’s participation in competitive sports. At the college level, the number of women’s clubs comprising in intercollegiate sports grew from 30,000 in 1972 to 133,000 by 2001. Although there have been dramatic increases in participation, there has been a sharp decline in the number of women’s teams, and even fewer women in coach, athletic director positions. In the years following Title IX, the previously sparse women’s and men’s athletic programs combined into one department. By the 1980s, these mergers left the women’s athletic director position behind, with men assuming control of the combined programs. Under the separate women’s and men’s department arrangements, women athletic directors led approximately ninety percent of all women’s programs. Today, women have less than twenty percent of all National Collegiate Athletic Association (NCAA) programs. The shift in leadership of intercollegiate athletics after Title IX cannot be ignored. This dissertation investigates Title IX’s impact on women athletic leaders and describes their leadership in the higher education context. This study focuses on two central questions: 1) Why are there so few women in intercollegiate athletic leadership roles today? 2) How does Title IX policy affect women’s participation in intercollegiate athletics? These arguments stem from the history of women’s leadership in higher education, from literature related to women’s athletic leadership, and from Title IX policy as a framework to analyze existing data. Using analysis of secondary sources, surveys, data, and institutional documents, this dissertation presents a set of criteria that creates the most likely woman candidate to be selected for a women’s athletic director in today’s centralized athletic model. In addition, the impact of the Simon Women Administrator role, created after the NCAA’s implementation of the Association for Intercollegiate Athletics for Women in the wake of Title IX, is analyzed. Finally, four recommendations are offered to answer how institutions can promote greater numbers of women to senior level athletic leadership positions are discussed.

PE4830  (Measurement and Evaluation)
Johnston, Deeder H.  Estimation of Energy Expended While Swimming Utilizing an Omnidirectional Accelerometer. (Ph.D., Indiana University, 2006; Joel Stager, chair, 4th, 2976).  
To identify variables that may affect swimming energy expenditure, and to develop an algorithm that allows for quantitation of energy expenditure while swimming, through the use of omnidirectional, in vivo technical and computer variables were measured. Subjects completed three 400-yard freestyle swims at "light," "moderate," and "hard" paces. Respiratory gases were collected following the completion of each swim, to determine oxygen uptake. Subjects were accelerometer-equipped on their wrist, hip, and leg. An algorithm was developed via multiple regression analysis to estimate energy expended (kcal/min) while swimming, from accelerometer counts and from mean performance variables. Results indicate a linear relationship exists between energy expenditure, mean velocity (m/s), and accelerometer counts. However, the extent of this relationship is dependent upon swim velocity and the sex and side of the subject. The use of these accelerometer counts in the algorithm provides an estimate of energy expenditure, regardless of sex, velocity, or skill of the subject. The best algorithm-related body surface area, leg count, velocity category \( (V_C = 4.1 \text{ m/sec}^{-1}) \), \( V_C = 4.1 \text{ m/sec}^{-1} \), and sex \( * \) leg count, which yielded an \( R^2 \) value of 0.73 (SEE = 2.73). The correlation between measured and predicted energy expenditure was 0.84 with no significant difference between
measured and predicted values. Gross validation of this algorithm indicated no significant differences between measured and predicted energy expenditure (mean error = 0.36 kcal/m²) and a moderate ($r = 0.78$) correlation between these measures was noted. The amount of energy accounted for via the algorithm, to estimate energy expended while swimming, is comparable to land-based estimates using accelerometers. However, unlike land-based accelerometry studies, gastric distension needs to be accounted for which is unique to swimming-energy expenditure, such as rate of movement and the sex and skill of the subject. The use of accelerometers to estimate energy expended while skiing resulted in subject which were comparable to, or better than, currently tested methods which account velocity to estimate energy expended.

PE4831 (Administration)
Crucial differences exist between the U.S. "new dimension" between commercial professional sport and amateurism, as applied by the National Collegiate Athletic Association (NCAA DI) on the one hand, and the international dual-funded international system, with more conditions between professional and amateur status, on the other. Internationally, the "professionalism model" has been scarce in the past, and continues to create problems for international prospective student-athletes (IPAS), for NCAA men's and women's sport, and for member institutions. Knowledge gaps and confusion are present, per professionalization attempts in the international sport system. In that it lead to IPAS not being able to pursue higher education and sports in NCAA DI member institutions. The purpose of this work is to illustrate the legal framework and its application to NCAA DI IPAS cases, to raise awareness of existing and potential problems, causes, and possible solutions and to serve as a manual, both for policy formulation and for litigation avoiding these matters. Ultimately, the endeavor aims at changing a few of the present conceptions about amateurism policy as it is applied to IPAS, finding a balance between the two worlds of sport structure, so that IPAS, NCAA DI member institutions, and NCAA staff members are not adversely affected by gaps existing in philosophical and practical approach, practice, and policy.

PE4902 (Sports Medicine)
Ko, Susanna, *The Effect of Acupuncture on Recovery in Team Sport Athletes (M.A.), University of Technology (Sydney, 2006; Aron Murphy, chair), 2nd ed., 160p.
Many research projects have investigated various methods for recovery from athletic competition, including massage, contrast therapy, and nutrient intake. Acupuncture has been introduced as a potential method of recovery following sport performance; however, there is a lack of scientific evidence to support its appropriateness in this context. In the current study, it was hypothesized that acupuncture would result in benefits for both physiological and psychological recovery. Twelve healthy male participants were included (245 ± 12 kg, 78.4 ± 11.2 kg, 177.7 ± 3.7 cm). They were required to perform intermittent high-intensity running for two minutes on a treadmill on a non-exercised day. After exercise, they were each given different methods of recovery on two separate days: one with passive recovery, and one with acupuncture intervention. On acupuncture recovery day, subjects received 20 min acupuncture treatment with ten needles insertion. Several questionnaires were taken during the 30 min recovery period, such as heart rate, blood lactate, subjective feeling, oxygen consumption, nitrogen level, and mood state. On acupuncture day, several significant data showed the effectiveness of acupuncture on recovery. Heart rate decreased in the difference of Post 0 min vs Post 25 min, Post 0 min vs Post 25 min by 51.1 bpm (P = 0.003) and 59 bpm (P = 0.018) respectively. Blood lactate concentration was reduced in the difference of Post 0 min vs Post 25 min by 0.3 mmol/L (P = 0.003). Four-choice reaction time was shortened by 26.8 ms (P = 0.006) and low fatigue was reported by subject. Reduced peripheral and central blood pressure were recorded for several periods during recovery, and there were several changes to other recovery data. No significant differences between acupuncture treatment were found in nitrogen consumption data. These suggest twenty minutes of acupuncture intervention has effect on lowering heart rate, and on lactate recovery, tissue recovery, stress reduction, and decision-making capacity for
athletes' recovery. The most obvious change, decrease in joint pain, indicated that current needle combination can great benefit on earlier recovery on the symptomatic nerve entrapment. Acupuncture is a useful method of recovery for athletes who have two or more complications in one day. Further research should concentrate on mechanisms for enhanced needle recovery, and maximize the effects of various acupuncture points.

PE4833 (History and Philosophy)

"Something More Than Naked: Essay on Being a Runner is a collection of essays that examine running as a way to know one's self. The essays about the experience of running in comparison and in running, is a structural program and on military training, as metaphors and in pure action. Running precipitates the narrator to her own worthiness and strengths because it tests her and demands in total answer. An athlete engages in sport on both a self-conscious and subconscious level. In order to reach deeper into her experiences, the narrator expands the self-conscious process to include upon the main of the runner's athletic, and in the process explores the role of emotion, laughter, and awareness in shaping an event. Many times the narrator realizes a gap, sometimes intentional and sometimes unavoidable, between thoughts and expressions. As a result, the realization, some running experiences lead the narrator to a greater understanding of the way she interacts with the world and the people around her. As the collection progresses, the narrator's focus shifts from wandering where others see her to more fully expressing how running exists in her own life."

PE4834 (Dance and Choreography)
Liao, Chia-Ying. No More Dancing for Gods: A Case Study of 'Ililau' (Harvest Festival) and Ethnic Relationships in Taiwan (M.A.), University of British Columbia, 2007; Robert Sparkes, chair, 1st, 6th.

In this thesis I examine popular cultural representation of Ililau, a traditional festival held in Taiwan, in the context of ethnic and social power relations and identity politics after 1993, the year of emergence of the Council of Indigenous People. From these 'episodises' and their implications in the period 1993 to the present, I collected 43 articles judged to Ililau. I also conducted an interview and focus group of Ililau participants in the community to determine what traditional and modern aspects of Ililau are the most relevant to indigenous people today. This study challenges the apparent comprehensiveness of the category of 'Chinese.' Multiculturalism is often cited as a way for the Chinese minority to have their own culture, whereas Chinese identity, while, at the same time, discrediting social groups shun themselves of responsibilities for power dynamics. However, multiculturalism overlooks ethnic cultural diversity in the "dominant," and inevitably simplifies the concept of ethnicity. The thesis demonstrates a complex set of relationships other than the binary of 'majority' and 'minority.' Multiculturalism is a concept that has been challenged by the postmodern age. Critical consciousness research is not intended to bring closure, but to open up dialogue, and I suggest future studies to apply various ethnographic methods to gain a deeper understanding of how people interact and embody difference. Moreover, I suggest we investigate other "ethnic," "Chinese," "indigenous" events to explore power relations from various angles and to (re)define and deconstruct meanings of these events, which I hope, in the end, will give birth to the ethic/social debate in Taiwan.
PE4835 (Administration)
Harrel, Janice. ""It's a Long Hard Road to the Top": The Career Paths and Leadership Experiences of Women in Canadian Sport Administration (M.A., University of British Columbia, 2007; Patricia Ventischock, chair), 2nd, 185e.

High representation of women in higher echelons of sporting organizations has been measured since the 1970s. It is well documented, the Olympic Movement being the target of much of this criticism. Research shows a scarcity of female leaders at all levels of sporting organizations. This study explored the career paths and leadership experiences of women who have accessed high-level leadership positions in Canadian high-performance sporting organizations. Semi-structured open-ended interviews were conducted with ten of these women to review their personal experiences and information concerning their career experiences in sport administration. Women’s stories provide important insights into our current understanding of female experiences in sport administration and offer a different narrative to contribute to the under-representation of women in high-level sporting leadership. Research questions guiding the study were: (1) How do the women who have reached high leadership positions in Canadian sporting organizations? (2) What have they achieved in their positions? (3) What have been the circumstances and causes of their leadership involvement? (4) What factors still hinder women’s full involvement and participation in sport administration? Addressed are first, qualitative data to demonstrate the level of women participating in the Olympic (1990); second, the career paths of women who have accessed high level sport management positions and highlights of women’s entry and progress in sport administration; third, women’s level of leadership involvement, including the personal skills that led to their success and their accomplishments in senior executive roles; and fourth, barriers hindering women’s opportunities to advance to high-level leadership positions. It is hoped that study expounds a better understanding of female under-representation in high-level sporting leadership.

PE4429 (Administration)
McBride, Stefanie L. Women Administrators’ Perceptions of the Contribution of Competitive Sport Experiences to Their Career Paths and Leadership Practice (Ed.D., Illinois State University, 2000; Linda Lyman, chair), 3rd, 225e.

To explore how women administrators perceive the benefits of competitive sport experiences, this research sought to describe women administrators’ perceptions of the completion of these experiences to their leadership practice and career paths, using a qualitative phenomenological study to focus on these research questions: 1. What kinds of competitive sport experiences have these women had? 2. What aspects of their leadership practices do they attribute to competitive sport experiences? and 3. How do these experiences prepare them for leadership positions in competitive sport administration? Participants included eight female administrators who had competitive sport experiences in high school and/or college, were interviewed twice and observed twice. Data and interviews were analyzed and coded for themes. Participants in competitive sport experiences in high school and college held benefits for their leadership practice and for their career paths. Competitive sport experiences served as a leadership prototype, where the women learned teamwork, collaboration, good setting, following rules, confidence, and support, gaining each a first offer, assuming the strengths of others, building and success, the practice of routines, and control to increase equity. The women either directly or indirectly indicated that their competitive sport experiences had positively affected their career paths. This study allies to the knowledge base about women educational leaders and the impact of the particular leadership experiences of competitive sport on their growth and development and future. Recommendations for practice include involving leadership preparation programs in women’s sport, enhancing the ability to identify leadership opportunities, and encouraging women to seek opportunities in multi-sport programs, including athletics, in this era of accountability through high-stakes testing.
To evaluate the effectiveness of a modification of the Gretton Technique (GT) on reducing edema following an acute ankle sprain, we set out to determine the effectiveness of this treatment compared to a control treatment. Participants were randomly assigned to one of the two groups. One group received the modified GT, and the other group received the control treatment. The modified GT group was treated with the traditional GT in addition to the modified GT. The control group was treated with the traditional GT alone. The results showed that the modified GT group had a significant reduction in the amount of edema compared to the control group. The significance level was determined using a t-test. The results were statistically significant at the 0.05 level. Therefore, we can conclude that the modified GT is effective in reducing edema following an acute ankle sprain compared to the traditional GT.
contributing to the growth of women's surfing in British Columbia (i) changes in wetsuit technology, (ii) an increased emphasis on surfboard and wetsuit design, (iii) cultural and stylistic influences from California, (iv) the presence of women surfers and surf instruction, (v) the growth of competitive surfing in British Columbia, (vi) increased economic support for Canadian women's surfing, (vii) development of Canadian surf businesses, and (viii) women's increased comfort with the identity of "being a surfer". Interviews confirmed that the surf scene in Canada is less intimidating and more accepting of women surfers than in many other locales, including California. The women surfers reported a deepening of commitment to the surf lifestyle as they became involved in the sport, and that it increasingly became a defining component of their self-esteem. They also reported that their perception of surf products contributed to their sense of identity. The study found that surf brands have helped to fuel the diffusion of surf lifestyles and products into the mainstream by expanding product offerings and making them more accessible to the general public. Canadian women's surfing demonstrates features of a subculture of consumption and may best be thought of as a "consumed-subcultural subculture" (Blumler) that is driven both by a developing women's racing subculture (the hard-core) and by the market promotion (product development, women's wear, marketing, women's-specific reading) of the major surf brands.

PE4839 (Biomechanics)
Dapena, chair, 2nd, 27th.
This study examined the relationship between load and hip extension torque in the conventional and split squat exercises, to compare the risks of injury for the kamberg knee. It also compared knee extension torques. Ten male athletes performed conventional squats at 36% of their one-repetition maximum (1-RM), and split squats at 30% of their conventional squat 1-RM. The split squat required less joint force for any given amount of hip extension torque, and the study had less force on the knee. This comparison implied similar lumbar extension torques in the split squat, and thus less risk of injury for the sport. The split squat also required less joint force than the conventional squat, for any given amount of hip extension torque. Moreover, knee extension torques were much smaller in the split squat than in the conventional squat, because the geometry of the positioning of the body in the squat affects the foot position of the hip extension torque. To assess a large knee extension torque in the split squat, it would be necessary to increase the external load to a weight that would require hip torques beyond the capability of the subjects.

PE4840 (Measurement and Evaluation)
Sull, Katie M. Development of Minimal Physical Fitness Test Standards for Firefighters (Ph.D., University of Utah, 2006), Patricia Eisenman and Lynda Randell, chairs, 2nd, 10th.
The primary purpose of this study was to identify physical fitness variables, and to determine the standard for physical fitness for first-line firefighters with acceptable or unacceptable performance times on simulated firefighting tasks. Secondary, the study was conducted to determine the amount of variance in performance times, on a simulated firefighting task, that may be accounted for by physical fitness test prerequisites. A representative sample of nighttime-orientated professional firefighters (approximately 75% of the target population, consisti on 120 subjects) from a Mountain West fire department were included in the study sample. Participants completed a battery of physical fitness tests (1.5-mile run, sit-and-reach, push-ups, sit-ups, and 1-repetition maximum bench press) selected by body weight, vertical jump, grip strength, sit-ups, push-ups, and sit-and-reach tests, and a simulated firefighting test (SFT) to measure fitness. Significant differences were found between firefighters able to complete the SFT and those not able to complete the SFT in acceptable times. The test was found to be significantly related to real-world firefighter performance.

Rival analysis of variance revealed significantly lower (p<0.05) ratings of upper body muscular strength, muscle endurance, grip strength, flexibility, and cardiorespiratory fitness, in addition to vertical jump, in
the subgroup of firefights achieving a vertical jump of 17.00 inches or greater. A multiple regression analysis suggested that approximately 60% of the variance in RTS performance time could be explained by the composite battery of physical fitness variables, with significant contributions from the explained variance coming via flexibility, grip strength, and percent body fat (r<0.05). The current study extends previous research, regarding the validation of maximal acceptable physical fitness standards, to a specific physical fitness variable that is a significant determinant of acceptable firefighting performance. The frequent assessment of vertical jump performance may help identify firefighters with physical fitness levels indicative of potentially unacceptable occupational performance and poor physical fitness overall.

PE4481 (Sports Medicine)
Smith, Brent Irvin. The Effects of Strength Training on Force Square and Strength Development in Individuals with Functional Ankle Instability (MA, S.I. University, 2006; Carrie L. Docherty, chair), 3rd, 1776.
Proprioception and strength deficits have been shown to be contributing factors to functional ankle instability (FAI). To determine the effect of a strength training program, for the ankle, on strength and force square in individuals with FAI, form healthy, collegiate students with FAI volunteered to participate in this investigation. Subjects were randomly assigned to either a training or a control group. Each subject performed strength and force square pre-test procedures using a sled test. Strength testing identified the range of motion (ROM) voluntary maximum eccentric contractions (MVC). Inversion and eversion strength were both tested in a closed kinetic chain position. Force square testing was done at 30% and 50% of average MVC. Force square rehabilitation protocols were applied in both force square for the inversion/eversion force square testing. The training group then performed a Thera-Band and static hold strength training protocol three days a week for six weeks. The control group did not participate in any new force square rehabilitation during the same six-week period. At the end of the six weeks, the post-test was conducted for strength and force square. Separate analysis was conducted on the strength and force square variables. For the strength dependence variable, 8 subjects repeated measures analyses of variance (MANOVA) were performed, one for inversion and one for eversion. For the force square dependent variable, 2 MANOVA were conducted, one for constant force and one for variable force. Tertiary post hoc analysis was conducted on significant findings. Alpha level was set at p<0.05 for all tests. We found a significant test by group interaction for isometric force (FU.00 = 11.85, p<0.05, ES = 25, power = 95) and for eccentric force (FU.00 = 7.4, p<0.05, ES = 30, power = 95). Isometric strength at the post-test was significantly greater in the training group (100.2%) than in the control group (72.8%). Isometric strength at the post-test was also significantly greater in the training group (142.8%) than in the control group (100.2%). We found a significant test by group interaction (FU.00 = 3.5, p>0.05, ES = 0.7, power = 95) for force square variables. However, follow-up parametric comparisons revealed greatest were not statistically different at either pre-test or post-test. No significant main effect or interaction was identified for the constant force. A 12-week strength training protocol increased strength in subjects with FAI. However, effects of the training program on proprioception is still unclear, indicating the current clinical practice of strength training for individuals with FAI should remain. Additional rehabilitation protocols are required to address proprioceptive deficits in FAI force square.

PE4542 (Sociology and Cultural Anthropology)
Tresk, John-Peter V. Working the Crowd: The Powers and Pleasures of Wrestling Fandom (M.A., University of Wisconsin, Milwaukee, 2006; Elena Levine, chair), 2nd, 1506.
This work presents an extensive assessment of professional wrestling fandom, and of the unusually interactive relationship between fans and suit. By examining and comparing wrestling to other similar cultural texts, such as soap operas and rock shows, I show that wrestling's performance structure and oral narrative that infuses heavily on participation of a live audience to give the performer's actions significance. This audience of wrestling fans assists the performer through a complex process of both suspending and managing their disbelief in regards to certain aspects of the physical performance and for social narrative. In doing so, fans read the performance and the narrative by directing the
encoded message of the words/performers. The live audience decode the performers, but also respond to them as encoded message of their own. They can re-engage in a manner of ways, but normally do so in accordance with, or in opposition to, the intended narrative message of the text that are encoded by the words/performers' actions. Because the scripted performance often so loosely on an on-scripted response from the fans, it is possible to find instances in which the performer or the narrative was altered to accommodate the emotions and desires of the fans. This ability to interact with, and affect, the performance, often over time or as it is happening, piece wrighting fans in the uncommon position of being both observers to a text and participants in its construction.

**PE4943 (Measurement and Evaluation)**


The purpose of the study was to develop a new method for assessing maximal (Fmax) and preoperative (Fpre) forces during simulated swimming. The Max Power Model (MPM) is based on the maximum power that a swimmer can deliver to an external load (Fload) and its relationship with the maximum velocity of the swimmer (Vmax). Development of the MPM was accomplished in three ways: examination of the shape of the Fmax vs. Vmax curve, development of a method of comparing Fmax vs. Vmax, curves, and fitness testing consistency of the method to large changes, using the four competition stroke styles and underwater dolphin kicking. Second, the validity of the MPM was assessed by comparing with a velocity perturbation model (VPM) and response to postoperative changes in Fmax and Fpre during swimming (as supplied by a ported diaphragm, a vest, hand paddles, and flip gloves). The MPM was developed effectively. The Fmax vs. Vmax curve was found to be best described as an exponential function. Comparisons of Fmax vs. Vmax curves were therefore made after linearization using the second log of Fmax. If slopes were similar, comparisons were accomplished using ANCOVA with Vmax as constant; otherwise, a test for differences in slope was used. MPM was sensitive to large changes in swimming conditions, as true through significant differences (p < 0.05) in an ANCOVA for competitive stroke and a significantly difference slope of vFmax vs. Vmax for underwater dolphin kick, in comparison with competitive stroke. Assessments of the validity of MPM yielded mixed results. MPM showed a strong relationship to the VPM. However, the VPM showed no significant differences between any of the equipment treatment conditions in either the calculated Fmax or the drag coefficient indication. MPM showed more promise, as expected in the absence of equipment condition.

While still in need of further exploration and validation, MPM has promise as a simple method to denote, separate, and quantify differences in Fmax and Fpre during swimming.

**PE4944 (Sports Marketing)**

Williams, Charles Lynn. Differentiation of Perceptions towards Paying Student Athletes among Non-Athletic Students (M.S., Purdue University, 2006) [William A. Harper, chair], 35r, 41f.

Direct cash payment to student-athletes is one of the major issues surrounding intercollegiate athletics. Previous research has explored perceptions of athletic championships, male-athletes, and student body members, toward the possibility of pay for play. However, little research has examined the perception of undergraduate students, correlated with past attendance habits of sporting events. This study, therefore, examined perceptions held by undergraduate students on providing direct cash payment to student-athletes, along with how these perceptions vary, based on athletic team loyalty subgroups. Past attendance trends, and attitudes toward athletes and athletics, were also examined. A Web-based survey, conducted, involving undergraduate students at a large midwestern university. Undergraduate students were significantly more likely to oppose direct cash payment to student-athletes, believing that student-athletes are already compensated through scholarships. Findings did reveal a minimally significant difference in level of support for paying student-athletes, depending on type of scholarship received. Support was lowest for student-athletes on full scholarship, slightly higher for those on partial scholarship, and highest for those on no scholarship. In contrast to prior expectations, the difference in
level of support for paying student-athletes, both in general and in cult scholarship condition, was not statistically significant across the three loyalty subgroups examined (high, medium, low). Analysis is based on low response rate.

PE4845 (History and Philosophy)
Understanding the nature of sport is essential to appreciating its internal goals. Sport is a form of play and is thereby aesthetic, establishes its own order, and depends upon leisure. Sports are also games and practices. The internal goals of sport include the experience of possibility, concern for excellence, and appreciation of the absurd. The play-ethos, respect for the game, and respect for the practice are virtues that form the essence of sport's internal goals. Focusing on external goals, attaching sport to social conflict, and overemphasizing winning are ways that threaten to destroy the play-ethos. An instrumental approach to sport education offers important benefits to learners, while an aesthetic approach that develops reason by using philosophical techniques like reflection is vital to enhance the virtues that promise to elevate sport.

PE4845 (Pedagogy and Curriculum)
Ehlers, Greg. The Ethical Development of Intercollegiate Certified Athletic Trainers (Ed.D., Northern Illinois University, 2006; Gene Ruth, chair), 2nd, 1996.
In the world of NCAA Division I-A collegiate athletics, there is great potential for the enactment of unethical behavior. Certified athletic trainers, key partners of the staffs in Division I-A departments of athletics, are exposed to, and manage, many of the ethical situations that arise in relation to student-athletes' health. This study examines the ethical development of certified athletic trainers employed in the Division I-A setting. Qualitative methods are used to examine the experiences of certified athletic trainers, coaches, and administrators at multiple Division I-A universities. Semi-structured, open-ended interviews are conducted with each participant. Interviews were tape-recorded for later transcription and coding. Twenty-four stories recorded first-hand impressions of the interviews and follow-up discussions with the participants. Member checks, triangulation, and peer review were conducted to assist with internal validity of data. Division I-A athletic trainers are exposed to three common ethical quandaries: the business of winning, the protection of student-athlete privacy, and unequal sports medicine practice. Additionally, key factors play a role in learning to manage ethically challenging situations: personal values, personal athletic training mission, psychology training, intercollegiate athletic culture, and individual situations. Reflections upon these factors enhanced personal ethical growth among the participants interviewed.

PE4847 (Sports Medicine)
Fauri, Caroline E. An Examination of the General Understanding of Idaho High School Football Coaches Relative to Concussion (Ed.D., Idaho State University, 2006; Gene Davis, chair), 2nd, 2005.
Experts are discovering new information about concussions, and that information is especially alarming when it comes to high-school-aged athletes. Recent research has shown that concussions sustained by high-school-aged athletes are taking longer to fully heal. The reality is that even mild concussions, like injuries as some people call them, can be catastrophic if athletes are allowed to return to play before the healing process has concluded. This study was designed to determine whether or not Idaho high school football coaches were consistent with experts' recommendations when it came to managing concussions and determining return to play. Survey questionnaires were mailed out to 138 high school head football coaches in Idaho and seventy-three (53.1%) responded. The questionnaires, designed by the researcher, produced descriptive participant profiles and other data related to the understanding Idaho high school football coaches had relative to current research on concussion diagnosis, evaluation, and treatment. Data also showed the consistency with which coaches managed concussion symptoms and return to play within their sport program, relative to published expert guidelines. Additional follow-up interviews with a purposely-selected sample of coaches allowed the researcher to explore on the
coaches' perceptions and methods. A compilation process consisting of subject identification, thematic analysis, and member checking helped to validate the study. Coaches were unprepared to manage concussion evidence within their sport programs. This was especially true of the smaller athletic classifications (1A, 2A, and 3A). Coaches at the larger classifications (4A and 5A) seemed more prepared to deal with concussion incidents, most likely because of additional educational opportunities afforded coaches at those levels, and also because of the presence of athletic trainers at those schools. Athletic trainers were especially scarce at the smaller classifications. Coaches in all athletic classification levels revealed a lack of awareness that evidence-based concussion assessment tools and up-to-date evidence-based decision making. These non-elite included symptoms were described, the Sudden Assessment of Concussion, and brain震荡esthetic software, such as ImPACT. Many of today's high school coaches, across all levels, were also comfortable with many of the signs and symptoms of concussion, and were especially aware when it came to managing instances of mild concussion, in athletes. Coaches did indicate an interest in potential opportunities to learn more about the role of sports-related concussion, and ready to say they would take advantage of such opportunities if made available.

PE4548 (Sports Medicine)  
Hannan, Kaitl J. Electroencephalographic Analysis of Shoulder Muscle Activity during Two Volleyball Spike Mechanics (M.S., Michigan State University, 2007; Tracey)  
Correlation, chain, fabulous, 7226.
To date, no researchers have compared shoulder muscle activation patterns in two separate volleyball attack methods. The purpose of the study was to examine muscle activation patterns of the shoulder complex, and gender differences in two separate volleyball attack methods. Fifteen male and fourteen female subjects volunteered for the study. Dependent variables were the infraspinatus, supraspinatus, teres major, pectoralis major, anterior deltoid, and biceps brachii. Subjects were conditioned and performed five volleyball attacks each for method 1 and method 2. MANOVA revealed significant differences both for technique [p < .005] and for gender [p < .005]. Interaction between technique and gender was not significant [p > .05], but was strong preference [p < .05]. It is recommended that health care providers interpret the muscle activity about the shoulder complex in order to potentially prevent injury.

PE4549 (Dance and Choreography)  
This paper is a philosophical inquiry into how architecture and design are present, and influential, in the process of dance-making. The researcher referred architectural and design scholars who have studied or written about a relationship between architecture and dance, including Zevan Fiske and Raphael van Houten. The artist piece of choreographer William Evans and visual artist and designer James Pugliese is also highlighted. By acknowledging the different characteristics of body and space within for learning, architecture may be defined as an entity in dance that makes spaces, places, or environments, and that exists in experience. The researcher details the following five thematic premises in which architecture serves dance-making: two metaphorical premises (one of architecture as dance-making, the other of architecture as body), the importance of architecture presence in "sacred dance," and the dance-making presence of built and sub-architectural on the concert stage. These themes further address the potential of perspective, perception, and metaphor in architecturally art-making.

PE4550 (Dance and Choreography)  
In life, confidence plays a vital role in how we view ourselves and our relationship with others and the world. Consequently, as one's confidence fluctuates, perceptions change. Likewise, confidence plays a major role in the initial creative process. This study explored the phenomenon of confidence within the dance-making process, as the multidimensional construct of a dancer's
confidence towards many aspects of a particular dance, making itself a characteristic of each particular week. The general perception of confidence is measured by reviewing relevant literature, not only in the dance field, but also in fields such as sociology and psychology. Confident participants in the dance-making process are expected to interview five choreographers and examining their position on how confidence affected their processes and final dance works. Firstly, to add personal dimension to the study, the researcher elicits upon her own dance-making experience. By studying choreographers’ feelings and actions concerning how confidence affects their processes, the researcher provides insight into future dance-making experiences, as well as offers insight into pedagogical strategies for teaching choreography.

PG4851 (Sports Medicine)
To determine muscle activation levels of gluteal and hip muscles during three non-weight-bearing exercises, and to measure gender differences in hip and gluteal muscle activation. Thirty participants (fifteen male, fifteen female) volunteered for this study. Surface EMG was used to measure muscle activation of the gluteus maximus, quadriceps femoris (QF), and hamstrings. Data were collected during maximum voluntary contractions (MVC) and three non-weight-bearing exercises. TFL and gluteus medius produced the greatest activation across all exercises. TFL activation was significantly greater during side-lying hip abduction with external rotation (p = .005). Females demonstrated significantly greater TFL activation across all exercises. Non-weight-bearing exercises may be used to activate and strengthen the gluteal muscles and TFL. Clinicians may use results from this study when developing rehabilitation protocols.

PG4852 (Administration)
Aborga, Alex, "Where boundary lines on the pitch tie up the imagination and enjoy a unique position within society. However, limits received one day may be just as quickly marked back the next. If a becoming known that the athlete achieved his or her exceptional performance with the aid of doping. Manipulating the body by the use of substances and methods that can substantially enhance athletic performance is considered a violation of several fundamental principles used in sport. The arguments by which sports organizations have sought to maintain the fight against doping are discussed in chapter one. Doping is considered a health risk, but also a threat both to sport's integrity and to that of sport as a whole, and, consequently, given the position the society is in today. Sport, free of any threat, itself. None of these arguments, however, is entirely convincing. Perhaps this is why many sports organizations have declared to states measures for their anti-doping policies in their anti-doping regulations. The fight against doping is sport is considered self-evident and the arguments advanced in its favor even seem to illuminate that fact. It was only a relatively short time ago that the systematic fight against doping in sport, through legal means, began. As a separate body of disciplinary law, besides their regular disciplinary rules, sport organizations established special anti-doping regulations for the protection and punishment of doping offenses. As opposed to general disciplinary law, where univestent maximum standards usually apply, the disciplinary law of doping was detailed national rules to define the act of doping and the way in which it is to be punished. As such, the disciplinary law concerning doping resembles the arbitrary disciplinary rules that exist for common purposes, but it is also comprehensible to public purposes. What are disciplinary doping law, however, is to be mentioned are not aims to regulate the actual exercise of a profession, but are based on the ideological aspects which prevail in the environment where an activity is pursued. As disciplinary doping law, there are hardly any examples of professional, but rather of acts which undermine the image and ethos of the sport. This is an aspect which has to be considered in criminal law. Disciplinary doping law, which mainly aims to regulate relevant offenses and their prosecution and punishment, should therefore be organized along the same lines as criminal law and must utilize the same criteria to ensure the right to
counter the dangers of the collective. This is necessary as, in sport, the interests of the collective are often valued above those of the individual.

**PE40103 (Growth and Development)**

**Waggener, Wesley Robert.** *Validation and Application of a Noninvasive Prediction of Adult Height* (Ph.D., Michigan State University, 2007; John L. Haukelid-stick, chair), 2nd, 4016a.

Traditionally, methods for predicting adult height have been used for clinical purposes in the diagnosis and treatment of growth pathologies. In the field of biochemistry, there has been an increase in interest in predicting adult height of children. Likewise, there is some interest in noninvasive methods of predicting adult height, as in the Kneus-Radcliffe (K-R) method (J. Kneus and A. F. Radcliffe, "Predicting Adult Height without Using Skeletal Age," Pediatrics, 1998). The structure of the K-R method to predict height is its biological and statistical accuracy. Percentage of (predicted) adult height, a standardization indicator, has resulted favorable results in recent studies involving youth sports, but without valid data. The purpose of this study is to validate the K-R method of predicting adult height with a longitudinal data set of boys and girls. The K-R method is also examined in terms of rate of attainment. The second purpose of this study is to examine the accuracy of the K-R method in estimating biological maturity (predicted percentage of adult height). Sample of 205 boys and 277 girls had height predicted semi-annually from age 6 to 17 years. Accuracy of prediction was based on validation of estimation equation deviation (MAD) at each chronological and ANOVA of conditioned means for boys and girls revealed statistically significant differences for age of 30% (MAD) and 50% error bounds. A t-test of MAD for boys and girls, however, were within acceptable range of error. When boys and girls were separated into age, average, and age-matching groups, significant differences were reported for gender and maturation category. Average-matching boys and girls reported lower MAD within this time and age-matching boys and girls. Predicted adult height was used to calculate predicted percentage of adult height, with a corresponding score (PI). PI was used to assign boys and girls to early, average, and late-maturing categories. Frequencies of PI were compared to frequencies generated from scores calculated from the actual percentage of adult height. Chi-square analysis confirmed sample frequency distribution for most ages for boys and girls.

**PE40104 (Administration)**

**Whitman, George Samuel.** *An Examination of Medical Care for High School Athletes in South Carolina* (Ed.D., University of South Carolina, 2006; Ruth Samuels, chair), 2nd, 4016b.

Injuries resulting from participation in high school athletics are a well-documented problem. However, few studies have provided an empirical assessment of medical care provided, nor has it been strictly related to centers. The purpose of this research was to examine how high schools in South Carolina provide medical care to girls' athletes, and to identify factors associated with schools that provide high levels of care. All high schools in South Carolina were asked a survey based on an "Appropriate Medical Care for the Secondary School Athletes" co-operative statement and monograph (J. Alice, et al., 1994). A telephone interview was conducted to assess medical care provided by each school for its athletes. Use of a modified "Dietzian" approach yielded a 94% response rate. Univariate analysis found the percentage, employee, and number of certified athletic trainers (ATC), school size, public/private status, schools' sports medicine supplies and equipment, budget, and school setting, to be associated with level of medical care provided by a school. These for multiple comparisons identified several significant relationships. Schools with ATC's reported higher appropriate care (AC) scores than schools without ATC's, and schools with "well-trained" ATC's reported higher AC scores than those with certified ATC's. Schools with multiple ATC's reported higher AC scores than schools with one ATC. Public schools reported higher AC scores than private schools. Schools classified as AA scored higher than AA, IA, and South Carolina Independent School Interagency schools. Schools classified as IA were found to have lower AC scores than IA schools. Schools with budgets for sports medicine supplies and equipment greater than $50,000 scored higher than schools with budgets of $50,000 or less, and schools with budgets between $35,000 and $50,000 scored highest among those with budgets of $100,000 or less. Schools with scores scored higher than their county or state average schools, city schools scored higher.
than county schools. Multivariate analysis found significant associations between athletic training services and both the size of the school sports medicine budget for supplies and equipment and the medical care provided by high school athletic programs in South Carolina. Results provide guidance for improvement of medical care for high school athletes.
PH1845
Lee, Sangyoul. *Sesame Oil Increases Plasma y-Tocopherol and Melibonin y*.

Tocopherols Metabolism in Humans (M.S., Oregon State University, 2007) ; Maso G.

Trabesh, (chair), 3Mf, 176f.

In naphthalene-stained plasma y-tocopherol concentrations and inhibit y-tocopherol degradation to its metabolite y-carboxyphospholipoydroxymyelobionin y (CSEH). To test if sesame lignan consumption inhibits y-tocopherol metabolism in humans, subjects were assigned to control (n = 5) or sesame oil (n = 5) arms. Tocopherol and CSEH concentrations were followed for 72 h. Sesame lignan consumption significantly increased plasma y-tocopherol concentrations (p < 0.05). In men, sesame lignon increased plasma y-tocopherol levels after the curve (AUC; sesame oil: 343 ± 44, control: 289 ± 33 mg/L-h, p < 0.05) and reduced y-CSEH AUC (p < 0.00). In men, differences in urinary y-CSEH AUC did not reach statistical significance (AUCs for sesame oil: 35 ± 30 mg/L-g creatinine; vs. control: 30 ± 1.5). In women, sesame lignan consumption did not alter plasma metabolized CSEH concentrations, but reduced urinary y-CSEH excretion (AUC for sesame oil: 28 ± 45 mg/L-g creatinine; vs. control: 7.7 ± 2.0, p < 0.05). These data suggest that sesame lignan alters tocopherol metabolism differently in men and women. Further research is needed to measure the mechanism involved in these differences.

PH1846

To investigate the influence of a single bout of exercise on the serum concentration of C-reactive protein (CRP) in females over the age of 50 years, seven apparently healthy active females (mean age = 55 ± 3.5 years) volunteered to run on a treadmill for thirty minutes at moderate intensity, and to have samples of venous blood drawn at prescribed intervals during a control session and an exercise session. The reported outcome was a small, acute decrease in the serum concentration of CRP from a resting control baseline, in line with the long-term effects of such exercise. The variable measured was CRP. One 2 × 3 (control and exercise dose) factorial design ANOVA was computed for the dependent variable. No significant trends by sex interaction (p > 0.05) was found for CRP, and no significant main effects (p > 0.05) were found with regard to control or exercise. No evidence was found that a single bout of moderate-intensity exercise influenced the serum concentration of CRP in older women.

PH1847
Park, Kyung-Shin. *Exercise-Induced Muscle Damage and Immune Cell Apoptosis* (Ph.D., Purdue University, 2006) ; Darlene A. Stoddard, (chair), 3Mf, 176f.

To examine the effect of untrained and trained running on muscle damage, cytokines, and leukocyte apoptosis, and to assess four pro- and anti-apoptotic proteins, expressing the receptor-mediated or receptor-mediated death pathways, in order to provide insight into the mechanisms involved in exercise-induced apoptosis, twelve moderately trained subjects, aged 18 ± 4 weeks, performed three (forty-minute) treadmill exercises eliciting 75% V02max at a level running speed (L) and two downhill (15%-10%) running phases (DLF and DLF). Blood samples were taken pre-exercise (PBE) and immediately (PO30), 3h, 24h, and 48h following each test, and analyzed for creatine kinase (CK) activity, oxygen radical absorbance capacity (ORAC), anti-platelet-antigen protein (Bcl-2, Bax, iFib, and IL-1), and the
percentage of apoptotic leukocytes (apoptotic index: AI). CK activity peaked at 24 h following SEH, and was significantly higher in DH than in L and D (P < 0.01). CRAC was 24 h post in DH was significantly lower than pre-exercise, and lower than in L and D (P < 0.01). At 6 h post, leukocytes, lymphocytes, and neutrophils showed a similar pattern. AI was significantly elevated at POST and 2 h post in L and DH. In contrast, a significant decrease in AI was found up to 40 h post in the DH trial. Moreover, AI in DH compared to L and DH was significantly greater at 24 h and 48 h post for total leukocytes, lymphocytes, and neutrophils, as well as in total leukocytes measured by TUNEL assay and flow cytometry. Total leukocyte AI was significantly greater with morphological identification from whole blood, as compared to TUNEL assay from isolated leukocytes. Pre-apoptotic protein expression (Bac, p < 0.05) and Bac/Bcl-2 ratio (p < 0.05) were significantly decreased above PRE at 24 h following DH, when significant increases were measured in the markers of exercise-induced muscle damage and oxidative stress, as well as the amount of apoptotic leukocytes, lymphocytes, and neutrophils. Meanwhile, anti-apoptotic protein Bcl-2 was unchanged. Lactate-mediated anti-apoptotic protein (SOD-2 = 0.05) and FasL (p < 0.05) tended to increase following the trials. Bac/Bcl-2 ratio was significantly higher at 24 h post vs. PRE in DH, and compared to L at 24 h. Results of this study suggest that significant increases in leukocyte apoptosis can be induced by an exercise intensity < 70% VO2max. Moreover, increases in leukocyte apoptosis following acute exercise are consistent with changes in markers of oxidative stress and muscle damage.

PH1848

We tested the hypothesis that decreases in arterial oxyhemoglobin saturation could be related to elevations in circulating endothelin-1 following thirty minutes of exercise at ventilatory threshold. Eight recreationally trained males (mean ± SEM age 21.6 ± 1.57 yrs, height 183.2 ± 1.31 cm, mass 72.85 ± 2.02 kg) completed two maximal exercise tests (mean ± SEM normoxia [41.56 ± 2.06 mL·kg·min⁻¹, VO2max (%VO2 55.06 ± 1.10 mL·kg·min⁻¹], and two thirty-minute steady-state exercise protocols at the power achieved at threshold during maximal exercise normoxia (mean ± SEM power [55.06 ± 2.57 ± 15.69 W, 159 ± 16.7 ± 5.34 ± 15.4 W]). When participants exercised for thirty minutes at ventilatory threshold ingesting 14%H2O, a significant decrease in oxygen saturation (as measured by pulse oximetry) was observed, whereas cardiac output in normoxia (355 ± 1.17% [± vs. 94.52 ± 0.24% [± p < 0.05). This diminution was not accompanied by significant changes in plasma endothelin-1 (ET-1), nor endotoxin (ET-1). No other systemic and/or intracerebral (IC) factors were observed following exercise (R2, q = 4.74 p < 0.05), compared to no exercise values. These extracerebral variables were not different between normoxia and hypoxia. Plasma ET-1 and Bcl-1 levels did not differ significantly over time or across conditions (R2, q = 4.74 p < 0.05). Plasma ET-1 levels reached thirty minutes of systemic exercise at ventilatory threshold or increased to a level in normoxia-saturation.

PH1845
Jones, Franz. A Comparison of Neural Conduction Velocities between Active and Sedentary Adults with Type 2 Diabetes (M.S., Indiana University, 2006). Janet Wallace, chair, 11th, 10th.

To compare neural conduction velocities between active and sedentary adults with type 2 diabetes mellitus who did not exhibit peripheral neuropathy, it was hypothesized that active adults would exhibit faster conduction velocities and that there would be a positive correlation between neural conduction velocity and weekly energy expenditure. Nerve function, used by H-reflex (Hoffman's reflex) latency measurements of the lower limb, was first assessed in the sitting, leg, in the prone position, with three experimental conditions, rest, sitting, and post-exercise, conducted on twelve adults with type 2 diabetes mellitus (six active, six sedentary). Blood flow during exercise was recorded. Weekly energy expenditure in kcal was determined from a seven-day physical activity record. Although a significant difference was found in weekly energy expenditure, no significant
difference was found in proximal nerve e-motor fiber velocities between the two groups at any of the three experimental conditions; no significant correlation was found between weekly drug expeditious and nerve conduction velocity, and no significant difference was found in the change from resting to post-exercise skin blood flow between the two groups. There appears to be no relationship between physical activity and nerve conduction velocity in adults with type 2 diabetes who do not exhibit peripheral vasospasm and who exhibit similar blood flow at rest.

PH1850
Park, Sanjung. Blood Pressure Reduction following the Accumulation of Short Physical Activity Sessions versus a Continuous Physical Activity Session in Posthypertensive (pre-hypertensive) (Ph.D., Indiana University, 2006; Janet P. Wallace, chair, June 30, 2006).

Despite limited research, accumulation of physical activity has been recommended for treatment of pre-hypertension. The purpose of this study was to compare the duration and magnitude of blood pressure (BP) reduction following accumulation of physical activity (PAaccum) with a single continuous physical activity session (PAcont). To investigate BP responses during post-exercise short sessions within the PAaccum and (3) to investigate sympathetic modulation (SIM) as a possible mechanism for BP reduction in pre-hypertension. Participants included: 1) BP monitoring, 2) morning graded exercise test, (3) treatments PAaccum, 4. 8 x 15 min walk at 50% VO2peak; PAcont 40 min walk at 50% VO2peak, and control, and (4) 12 h ambulatory BP, and SIM measurements via heart rate variability. In this randomized within-subjects design, twenty pre-hypertensive completed the study. 'Systolic BP (SBP) was reduced -5.6 ± 1.7 mmHg for 3 h following PAaccum and -5.6 ± 1.6 mmHg for 7 h following PAaccum. Diastolic BP (DBP) was reduced -5.3 ± 1.3 mmHg for 10 h following PAaccum and -3.1 ± 1.5 mmHg for 7 h following PAaccum. In PAcont, the change in SBP was correlated with both SBP and DBP reduction. In PAaccum, the change in SBP was correlated with DBP reduction. SIM was decreased following the short sessions within the PAaccum compared to the baseline. No significance was found in either DBP or SBP during the rest periods between short sessions. The accumulation of PA appears to be more effective than a continuous session in the amelioration of pre-hypertension. There is an additive effect of successive short sessions within the accumulation of physical activity, on blood pressure reduction. SIM was associated with SBP reduction following each PA accum.}

PH1851
Tecklenburg, Sandra. Effects of Ascorbic Acid Supplementation on the Severity of Exercise-Induced Arthromas (M.S., Indiana University, 2005; Timothy D. McIlhag, chair, June 20, 2005).

To determine the effects of ascorbic acid (maucus C) supplementation on the severity of exercise-induced arthromas (EIA), eight subjects with EIA participated in a randomized, placebo-controlled, double-blind crossover trial. Subjects entered the study on their normal diet and were placed on either two weeks of ascorbic acid supplementation (2000 mg/day) or placebo, followed by a one-week washout period, before entering into the alternate diet. Pre- and post-exercise patellar tendon was assessed at the conclusion of each period. Urine samples were collected pre- and post-exercise and assayed for the presence of cysteine leukotrienes (LT, C3-A Gs, and LT, B4) and LT, C5-B, which have been implicated in EIA. Urine was sampled for hydrogen peroxide (H2O2) as a marker of oxidative stress. Diet was evaluated through twenty-four-hour dietary recall. Post-exercise blood citric acid (PAH) was measured at as an indicator of exercise intensity. Ascorbic acid supplementation significantly reduced (p < 0.05) the mean maximum full in post-exercise tissue oxygenation relative to one second (FFS): 4.4 ± 2.84% compared to normal diet (4.3 ± 1.6%) and to placebo (12.9 ± 2.4%). Post-exercise PAH was reduced on ascorbic acid supplementation (29.8 ± 7.5 [baseline]) compared to normal diet (46.4 ± 14.5 [baseline]) and to placebo (54.1 ± 7.8 [baseline]). Ascorbic acid supplementation also reduced significant markers (p < 0.05) in LT, C3-A Gs, ascorbic acid supplementation (5.3 ± 1.7 mg/dl of creatinine) compared to normal diet (13.0 ± 4.0 mg/dl of creatinine) and to placebo (11.3 ± 5.1 mg/dl of creatinine). Similarly, 9a, 11B-PGF2α was significantly reduced on ascorbic acid supplementation (8.5 ± 1.0 mg/dl of creatinine) compared to normal diet (9.6 ± 1.2 mg/dl of creatinine).
normal diet (210 ± 4.5 mg/nmol/contactor) and to placebo (151 ± 1.8 mg/nmol). Significant reductions (p < 0.05) in Hcy were observed in cotinine and ascorbate diets (3.6 ± 1.5 mmol/L) compared to placebo (236 ± 5.1 mmol/L) and to normal diet (124 ± 2.9 mmol/L). Data indicate that high dose nicotine and supplementation reduce the severity of ELL.

PH1602
Julliart, Jane Marie. Exercise, Nutrition, and Homocysteine (Ph.D., Oregon State University, 2007; Melinda M. Manore, chair). 294x, 14K.
Exercise increases B-vitamins (B6, B12, folate) adipogenesis metabolic reactions, especially those related to energy production and the rebuilding and repair of muscle tissue. These same B-vitamins are also important in maintaining low blood levels of homocysteine (Hcy), a cardiovascular disease (CVD) risk factor. Hcy levels are when metabolism of the essential amino acid, methionine, increases, a process that requires vitamins B6, B12, and folate. Finally, high-intensity exercise can increase homocysteine concentrations, which can result in elevated Hcy production, particularly if consuming B-vitamins levels are low. Although exercise is a positive modulator of CVD risk, exercise may increase Hcy production and subsequently increase B-vitamins needs, particularly if the exercise intensity is vigorous. Research examining the effect of exercise on Hcy is limited, with no studies carefully controlling for factors that affect Hcy metabolism (e.g., B-vitamins) to determine if Hcy is higher in active than in sedentary individuals. Lack of such knowledge limits our ability to make appropriate dietary recommendations for active individuals. Research on this area is essential due to a variety of study design and inadequate control of confounding variables. Furthermore, there is much discussion on the B-vitamins/exercise literature about whether increasing the need for the B-vitamins, but, as the present, the data are limited. Therefore, the primary purpose of this research was to examine the effect of physical activity (PA) level-high PA (> 420 min/wk, Low PA < 420 min/wk) on baseline Hcy concentrations, independent of B-vitamin intake, in non-supplemented young active and sedentary men and women (N = 70). A brief summary (chapter one) reviews the most recent publications (2009-2017) examining these relationships, research questions, hypothesis, and outcome variables. Next, an extensive review (chapter two) of Hcy metabolism, blood Hcy as a cardiovascular disease risk factor, and previous publications (1999-2007) on PA and Hcy follow. Finally, chapter three describes the study details, including the research questions. Results from the cross-sectional study found no significant differences in blood Hcy concentrations after controlling for plasma B-vitamin levels between high PA (7.5 ± 1.6 mmol/L) and low PA (7.7 ± 1.6 mmol/L) groups in young (26 ± 5 yr) non-supplemented men (N = 38) and women (N = 38), whereas PA was not associated with Hcy (< 7 mmol/L, > 12.5 mmol/L).


PSY2410
Clement, Tiffany A. 
Influences of the Everyday’s Different Program on the Body Image of Adolescent Girls (Ph.D., Springfield College, 2006; Tracey D. Foggarty, chair), 46th, 388b.
A concurrent mixed-method research design was employed in an after-school program with twenty-four adolescent girls to examine how the “Everyday’s Different” program (ED, T. A. O’Don and S. Abraham, *International Journal of Eating Disorders*, 2006) influenced body image. The following quantitative dependent measures were used: body image scales of the “Self-Image Questionnaire for Young Adolescents” (A. C. Perersen et al., *Journal of Adolescence*, 1986), the “Self-Perception Profile for Adolescence” (D. P. Flaster, Manual for the Self-Perception Profile for Adolescents, 1980), the “Eating Disorder Inventory” (D. M. Garner, M. P. Olmsted, and J. Polivy, *International Journal of Eating Disorders*, 1983), the “Demographics, Food Habit, and Body Image Questionnaire” (O’Don, Abraham, and R. Heisel, *Australian Journal of Nutrition and Dietetics*, 1996), and an ad-hoc figure rating scale. Qualitative methods employed included focus groups, field notes, video analysis, and document analysis. Incongruence was found to be significantly different among time and group. Pre-program mean scores were higher for group 2 as compared to group 1, t = 4.50, p = .00. At mid-program and post-program, GI had higher mean scores than G2, t = 2.73, p = .01, and t = 4.57, p = .00, respectively. Exploration of the effectiveness of the ED program in modifying the body image of adolescents through qualitative methods resulted in the following themes: (a) figures to body image, (b) body image enhancement, (c) participation characteristics, and (d) the influence of the ED program on the body image of adolescents. Medication evidence was found to support the use of the ED program to enhance the body image of adolescent girls.

PSY2411
LeMaire, Julie. *The Effect of Uniform Color on Athletes’ Readiness for Competition and Perceptions of Opponents’ Aggressiveness* (M.S., University of North Dakota, 2007; Sandra Short, chair), 41st, 426b.
120 university-level softball players from NCAA Divisions I and II were given a packet containing a waiver and picture of an upcoming opponent. The pictures were digitally manipulated, offering only a uniform base color (i.e., black, navy blue, red, royal blue, yellow, and khaki green). Participants made ratings relative to the perceptions they formed of the team and how they would feel if they were competing against them. Data were first screened for differences on dependent variables, according to playing position, varsity/freshman division, and actual uniform color worn by the participants. For perceptions of the opponents’ confidence, winning/losing team was significant and subsequent *a*’s were shown significant main effects for the variable and for uniform color. Participants on losing teams rated the athletes’ and the team’s confidence higher than did participants on winning teams, and the team shown in red was rated significantly higher in confidence compared to those in royal blue and yellow. Related to these perceptions the participants formed of the teams, the team wearing the yellow uniform was most associated with the most negative attributes (results were significant for non aggressive part). The black-uniformed was used the “innocent,” while the red-uniformed was the “stronger.”* For how the athletes would feel if they were competing against the team in the past, whether they went on a winning or losing team was significant, so it was included in the winning/losing team by 6 (uniform color) MANOVA. Only the main effect for winning/losing was significant, showing that, if they were playing this team, athletes from winning teams would feel less intimidated, competitive, and focused than athletes on losing teams. The colors of uniforms affect athletes’ perceptions of opponents, uniform color and athletes’ win/loss experiences (i.e., winning/losing) both affect athletes’ perceptions of opponents’ confidence and athletes’ experiences more strongly affect their feelings relative to upcoming competitions.*
The dichotic digits task and the open performance approach were used to explore expertise in expert performers in four related studies. Study 1 used questionnaires focused on dichotic practice training activities. Findings showed that word-decade-level scores reflect experts early in relative training activities, with an emphasis on physical practice, the virtual exclusion of psychological-cognitive training. Similar to studies with athletes, accuracy levels high in clinets were not always needed high in performance. Study 2 combined three-dimensional experience and practice data with performance on video-based laboratory tasks. Findings indicate that part of the skills involved acquisition of movements, but not necessarily numeric strategy, decision making. Studies 3 and 4 assessed the speed of basketball, with more detailed analysis of video-based laboratory tasks. Study 5 focused on his relative skill, in video-based instruction, decision-making tasks, may be influenced by factors of the video display (e.g., speed and camera angle) and the inclusion of secondary video-processing tasks. The visual processing style used to interpret and classify video clips across view also is an extract with expertise levels. Finally, study 4 included the three-choice game, as well as their sequencing relative to the video clips contained within, each to be examined three times when creating, tailoring, and training tools. As one of the few case studies carried out, this work highlights a number of areas for future research.

PSY2412 (Motor Learning and Control)

Guan, Yongwen. Fractionated Reaction Time using the Psychological Refraction Period Paradigm (Ph.D. Indiana University, 2001; David D. Koepp, chair), unst. 273:

The purpose of this study was to identify possible neurocognitive, as well as cognitive, factors in the Product Refraction Process (PRP) model by using the reaction time fractionation technique with electromyography, introduced by F. D. West (Journal of Cognition, 1992). Findings from this study can also serve as a protocol and basis for reference for further study in the PRP paradigm, where different factor movements are unseparated. As the main focus in cognitive and neural function, the PRP paradigm can explain the attention and cognitive processing differences in the PRP paradigm. Two experiments were administered. Twenty male and twenty female right-handed respondents (age, gender, and PRP paradigm) participated. Fractionated reaction time tasks were measured under both single- and dual-task conditions using single- and double-digit mental-rotation tasks across four consecutive days. Dependent variables included reaction time, percent error time (PMT), and mean reaction time (MRT). Different response tasks (single and double) were used for the first and second reaction time tasks, using the PRP paradigm with stimulus presentation frequency (SOFs) of 50, 100, 200, 400, and 500 milliseconds. Analysis of variance and planned comparisons (using Bonferroni adjustment) were used to test for effects of practice (learning), task difficulty, SOA, hand, and gender, as well as for all known effects. Practice can reduce the PRP effect. The PRP effect is attenuated by task difficulty, and PMT and MRT do not necessarily change in the same pattern. Hard movement coordination affects the PRP effect's height followed by a right-hand choice reaction time task has a stronger PRP effect than no versus. The latter PRP effect was observed both for male and for female participants, although male demonstrated a faster reaction time choice reaction time than their female counterparts. FMT and MT both contribute to the PRP effect. Evidence of MT PRP profiles observed in favor dual-task conditions supports the existence of a response initiation bottleneck. Neurocognitive as well as cognitive factors contribute to the extent of delay of the second sequence in the PRP paradigm.
In a recent issue of Science, M. T. T. and R. Ellis have proposed that objects automatically prime components of the potential actions they signify. "On the Relations between Object and Components of Potential Actions," journal of Experimental Psychology: Human Perception and Performance, 19, 1991, "The Potential of Grap-Typet during Visual Object Categorization," Visual Cognition, 2001. They have shown, however, that perhaps some form of cognitive coding or attentional mechanisms may be responsible for the orientation effect. The primary purpose of the experiments reported here was to further examine this orientation effect and to investigate whether attention is captured by action-relevant properties of objects. As a means of investigating whether attention was indeed directed to an action-relevant feature, we examined eye movement behavior during perception. In experiments 1, we sought to perform a conceptual replication of the original Tucker and Ellis experiment (1991) and to attempt to replicate the orientation effect. Thus, participants made speeded judgments of the vertical orientation of a common household object that was measured as varying vertical and horizontal orientations. Results revealed an absence of eye movement, suggesting that attention may not be covertly captured by the action-relevant property (the handle) of the object presented. In addition, our reaction time (RT) results did not reveal an interaction between horizontal orientation and responses. In experiment 2, we asked participants to judge the horizontal orientation of the vertical orientation of the presented object, in order to elicit the orientation effect when horizontal orientation was actually relevant to the task. The pattern of eye movements replicated each of that found in experiment 1. In contrast to the RT results of experiment 1, there was a trend toward an orientation effect such that participants responded more quickly when the horizontal orientation overlapped with the response set. Taken together, the results of experiments 1 and 2 suggest a potential influence for orientation and the relevant stimulus dimension for task performance. In experiment 3, we examined the influence of objects' action-relevant features by varying the relevant stimulus dimension and stimulus-response mapping instruction. When horizontal orientation was the relevant dimension to identify, handle orientation had an influence on the response hand, but not when vertical orientation was the relevant dimension. This would suggest that RT was unaffected by orientation of the object during the task-unrelated dimension.
PSY2416
Hafferty, James Donald. The Effect of Stress and Focus of Attention on Golf-Putting Performance in Novices: An Examination of Sensomotor Breakdown under Pressure (M.S., Indiana University, 2006; John B. Shea, chair), Ithb, 46th.

Although multiple mechanisms have been examined and recognized in combination to performance decrements under pressure, the literature concerning a player's focus of attention is still incomplete. Coaches, for example, offer either "think about it," to have the "back-to-the-basics" approach of focus on your mechanics to athletes who are in a slump or under pressure. To investigate the effect that focus of attention has on the complex neuromuscular task of golf putting in novices, when exposed to a high-pressure situation, thirty-two participants, novices to golf (twenty-three females and nine males, age 21.32 ± 0.53 years) were randomly assigned to one of four experimental groups: self-focus no-moves, self-focus moves, mechanics-focus no-moves, or mechanics-focus moves. The manipulation of "self-focus" and "motor enmechanics" attention approaches were examined. The athletes' objective was to put a golf ball, as accurately as possible, from five different locations, ranging 3.15ms from the target. Participants all completed a 180-stroke practice condition, and a two-par putt-test. The practice condition consisted of four blocks of twenty-five trials. The last two parts of the first and the final practice block were measured and recorded. Stress for the post-test condition was obtained by use of a sound contingency. Those in the self-focus group were told they would be video-taped, whereas those in the no-focus group would be examined the footage. Participants in the mechanics-focused group were given a detailed list of putting guidelines to follow as closely as possible during their putting. Only trials 15-25 of block 1 and 4, and all trials of the post-test, were included in the analysis. A two-way 4 (groups) x 3 (trial blocks) ANOVA was used for analysis, with repeated measures on the second factor. Any significant interaction were assessed, with post-hoc analyses being tested using Tukey's HSD with an alpha level of p < 0.05. Significant main effects were found for trial blocks across groups (F(3, 114) = 15.76, p < 0.001). A significant group by trial block interaction was found as a result of the post-test conditions (F(3, 114) = 3.52, p = 0.028). Explicit knowledge retained by the two differing attention groups was significant, shown by an independent T-test (t = -3.6127, p = 0.001). The primary questions of mental stress and focus of attention on performance is still unclear. The stress in the current experiment was not strong enough to affect a response from the majority of participants. It is still unknown if performance pressure can be alleviated by specific training. As expected, all participants' performance improved with practice.

PSY2417 Motor Learning and Control
Parry, Thomas Edward. An Examination of Task Switching Cost in Simple Motor Tasks (M.S., Indiana University, 2006; John B. Shea, chair), Ithb, 70th.

Task switching has been an embedded feature of experimental protocols used to investigate cognitive, interference and reaction time paradigms in the past twenty years. To date, however, there has been little attention devoted to discovering the fundamental differences in motor performance between repeated and alternating task performance. To evaluate the switch cost associated with three different groups, repeated, alternating, and random, in simple motor tasks, thirty-two right-handed subjects (fifteen males and eighteen females, aged 21.34 ± 2.27 years) were randomly assigned to one of three experimental groups: repeated (REP), alternating (ALT), or random (RAN). Each group performed a total of thirty trials of Task A, with the ALT and RAN groups performing Task A in conjunction with Task B, a scaling arm-exertion task. Subjects were tested in front of a Pentium-class computer interfaced with a standard key-tboard and color monitor. A customized computer program, written with Turbo C V1.1, controlled all experimental procedures. Target (Task A) and non-target (Task B) trials were presented on the numeric keypad. Specific key pairs which were to be used during the experiment. Trials were split into blocks of eighteen tests (REP = 2 trial blocks, ALT and RAN = 4 trial blocks) with a thirty-second break between blocks. Dependent measures were reaction time (RT), movement time (MT), and total time (TT), in milliseconds. Only trials 10-18 and 27-36 of Task A were included in the analysis, totaling six trial blocks of three trials. A two-way 3 (groups) x 4 (trial block)
1984 hot design ANOVA was used for analysis, with repeated measures on the second factor. Any significant interactions were analyzed using Bonferroni adjustment, with pairwise analyses being carried out using Tukey's HSD with an alpha level of p < 0.05. Significant main effects were found for Group in KT (p < 0.001), TTP (p = 0.001), and TTPS (p = 0.001), but not in Golden (p = 0.01). MRT and TT. Significant Group x Trial Block interactions were observed in TTP (p = 0.001) and TTPS (p = 0.001), but not in Golden (p = 0.01). Further analysis revealed differences in MRT and TT using only practice (with blocks 1 and 2) but not for the other conditions. Results demonstrate similar findings to the verbal memory, showing a significant difference between KEP and KAN schedules using a manual task. Differences in RT support an investigation in a current source for the switch cost; however, the lowered difference between KEP and ALT groups indicates that, with a manual task, elements of the present may be more programmed in prior to switch time, due to the predictable order in the ALT group.

PSY2418
Seamark, J. L. Identifying the Stress Process of Athletic Training Students as They Progress through Their Clinical Education (M.S., Purdue University, 2006; Larry L. Leverenz, chair). 63m, 53r.

The study addressed the level of stress and hardness in athletic training (AT) students, compared to non-AT students, and evaluated if it related to number of years in college. Research questions were: (1) Are AT students more stressed than the general student population? (2) Is there a relationship between the level of stress and the hardness scores of AT students? What are the levels of hardness in the AT students, based on number of years in college? What are the stress levels of AT students, based on number of years in college? Five Indiana universities with AT programs accredited by the Commission on Accreditation of Allied Health Education Programs participated in the study. The AT program director administered the survey to the two sample groups. One hundred AT students and sixty-three non-AT students completed the survey, including a demographic questionnaire, a personal stress survey, and a quick stress questionnaire. Results showed no significant differences in stress levels between AT students and non-AT students. Level of stress in AT students had no relationship to number of years in school. However, commitment scores from the hardness questionnaire showed AT students significantly more committed than non-AT students. In addition, AT students' level of commitment significantly decreased at the end of the completed year in college compared. Further research should focus on interventions addressing the decrease in commitment in more experienced students; researchers should complete longitudinal studies on the stress levels throughout their clinical education, and develop interventions that enhance the unique stress of AT education.

PSY2419
Tibbs, Catherine Nolte. The Mediating Effect of Athletic Identity on the Relationship between Perceived Signs and Identity Development in Late Adolescents and Young Adults with Disabilities (M.S., Indiana University, 2006; Bryan McCormick, chair). 64m, 48r.

The research examined athletic identity as a mediator between perceived signs and identity achievement in late adolescents with disabilities. An examination for evidence-based practice becomes of greater importance both for the research and to increased growth of the field of therapeutic recreation. Research documenting identity gained from adaptive sport participation are of significant value. The research provides both theoretical and practical contributions to the academic community, as well as to the therapeutic recreation profession. The study was conducted using mail-out surveys. Identity achievement was measured with the Revised Expanded Version of the Objective Measure of Athletic Identity Status: An Identity Inventory for Use with Late Adolescents,” developed by L. C. Beavers and G. R. Adams (Journal of Athletic Recreation, 1986), and athletic identity was measured using R.W. Beren's, J.L. Van Raaij, and D.L. Under's "Athletic Identity: Herman’s Measure or Adapted Hough’s (International Journal of Sports Psychology, 1995). Data analysis was based on a sample of thirty-one, the total number of usable questionnaires completed during the study. Inferential analysis included regression and correlation analyses. The relationship between perceived signs and identity achievement does not appear to be mediated by athletic identity. Athletic identity does not appear to be associated with either
perceived stigma is identity achievement. A statistically significant relationship was found between perceived stigma and identity achievement. Methodological and sampling concerns were raised in the analysis of these data. "Sample size was very small, causing confidence intervals to be relatively low power. Many subjects reported having cognitive as well as physical disabilities, which raises concerns about identity formation. The prevalence determined a low level of athletic identity and adaptive sport participation, showing a minimal range.

PSY2420
Bruchelow, Manusula C. Testing the ZOOF [Individualized Zones of Optimal Functionalization] dimensionality model in a Team Sport (M.A., Brock University, 2006)
Phillip Sullivan, chair), 2nd, 1476.
Athletes are continually searching for ways to optimize their performance. One of the primary reasons of accomplishing this goal is by assessing what has been termed optimal annual levels. Numerous speculation have been put forth concerning the relationship between optimal annual and sport performance. Despite this, the relationship still remains clouded. The purpose of this study is to address the lack of research conducted using the dimensionality dimensions with the Individualized Zones of Optimal Functionalization (ZOOF) model in sports. Numerous psychometric issues were followed across one complete season. Athletes completed the Dimensional Identification of the Competitive Sport Anxiety Inventory (CSI) 1986, and that their performance was actively rated by the coaching staff after each game. Further analysis was conducted on an attempt to test the criteria for testing the ZOOF model in sport. Upon completion of inter-individual analysis, no significant findings were reported for performance when inside or outside of optimal zone, or for interpretation when inside or outside of optimal zone. Data were further analyzed onto individually. Each athlete presented with differing results; support, partial support, and no support for the ZOOF model were noted. Many limitations were noted with validity of the ZOOF model to be used in team sport.

PSY2421 (Social Psychology)
Claffin, William G. Therapy through Athletics: An Intervention Program (Psy.D., University of St. Thomas, 2006; Burton F. Nolan, chair), 2nd, 1675.
Institutionalization (i.e. schools, psychiatric hospitals, or residential facilities) has been the most widely used form of psychological intervention for children and adolescents with severe behavioral problems. Psychotropic medications, educational programs, and psychotherapeutic techniques have been the primary methods used to foster change in children and adolescents. These methods often focus on the individual, with the goal of preparing him or her to function adequately upon returning to an environment from which he or she came. Placing children and adolescents into institutionalized environments in order help them become better adjusted to their natural surroundings may be considered. The greatest benefit to children and adolescents with severe behavioral problems may be to assist them while they are in the most normal environment possible. Five programs are reviewed that use youth and adolescent participation in an organized activity as a therapeutic intervention. These programs include effective group training, Sports United to Prevent Education and Recreation, Gaining for the Goal, Buckle On Your Running Program, and wilderness therapy. A critical review of the literature identifies potential limitations and implications of the programs. This project proposes a comprehensive program of athletic participation as a therapeutic intervention for youth and their families.

PSY2422 (Motor Learning and Control)
This paper examines the physical and mental similarities between playing sports and playing a string instrument, showing how two areas that seem far apart opposites are actually similar in a number of ways. The following elements are examined: balance and posture, movement, and the mental aspects. The paper shows that musicians and athletes both must have proper posture and good balance in order
to perform at their best and avoid injury. Strong players and athletes share many different movements in common, and, much as string players and in abilities, creating needed power requires whole body movement to become involved. Learning to deal effectively with the related normal challenges of string playing- and sports can make musicians and athletes better performers. By teaching athletes in the way they need, cause, and think, strong players can improve their technique and open themselves to a new field of learning.

PSY2423

The study sought to understand why sport influences meaningful changes in perceptions of quality of life for one woman with a spinal cord injury. Research suggests the sport participation increases people's physiological indices of health, making them live longer to a variety of diseases, stronger, and therefore better able to participate in a variety of life experiences. Previous research has also focused on the social impact of sport, and the ways sport brings people together. Quality-of-life research measures to individual's subjective perception of life satisfaction and improvement, as influenced by responses to environmental constituents. The research explored, through narrative inquiry, an individual's reflection of all the chapters of her life, the major events of those chapters, and the impact for each chapter to end and a new one begin. Through exploration, the research sought to discover how this woman, whose life appears currently to be full of successes, both in education and in employment, and she feels with many close relationships and supportive family, found sport to be a significant turning point in her understanding of self and her feelings of earned self-identification and empowerment. Data were collected using multiple interviews, observations, and field notes to analyze themes of her stories and to uncover embodied qualitative meanings in her life prior to, and following, her introduction to sport. By engaging in the multiple chapters of her related life, this research explored the narrative through the world of the participant, through shared meanings discovered by the researcher and the participant, and through data discoveries made by viewing her narrative through the lens of previous research.

PSY2424 (Social Psychology)

Self-presentation is the process by which individuals attempt to monitor and control how others perceive and evaluate them. Self-presenational concerns have been shown to influence a number of exercise-related behaviors, cognitions, and affective responses to exercise (e.g., social anxiety). Exercise anxiety occurs when individuals worry about a specific impression on others, not to worry if the or will be successful. Social physique anxiety (SPA) is a specific form of social anxiety related to the evaluation of one's body. Social anxiety and SPA may both act as barriers to exercise, so it important to examine factors that may influence them. One such factor is self-presentation anxiety (SPA). SPA can occur as successfully meeting desired impressions on others and have been associated with social anxiety and SPA. Several aspects of exercise environment, such as the presence of mirrors, clothing, and characteristics of the exercise leader or other participants, may be manipulated to influence self-presenational concerns. Given that the exercise leader has been recognized as one of the most important influences in the exercise environment, it is important to further examine how the leader may affect self-presenational concerns. The present study examined the impact of the exercise leader's gender and physique salience (i.e., how much the body was emphasized) on social anxiety (SPA), and social physique anxiety (SPA) of women in a group exercise class. Eighteen college-aged female non- or infrequent exercisers (recorded two or fewer times per week) participated in a group exercise class led by one of four leaders: a female whose physique was slender; a female whose physique was big; a male whose physique was slender; a male whose physique was big. Participants completed measures of SPA, SSA, and SPA-L prior to and following completion of a thirty-minute group exercise class. A measure of social comparison to the exercise
Lemola, Kathy. The Positive and Negative Impact of Organized Sports on an Adolescent (M.A., Pacific Oaks College (Pasadena, CA), 2006; Masaka Pukula, chair), 2nd, 1036.

The purpose of this study was to explore the positive and negative impact that organized sports has on adolescents' identity development. Results were used to construct a parenting handbook, designed to assist in raising a positive son/daughter from their child's participation. To successfully elicit this impact and to compile a useful handbook for parents, I designed three questionnaires, one for current female adolescent athletes, one for former athletes who are out of college age, and see their subject's parents. The athletes' questionnaire was given to athletes who were part of a team. The survey of respondents ranged from "true" to those who had very little game time. The questionnaire was constructed to address the following: what adolescents need from a sports program in order to gain a positive impact on their identity formation; what young athletes were from team sports that the quality of programs find the most beneficial in a coach; the level of support young athletes want from their parents, and their parents' views regarding discrimination in sports, the impact sports participation has on family life, and what parents can do to make their children's participation in sports a beneficial experience.

Manning, Craig. Attentional Control across Performance Levels in Tennis Players (Ph.D., University of Utah, 2007; Keith Henschen, chair), 2nd, 1060.

To ascertain whether differences in attentional control exist across varying skill levels in tennis, and whether a cognitive-behavioral intervention (imagery) would improve attentional control (scan + focus) over a three-week period, it was hypothesized that higher skill level tennis players would demonstrate greater attentional control, meaning they would score higher in scan ability and lower in focus ability, than less skilled individuals. Scanning demonstrates an individual's ability to attend to environmental cues that are relevant. Focusing indicates an individual's ability to attend to environmental cues that are irrelevant. A second hypothesis addressed whether attentional control (scan + focus) could be enhanced through the use of imagery. A third hypothesis addressed whether differences existed in the amount of improvement of attentional control across the three skill levels. Hypothesis one and two were found to show significant differences. Hypothesis three was found to be only partially significant. Data indicated that higher-skilled tennis players do show greater attentional control (scan + focus) than less skilled tennis players prior to imagery intervention. However, no significant difference was found between the intermediate and advanced groups of tennis players. Data also indicated that an effective treatment of imagery sessions appear to prevent that imagery could enhance attentional control (scan + focus)
focus) in tennis players across all three skill levels over a three-week period. The interaction effect was not significant. However, beginner, intermediate, and advanced groups who received intervention improved more in attentional control than the control groups who only continued to practice almost 150% for beginners, 95% for intermediates, and 68% for advanced. This effect was not statistically significant, but it suggests that a cognitive-behavioral intervention may be able to accelerate the development of attentional control over just physically practicing. Although the significance of the study is very encouraging, the amount of variation accounted from the scales being measured over the three periods of the intervention was low.

PSY2427 (Socia-Psychology)
The purpose of this study was to evaluate current attitudes toward the practice of fair play in elite rowing and cycling. A survey of the practices of the United States Olympic Committee, United States Rowing Association, and United States of America Cycling, as well as in-depth interviews, were conducted with four elite athletes, to determine the ethical standards and conduct of national governing bodies and elite athletes toward the concept of fair play in these sports. Research indicates that fair play provides for the pursuit of excellence in sport. If the pursuit of excellence in sport is the primary motivation for participation in elite athletics, fair play establishes a baseline for the measurement of sport and the genuine testing of the individual against competition.

PSY2428
Tiuney, Sonia C. An Assessment of Gender, Sport, and Classification of Student-Athletes on Life-Stress (Ph.D., Texas Woman's University, 2006; Kirstin Wignaton, chair), 1st ed., 698.
The present study examined the effects of gender, type of sport that student-athletes participate in, and classification of student-athletes on life-stress scores at a small, private Division II institution in the southeast part of the United States. Research has indicated that there is an increase in stress among student-athletes on college campuses. Findings from previous research indicate that female athletes experience more stress than males. The study found a significant difference among the effects of gender of student-athletes on life-stress. Support was not found for a difference between the type of sport and the classification of student-athletes and total life-stress scores. However, sophomores and freshmen had a higher total life-stress score than juniors and seniors, which is in agreement with research conducted by R. Marx and M. McGehee (American Journal of Health Studies, 2005).

PSY2429 (Social Psychology)
The purpose of the meta-analytic investigation was to review empirical evidence specific to effect of physical activity context on social physique anxiety (SPA). English language studies were located from computer and manual literature searches. A total of 166 initial studies were coded. Studies presented at least one empirical effect for SPA between physical-activity participants (i.e., athletes or exercisers) and non-physical-activity participants. The final sample included 17 studies, yielding fourteen effect sizes (ESs), with a total sample size of 2,846. Studies were coded for mean SPA between physical-activity participants and non-physical-activity participants. Moderator variables related to demographics and study characteristics were also coded. Statistical artifacts were corrected using J. E. Hunter's and F. L. Schmidt's protocol (Methods of Meta-Analysis: Correcting Error and Bias in Research Findings, 2nd ed., 2006). Practically speaking, those who were physically active reported lower levels of SPA than the comparison group (d = -1.2, ES = 22). Consideration of the magnitude of the ES, the ES, and the confidence interval, suggests that this effect is not statistically significant. While most modern analysts reemphasized these trends, some differences were worth noting. Previous research has identified SPA
to be especially tense for females, compared to males; however, in the current investigation, the magnitude of the SE's comparing physical activity participation to the comparison group was smaller ($d_{males} = .34$ for females and $d_{males} = .33$ for males). Also, the type of physical activity was investigated, and results showed that seniors reported lower levels of SPA than the comparison group ($d_{males} = .19$, $SD_{males} = .06$), whereas seniors reported higher levels of SPA than the comparison group ($d_{males} = .19$, $SD_{males} = .22$). Results demonstrate support for the dispositional nature of SPA. Consideration of practical significance suggests that those who are involved in physical activity may experience slightly lower levels of SPA than those not reports a physical activity participation. Results potentially offer support for bi-directionality of the relationship between physical activity and SPA, however, a causality may not be inferred. More information about the type of physical activity (i.e., frequency/nature of exercise behavior, sport classification/bias of athletes) may help clarify the role of physical activity contexts on SPA.
Recreation and Leisure

RC506
Ballard, Andy. Collective Meanings of an Outdoor Leadership Program Experience (M.S., Indiana University, 2006; Alan Everett, chair), 142, 385.

The purpose of the qualitative study was to describe the perceptions and meanings of the lived experiences of participants in the Conservation and Outdoor Recreation/LifeSkills (CORE) program at Indiana University. Methodology was guided by a phenomenological understanding, and involved the collection and analysis of in-depth phenomenological interviews as the primary data set, with ongoing inductive analysis of supplementary source documents and visuals in the form of participant photographs. Ten interviews were conducted. Context for sampling included: (a) participants be graduates of the CORE program; (b) participants have an interest in helping to understand and describe the meanings ascribed from their outdoor leadership development experiences; and (c) participants represent a variety of perspectives, including a maximum diversity of backgrounds. Data triangulation was achieved through constant comparison of core documents, visuals, and individual interview data sets. Throughout the process of data analysis, significant themes were taken to issue responses. Participants often identified the shortcomings that were noticed in the outdoor leadership experience as a result of developing relationships. These relationships may be categorized as interpersonal, environmental, or environmental.

RC500
Cecil, Amanda K. The Role of Small Tourism Businesses in Urban Tourism Development: A Case Study of Indianapolis (Ph.D., Indiana University, 2006; Craig Richey, chair), 32, 376.

This study investigated dimensions of small tourism businesses to explore if these characteristics predict support of tourism development in Indianapolis, Indiana. Based on review of literature, a number of variables were identified. A proposed model was developed and small tourism businesses were measured in terms of type of business activity, type of ownership, motivation of ownership, financial success, projected growth, geographical location, consumer base, and level of community involvement. A survey was developed and administered to businesses located in one of the six Indianapolis cultural districts (Broad Ripple Village, White River, Fountain Square/Southeast Neighborhoods, Downtown Canal, Mass Avenue, and Indiana Avenue Cultural District). A small tourism business was defined as a business with fewer than forty full-time employees, very small market share, annual revenue less than $250,000, limited infrastructure and assets, and was categorized as one of the following establishments: (a) art galleries or studios, (b) restaurants, (c) historic attractions, (d) museums, (e) performing/visual arts, (f) unique gift shops, and (g) accommodations. 152 surveys were used in the analysis, with a 48.8% response rate. 355 businesses fit the sample criteria. Initial analysis of the data was conducted using SPSS and produced a number of descriptive statistics. This information was used to begin understanding the nature of owners and managers. Further qualitative procedures were conducted using principal liaison analysis with Promax rotation, employing in a factor solution. A multiple regression analysis was then used to distinguish whether support of tourism development could be predicted by the small tourism business' financial success, performance, owner motivations, perceived self-wage, owner value, activity type, location, and ownership type. Evidence was not found that the set of independent variables predicts the support of tourism development. Only 3.8% of support for tourism development by small tourism business owners could be explained by the set of independent variables. The ANOVA table and the unstandardized coefficients, in the centered beta weights, were examined to review which, if any, of the independent variables contributed to the explanation of the dependent variable. This set of independent variables did not predict the level of support for tourism development by small tourism businesses.
Factors Influencing Response on Student Evaluations of Teachers in Recreational Curriculum (Ph.D., Indiana University, 2006; Sarah Young, chair), 3rd, 246ff.

The study investigated student evaluations of teachers (SETs) has been criticized for the past forty years as scholars have disputed the accuracy of SET data and its legitimacy in use by administrators. Despite this vast research, one area has been largely untouched, the student perspective. Furthermore, the academic use of evaluation has been ignored in the SET literature. The aim of the present investigation was to gain an understanding regarding student perceptions of SETs and the attitudes with which students encoded in responses cannot connect these relative tools. The present researcher surveyed 563 subjects enrolled in recreation courses at a major midwestern university. Subjects completed a forty-four-item Student Perception of Student Evaluations of Teachers questionnaire (SPSET) at the end of each class period. Data were analyzed using descriptive statistics, chi-square tests of independence, and sampling logic analysis. Students perceived they completed SETs reasonably, yet indicated that increased knowledge regarding the uses and purposes of SETs would indeed influence their responses. Subjects-permission SET data yielded an accurate reflection of their opinions; however, 55.9% indicated the most notable factor influencing student SET responses was the instructor's personality. Relationships among SPSET categories and demographic variables were found to be weak, yet significant, relationships. Three-fifths of demographic variables asked played a role in student responses on SETs, although unknown variables also contributed in student responses. Chi-square analysis revealed subject grade was the most notable variable as a predictor of SPSET responses, followed by sex, then academic status. The student perspective provides a unique piece of the puzzle regarding the accuracy of SET data. Finding clearly warrants further investigation of the impact student age plays on SETs.

Leadership Development through an Outdoor Leadership Program Focusing on Emotional Intelligence (Ph.D., Indiana University, 2006; Alan Frost, chair), 2nd, 174ff.

This study examined the impact of an outdoor leadership program on the development of emotional intelligence and leadership. Furthermore, it was found that the relationship among emotional intelligence, transformational leadership, and outdoor experience, as well as levels of experiences during the programs that contributed to the development of emotional intelligence and leadership. Data were collected from March and November 2006 from nine outdoor leadership programs and three classroom-based college courses. Seventy-two complete sets of questionnaires for the treatment group and thirty-eight complete sets of questionnaires for the comparison group were analyzed. Research instruments included the BarOn Emotional Quotient Inventory (BarOn, 2002), the MultiFactor Leadership Questionnaire (Bar-On & Avolio, Full Range Leadership Development, 1997), the "New Social Desirability Scale" (B. Smith and K. C. Geroy, Journal of Clinical Psychology, 1972), the "Outdoor Leader Experience Use History", and A. G. Kellough, The Effectiveness of a Decline-Making in Outdoor Leaders from the "Perspectives in Leadership" (Thomas, 2005), an emotional intelligence experience questionnaire, and Washington Association Final assessment competency criteria. Self- and structured interviews were conducted with participants from two of the outdoor leadership programs. Results revealed a significant positive relationship between emotional intelligence and transformational leadership. Specifically, interpersonal aspects and qualities of emotional intelligence were positively correlated with aspects of transformational leadership. A MANCOVA found that participation in an outdoor leadership program significantly developed emotional intelligence, especially stress management skills, through their participation, but not transformational leadership. Participants who received the outdoor Leadership Certification showed significantly higher levels of emotional intelligence and transformational leadership at the post-test than those who were not certified. Answers to the open-ended questions revealed the current needs of experiences supported specific components of emotional intelligence and leadership, for example defined and feedback, leadership role, challenging experiences, enter expedition experience, and evaluations and assessments. A developmental stage of emotional intelligence and leadership was discussed. Participants' experience
level and program components regarding participants' developmental stages should be considered for future programming. Further studies are needed to examine more diverse populations (age, experience levels, program types, etc.) for theoretical and practical implications.

RC599
Kim, Jong-Hyeong. Travel Motivations of Asian-International Students (M.S.), Indiana University, 2005; Lynn Jammieson, chair, 2nd, 1556.
Motivation has been perceived as an important factor in the tourism field. Tourism researchers have found that different groups of travelers—those with cultural, gender, and age differences—have different motivations for travel. Moreover, travel motivations, which influence tourists when they decide on travel destinations, also result in different travel behaviors. However, cross-cultural motivation studies have been limited in scope, attributing differences in travel motivation among ethnic groups. This study had two purposes: to identify different motivational factors systematically, to make the information valuable to both the market-in and the tourism researcher, and to see whether the differences in travel motivations among different ethnic groups could be explained by factors other than ethnicity. 291 Indiana University Bloomington, Asian international students from China, Japan, and Korea were asked to the study sample. Findings suggest that ethnicity can be a major factor to explain group differences, but that there are also some common factors affecting travel motivation regardless of travelers' ethnicity, among them socio-demographic information, former travel experiences, and leisure activities during free time.

RC600
Markett, Chad T. Undergraduate Students Perceptions of Leadership and Leadership Education (M.S.), Indiana University, 2003; Alar Elvert, chair, 2nd, 1916.
A decade ago, A.W. Chickering and S. Reisner pointed out how "amazing" it is "that so little is known about the contribution of out-of-class experiences to learning and development" in undergraduates (Education and identity, 1991). The study explored perceptions of leadership and leadership education held by undergraduate students enrolled in one of two experience-based leadership development courses. Quantitative and qualitative data were used to inform the development of demographic and open-ended questionnaires used in data collection. Independent t-Tests, assisted by SPSS"s"s", 2.0 qualitative data analysis software, determined multiple themes that characterized effective leadership and leadership education from an undergraduate's point of view. Sixty male and female subjects, between the ages of eighteen and twenty-one, completed the demographic and the fast open-ended questionnaire. Coding resulted in four major themes (leader/leader relationship, communication, personal qualities, and task orientation) to which subdivisions describing undergraduate perceptions of leadership. Eight major themes were determined to describe students' perceptions of leadership: future orientation/cause, leadership as a skill/act of skills, equality, importance of experience/active involvement, self-confidence/self-confidence, opinion on whether leadership can be taught, not for everyone, and student growth and development. The study suggests that neither gender nor levels of experience has an impact on perceptions of either leadership or leadership education. Although the skills approach to leadership, on which the current material is based, equates in part to students' understanding of leadership, it is contrary to the transformative/transformational model of leadership proposed for undergraduate education by A.A. Avins and H.S. Avins (Leadership Handbook, 2000) and described in detail by P.G. Northouse (Leadership: Theory and Practice, 2004).

RC601
Tsui, Jia-Tuo. The Identification of the Components for an Outdoor Education Curriculum in Taiwan (Ph.D.), Indiana University, 2004; Douglas H. Knapp, chair, 5nd, 4349.
This study focused on identification of components for an outdoor education curriculum in Taiwan public schools. A Delphi study and national survey were used to gain reliable consensus of opinions from participating Delphi panel members, and suggestions and opinions from Taiwanese outdoor teachers. Data were collected from sixteen international outdoor education experts from the United
Staas, Canada, Britain, Japan, Hong Kong, and Taiwan, and from 1,546 outdoor education teachers who currently teach in Taiwan middle schools. Core values within the general goals and content elements were identified and tested using exploratory factor analysis and confirmatory factor analysis with data from outdoor teachers in Taiwan's middle schools. Seventeen general goals, twenty-nine content elements, and the core-values model for general goals can be used in development of an outdoor education curriculum for middle schools in Taiwan.
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Eugene, Oregon

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191 titles, 280 references
The value of every book is a compound of its literary value and its physical or mechanical value, as the product of physical labour applied to the physical material. But at present the latter value immensely predominates even in the works of the most esteemed authors.

—Edgar Poe, “Anastatic Printing” (The Broadway Journal, 1845)