

15th Annual Petersheim Academic Exposition Abstracts

Tuesday, April 12 – Saturday, April 16, 2011



POSTER PRESENTATIONS

- [School of Health and Medical Sciences Poster Session](#)
- [Interdisciplinary Poster Session](#)

VIRTUAL PRESENTATIONS

- [Virtual Presentations](#)
- [Virtual Tour of Seton Hall's Second Life Activities](#)

EXHIBITIONS AND ORAL PRESENTATIONS

- [The Department of Communication and the Arts Student Recital and Exhibition](#)
- [A Symposium on Global Health and Health Issues in the Philippines](#)
- [Symposium on the First Year Experience](#)
- [Psychology Club Presentation](#)
- [Psychology Department Research Symposium](#)

POSTER PRESENTATIONS

School of Health and Medical Sciences Poster Session

Tuesday, April 12 1:30 – 3:00 PM University Center Main Lounge

THE UNDERSTANDING AND USE OF OVER-THE-COUNTER PAIN MEDICATIONS AMONG COLLEGE STUDENTS

Bryan Georgiana, Leslie Davis, Lacey Genovese, Christopher Monacelli, Vincent Stonis and Denise Rizzolo

Department of Physician Assistant, Seton Hall University

Over-the-counter (OTC) pain medications are among the most commonly used medications in the United States. Although the Food and Drug Administration (FDA) and manufacturing companies publish reports concerning the side effect profiles of OTC medications, previous studies suggest that adult consumers are unaware of the side effects of over-the-counter analgesics. The purpose of this study is to assess the knowledge and usage patterns of over-the-counter pain medications among college students. Students aged 18-30 completed a survey entitled, "Awareness and Use of Over-the-Counter Pain Medications." Of the 187 participants who completed the survey, 183 students (97.3%) reported using over-the-counter pain medication. Ibuprofen was the most commonly used analgesic followed by acetaminophen, aspirin, naproxen, and other. 22 students admitted experiencing side effects from their medication use. 63 students (33.5%) reported discussing their use of OTC analgesics with their primary care physician. Only 32 students (17.1%) answered all five knowledge questions correctly. The results supported the hypothesis that college-age individuals were not knowledgeable about the side effect profiles of over-the-counter analgesics. Regarding specific side-effects of OTC pain relievers, the data correlates with previous studies as most participants were aware of the possibility of gastrointestinal irritation with NSAIDs but had little or no knowledge about the OTC analgesic effects on the pulmonary, kidney or liver systems. The results of this study suggest that while college-age students do possess some knowledge about the side effects of over-the-counter pain medications, most do not have full knowledge of the adverse effects of their chosen analgesic.

THE INFLUENCE OF BODY MASS INDEX ON POSTURAL SWAY RESPONSES OF CHILDREN AGED 6-14 USING THE SENSORY ORGANIZATION TEST

Catherine M. Maher, Mary P. Alexander, Danielle Davis, Nickie Parmar, Laura Penny and Shonda Robinson

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Purpose/Background: The development of effective balance responses is a key component of human functioning. Children develop balance responses, modifying them as they grow to maintain equilibrium and upright posture regardless of changes in environment. The purpose of this study is to determine when children develop postural sway and balance responses, which

mimic those of adults. This study also examines the influence of body mass index on a child's development of balance strategies and postural sway. Although research has been conducted on the development of balance strategies in children, the role of BMI, in particular for children that are overweight, and its influence over balance strategies and postural sway is inconclusive. It is hypothesized that younger children will display more postural sway during testing compared to the older subjects. In addition, this study expects to find that obese children will display balance and increased postural sway during the balance test than those children who have healthy weights. **Number of subjects:** Five healthy participants (2 males and 3 females, aged 8-14) volunteered for the study. **Materials/Methods:** Objective measurements of height and weight were used to determine body mass index according to the CDC (http://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html).

The Balance Master (Neurocom 6.1 ®) was used to assess postural sway under six conditions: normal vision with a fixed support; eyes closed with a fixed support; eyes open with sway reference; eyes open with the platform moving; eyes closed with the platform moving; and eyes open with the platform moving and sway reference. Based on the obtained data, the composite equilibrium score was calculated for each participant. A Pearson's R correlation analysis was performed to identify the relationship between age, height, weight, BMI, leg length, and postural sway responses. **Results:** Out of the five subjects, four fell into the healthy weight category, with a BMI within the 5th to 85th percentile and one had a BMI in the 95th percentile, the overweight category. All subjects demonstrated increased postural sway under conditions of sensory conflict. No correlation has been identified between BMI and equilibrium composite scores of postural sway across all conditions. No significant difference was noted due to the small sample size. **Conclusion:** In order to reject or accept the hypothesis more participants have to be recruited and tested. This research is still in its active state and the researchers are still in the process of data collection before any analysis can be performed.

TESTING THE ACTION PERCEPTION-PRODUCTION LINK IN SPEECH: AN ACOUSTIC STUDY

Eileen Scott ¹, Megan Mills ², Vanessa K Debernardi ¹, and Vikram N. Dayalu ¹

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A close link between motor production and its perception has been postulated by a variety of models. In the upper limb literature, it is clearly demonstrated that the percept of an externally generated non-congruent movements of the hand (e.g., horizontal movements) adversely influences the production of one's ongoing hand movements (e.g., vertical movement of the hand). Furthermore, the interaction between the hand and mouth movements during speech production is widely known. Therefore, the current study was designed to test the action production-perception link in the realm of speech production. Normal adult participants were asked to repeat the non-sense syllable /aba/ for 10 trials. The task was performed across six experimental and one control condition whereby the influence of congruency and source of the priming signal on speech production was tested. Acoustic measures namely fundamental frequency, intensity, formant 1 and formant 2 frequency for the vowel /a/ that preceded and

followed the /b/ sound were computed. The results will further the discussion on similarities and differences between speech and limb motor control.

INFLUENCE OF DELAYED VISUAL AND AUDITORY FEEDBACK ON SPEECH PRODUCTION IN NORMAL ADULTS

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Normal speakers while speaking under Delayed Auditory Feedback (DAF) manifest a variety of speech disfluencies. This phenomenon has been frequently cited as evidence for the role of the auditory modality in speech production. Recent studies have demonstrated that externally generated visual speech signals can indeed influence the speech production of a speaker. Therefore, the current study is designed to test whether a participant's own visual speech movements (i.e., movements of the frontal articulators) can influence their speech production. Delayed Visual Feedback (DVF) was used to test the influence of visual feedback on speech production and the results were compared to DAF. Normal speaking adult participants participated in this study. Each participant was instructed to memorize 8 to 10 syllables of meaningful text and recite it at their normal pitch and loudness. A total of 300 syllables were produced by each participant as they spoke under each condition. DAF and DVF delays of 100, 200 and 400 were tested and the results were compared to a baseline condition. The overall number of speech disfluencies as well as a categorical analysis of the types of speech errors was conducted to demonstrate the differences in disfluencies induced by DAF and DVF.

BREATHING AND STEPPING COORDINATION DURING DUAL TASKS IN PERSONS WITH PARKINSONS DISEASE

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Purpose/hypothesis: Parkinson's disease (PD) is a degenerative disease caused by loss of dopaminergic cells in the substantia nigra. The symptoms of PD include rigidity, tremor, akinesia, bradykinesia, decreased postural reactions, and a lack of automaticity. Our study focused on a specific area of non-automaticity: freezing of gait. Freezing of gait (FOG) is characterized by a sudden inability to move the lower extremities, and is related to falling and fear-or-falling. The pathophysiology of freezing of gait is not understood. It appears to be unrelated to bradykinesia and rigidity. Several authors have suggested that FOG is associated with a collapse in rhythmic interactions between moving limbs. Our study investigated whether there is also a deterioration of the rhythmic interactions between the limbs and respiration. Respiratory changes have been reported to precede FOG, and stress is a common factor in FOG, which may be related to breathing. We hypothesized that when compared to healthy controls, i) persons with PD will have more variability (less coordination) in breathing, stepping, and motor-

respiratory coordination (MRC), particularly during dual tasks that typically elicit FOG and ii) coordination of breathing, stepping, and breathing-stepping will be improved through conscious effort. Number of subjects: There were 17 total subjects: 6 subjects with PD (Hoehn and Yahr Stage 1 & 2; 2M: 4F; average age: 80±5yrs) and 11 healthy subjects (1M: 10F, average age: 79±3yrs). Materials and Methods: Breathing was measured using a thermistor threaded through a nasal cannula and stepping was measured by heel-toe strike transducers and all data collected were analyzed by BioPac *Acknowledge* Software. Each subject was given a mini mental questionnaire to confirm eligibility to participate. The PD subjects were also evaluated by the UPDRS to characterize the motor disability, and completed a Freezing of Gait questionnaire (FOGQ). Breathing was recorded during standing at rest for 2 minutes. Next the subject's breathing and stepping were recorded while stepping at normal pace, at a higher frequency, at a lower frequency, during a dual task, and while mentally focusing on coordinating breathing and stepping. The order of these tasks was randomized. Measurements included breathing rate and variability, stepping rate and variability and motor-respiratory coordination (MRC), which was measured as i) the frequency ratio: the ratio of the stepping rate/breathing rate at each peak inhalation and ii) the variability of the frequency ratio. Preliminary Results: Our preliminary results showed shallower and more variable breathing in persons with PD; breathing rate was increased and inhalation time was decreased. Stepping cadence was similar to walking cadence. Cadence was also unaffected by PD or dual-tasks. However, cadence variability was increased in PD during dual-tasks and slow-stepping. MRC was more variable in PD during dual-tasks. These data findings suggest that motor blocks in PD may be associated with a breakdown in MRC given that this occurred during tasks that typically elicit FOG.

THE LIVED EXPERIENCES OF MOTHERS WITH MULTIPLE SCLEROSIS: A PHENOMENOLOGICAL STUDY

Raquel Dominguez, Abby Engel, Melissa Galbreath and Allison Monroe
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This qualitative study describes the lived experiences of mothers with Multiple Sclerosis. Two Internet based blogs written by American mothers in their forties who have been diagnosed with MS were analyzed with a phenomenological perspective using phenomenological research methodology. Emerging themes were derived from the blogs, including MS as an inconvenience, lack of support, feeling overwhelmed, the gift of children, motherhood anguish, role changes and maintaining a positive outlook. Both women experienced similar emotions, stressors and reactions to their daily lives, and both stressed the importance of family support. The results of the study found that feelings of loss combined with attempting to maintain an optimistic outlook on life encompasses the lived experiences of mothers with Multiple Sclerosis.

EFFECT OF WALKING ASYMMETRY ON CLINICAL MEASURES OF ENERGY COST IN HEALTHY INDIVIDUALS.

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Background: Normal walking at self-selected speed is characterized by symmetry in step length and step time between limbs and is associated with minimal energy cost and exertion. Therefore, it is often assumed that asymmetrical step length and step time observed during impaired walking in neurological populations, might contribute to an increase in energy cost and exertion. However, the relationship between walking asymmetry and energy cost is poorly understood. The purpose of this study was to examine if altering step length and step time symmetry between the lower limbs reflects in a change in heart rate (HR) and rate of perceived exertion (RPE); both established clinical measures of energy cost. *Methods:* Participants included healthy individuals in the age range of 18-40 years. Participants completed four, five minute walking trials on a treadmill at their self-selected speed which consisted of two trials of symmetrical walking between limbs and two trials of walking asymmetrically with a 25% increase and decrease in both SL and ST values on the dominant limb. HR and RPE were monitored at rest and also at every minute of each trial. HR was monitored using the Polar heart rate monitor and RPE was assessed on the Borg's Rate of Perceived Exertion Scale. *Results:* Preliminary results are presented and discussed. *Conclusion:* Results of this study as well as further research would contribute to the body of evidence about the factors influencing the energy cost of walking and guide rehabilitation protocols targeted at improving impaired walking.

A REVIEW OF CHILDHOOD OBESITY

Georgina Robinson, Megan Geier, Katie Perpich, Rachel Russ

Physician Assistant Program, School of Health and Medical Sciences, Seton Hall University

Childhood obesity has become a growing problem among US children. Currently, an estimated 16.9% of children ages 2-19 in the US are obese. Genetic factors, lack of physical activity, and increased consumption of fast food are all possible explanations of childhood obesity. Childhood obesity can lead to both acute and chronic problems including, but not limited to insulin resistance, hyperlipidemia, cardiovascular disease, fractures, and psychosocial issues. Prevention is the primary goal for controlling childhood obesity. Lifestyle modifications, medications, and bariatric surgery are the treatment modalities. Utilization depends on the child's age, weight, and current health status. Lifestyle modifications of diet, exercise, and behavioral modifications should be initiated first, while medications and bariatric surgery should be reserved for more severe, refractory cases.

HEALTHY PEOPLE 2020: KNOWLEDGE, BARRIERS, AND ACCESS AMONG MILLENNIALS AT A COLLEGE CAMPUS

Hailey Hoplock, Sarah Esposito, Erin O'Donoghue, & Ellen Mandel

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This study examined the awareness of young adults concerning modifiable risk factors of chronic disease, and addressed possible barriers that impeded their disease prevention practices. Seton Hall University students were given a survey assessing their health behaviors. Results demonstrated that 85% of students were unaware of health services offered by the university health center. Correlations were found between respondents' perceived risk of developing preventable diseases and BMI, exercise frequency, and perceived health status. Overall, respondents were well educated about their personal health status. Barriers to disease prevention were not from lack of knowledge, but from lack of accessibility to resources.

COPING METHODS UTILIZED BY PHYSICIAN ASSISTANT STUDENTS

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The purpose of this study is to determine the coping methods utilized by physician assistant students and to determine if differences exist in the coping methods used during different phases of education, gender, age, and prior education. Participants completed an online survey composed of demographic information and the COPE inventory to determine each participant's predominate coping method. Data was analyzed using frequency counts, Kruskal-Wallis test and Chi-Square analysis, along with descriptive statistics. A statistically difference was found in gender. Females were found to use instrumental social support as well as emotional social support more often than men. There was also found to be a significant difference between phases of study and predominate coping method. The class of 2012 predominately utilized active coping when compared with the other classes. No significant differences were found between age and coping method or prior education and coping method. The results of this study suggest that there exists a difference between gender and phase of study in terms of which coping method is utilized more often.

COMPARING WRITING PROCESS PERFORMANCE IN SIXTH GRADE STUDENTS WITH AND WITHOUT LANGUAGE-LEARNING DISABILITIES (LLD)

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The most widely accepted model of the writing process, proposed by Hayes and Flower (1980), includes three components: planning, translating, and revising. Research has demonstrated that Language Learning Disabled (LLD) children perform poorer than typically developing (TD) peers on written language tasks in the following areas: productivity (Mackie & Dockrell, 1992; Scott & Windsor, 2000), lexical diversity (Fey, et al., 2004; Mackie & Dockrell, 1992; Scott &

Windsor, 2000), grammaticality (Dockrell, et al., 2007; Fey, et al., 2004; Gillam & Johnston, 1992; Mackie & Dockrell, 1992; Scott & Windsor, 2000; Windsor, et al., 2000), and sentence complexity (Fey, et al., 2004; Gillam & Johnston, 1992; Mackie & Dockrell, 1992). The purpose of the present investigation is to compare how LLD and TD children perform across a three day writing process protocol designed for this study based on the Hayes and Flower (1980) model. The data used is a subset from a larger study evaluating the writing process in sixth grade students. Thirty-two students participated qualifying as either LLD or TD. Findings suggest that children with LLD do not attend to the revision component of the writing process model with the same accuracy as their typically developing peers.

THE EFFECT OF AN INCLINE WALKING SURFACE AND THE CONTRIBUTION OF BALANCE ON SPATIOTEMPORAL GAIT PARAMETERS OF OLDER ADULTS.

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The purpose of this study was 1.) To examine the effects of an incline walking surface on spatiotemporal parameters of healthy older adults (> 70) and 2.) To identify changes in spatiotemporal gait parameters during incline walking in healthy older adults with balance impairments. All subjects in this study were deemed independent community ambulators, operationally defined as anyone who can walk without an assistive device or aide from another person in “places outside their own neighborhood but within their own town 1-3 times per week”. Subjects performed two different validated functional balance measures, the Berg Balance Scale (BBS) and Dynamic Gait Index (DGI). A third measure of dynamic stability, the Gait Stability Ratio (GSR) was also calculated. All subjects walked on the GaitRite® electronic walkway system under the following conditions: 1.) level ground and 2.) inclined surface. Dependent variables included: cadence, step length, mean normalized velocity, GSR (cadence/velocity), BBS scores and DGI scores. Results of this study indicate that cadence, step length and velocity all decreased on inclines while GSR increased on inclines relative to subjects’ level ground walking patterns. Significantly shorter and slower steps with increased GSRs measured on inclines suggest more time spent in the double support phase of the gait cycle and suggests the primary goal even in healthy older adults is to maintain stability during walking. Findings from this study provide a new database of information for healthy community-dwelling older adults as they negotiate a common community barrier.

THE IMPACT OF THE USE OF SOCIAL NETWORKING SITES ON STUDY HABITS AND ACADEMIC PERFORMANCE IN COLLEGE AGED STUDENTS

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This study aimed to examine the impact of the use of online SNS sites on the study habits and academic performance of college students. Students at Seton Hall University, ages 18-29, who

completed at least 12 credits, were asked to participate in this research study. Using the Academic Survey System and Evaluation Tool (ASSET), this web-based survey was comprised of 23 questions. The results indicated that most participants were non-Hispanic white females between the ages of 18-22 who completed 60 or more credits. The mean time spent studying was 10 hours per week. The majority of respondents reported an overall grade point average (cumulative GPA) equal to a B+ or greater (3.01). Participants utilized Facebook most frequently, with majority of respondents using this SNS daily, specifically while doing homework. Most participants believe that their usage of SNS has only slightly affected their grades. There were no other statistically significant relationships found using the data collected on the three other social networking sites. This study demonstrated a weak positive relationship between usage of Facebook and GPA, suggesting that there is not a major affect on grades. The self-reported results suggest that although students use SNS daily while doing homework, the respondents perceived it has little affect on their grades.

SECONDARY EFFECTS OF CAMP OPEN ARMS UPPER EXTREMITY CONSTRAINT INDUCED THERAPY ON FUNCTIONAL MOBILITY, BALANCE AND SPATIAL TEMPORAL PARAMETERS OF GAIT

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Purpose: This study reports the secondary effects of a constraint induced movement therapy (CIMT) protocol in children with cerebral palsy on overall functional mobility, balance and spatial temporal parameters of gait. While CIMT studies have focused specifically on upper extremity effects of this approach, and given that the motor system functions as a dynamic system, as proposed by the dynamic systems model of motor control, it is hypothesized that improvements in upper extremity functioning resulting from CIMT would positively influence lower extremity functioning. This hypothesis is based upon the generally accepted theory that central pattern generators (CPG's) located in the spinal cord are involved in the coordination and control of limb and body segment movements used to produce stereotypic locomotor patterns associated with gait. **Methods:** 6 children between 4 and 12 years of age participated in a 3 week CIMT program. Participants were tested on the first and last day of CIMT program on the Standardized Walking Obstacle Course (SWOC), the Pediatric Balance Scale (PBS) and spatial temporal parameters of gait. **Results:** Nonparametric tests and individual subject means were employed on all pre-post measures. The tests showed statistical significance between the number of stumbles recorded during pre and post assessment of the SWOC, as well as the pre-post PBS scores. **Conclusion:** In this study, CIMT was found to be effective in promoting changes in balance and functional mobility level. However, no changes were noted in the participants' spatial temporal parameters of gait.

INFLUENCE OF BACKPACK LOAD ON GAIT IN STUDENTS 15 TO 30 YEARS OLD

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The use of backpacks is widespread and very common amongst students of all ages. While walking with a backpack can be a resourceful way to carry diverse items used everyday, we often carry too much, resulting in compensatory postural changes necessary to balance the superimposed loads. With only a few small studies examining how students modify gait strategies, the purpose of this within-subjects repeated measures design was to describe the 3-D kinematic (limb and joint motion) changes in the hip and knee during treadmill walking. Fourteen healthy adolescent and young adult (15 to 30 years old) volunteers walked at 1.5 m/s for 90 seconds while wearing a standard backpack across 5 conditions of differing loads: 0, 5, 10, 15 and 0% body weight (BW). Six Qualysis Proflex[®] cameras recorded 3D movement from 28 reflective markers placed on specific body landmarks on the legs and pelvis. Hip and knee range of motion (ROM) values were viewed and processed with Qualysis Track Manager[®] and Visual3D[®] software packages. Means of several gait cycles within each trial were entered into within-subject repeated measure ANOVAs ($p < .05$) to determine significant differences for maximal joint excursions in all 3 cardinal planes of the hip and the sagittal plane of the knee across the 0, 5, 10 and 15% BW conditions, with post-hoc analysis consisting of paired t-tests using a Bonferroni type correction ($p < .0125$). Further, we investigated if un-weighting the backpack at the end of the trials resulted in a recovery state consistent with baseline walking using paired t-tests between the initial and final 0% BW conditions. Our results are consistent by other similar studies by Stiskal et al (2009, 2010). Subjects adopted a more forward flexed gait pattern as the hip joint increased its maximal flexion and reduced maximal extension at the heaviest backpack load. Also, increases in both maximal hip abduction and adduction occurred as subjects changed limb position while walking again at the 15% BW condition. The knee joint demonstrated an increase in knee flexion as the 5% and 10% loads but reduced both its maximal flexion and extension at 15% BW. Lastly, once the backpack loads were removed (0% body weight), subjects exhibited walking patterns similar to baseline, further illustrating the influence of the external loads. We concluded that both the hip and knee joints must adapt to the loads contained in the backpack. The kinematic changes in hip and knee joint motion result from altered body positions necessary for effective walking at a consistent speed.

THE EFFECTIVENESS OF MANUAL THERAPY AND ECCENTRIC EXERCISE INTERVENTION FOR BICIPITAL TENDINOPATHY IN PATIENTS REFERRED FOR WORK HARDENING SERVICE

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Introduction/Background: Work related upper extremity disorders are significant problems that challenge occupational health providers. Bicipital tendinopathy, a collection of histologic findings that include degeneration of collagen fibers and increased cellularity of the long head of

the biceps tendon, can hinder performance and delay an individual's return to work following injury. Although the condition can be an underlying source of pain and dysfunction, it can often be overlooked. Past studies have shown transverse friction massage, joint mobilizations and eccentric loading have individually been effective in the treatment of tendinopathies. Our study utilizes a combination of the three treatments to determine the effectiveness of a standardized multimodal program on the clinical and functional outcomes in patients diagnosed with bicipital tendinopathy referred for work hardening intervention. Subjects/Methods: All patients who present with a primary complaint of shoulder pain were invited to participate in the study to examine the effectiveness of this multimodal intervention. Patients who met inclusion criteria qualified for the treatment phase of the study and continued on to complete a numeric pain scale, standard impairment evaluation and a shoulder pain and disability index (SPADI) questionnaire. The patients were treated with a standard intervention plan created for the study. The plan consisted of manual therapy, including transverse friction massage, glenohumeral joint mobilizations, and elbow flexor eccentric training. At the end of the intervention period, patients were re-evaluated and completed post-test questionnaires to measure the change in functional status. Clinical Relevance: The goals of the study were to determine the effectiveness of a standardized multimodal program on clinical and functional outcomes. Results of this case series suggest that a multimodal approach of manual therapy, eccentric exercise, and work hardening intervention has a positive effect on bicipital tendinopathy.

PERCEPTIONS OF ATHLETIC TRAINERS AMONGST HIGH SCHOOL COACHES AND ADMINISTRATORS

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Context: To increase awareness and level of knowledge of the AT profession, perceptions of AT need to be identified and examined in populations that work closely with ATCs. Objective: To evaluate the perceptions of coaches and administrators in New Jersey regarding the role of an ATC. Design: Cross-sectional via online survey. Setting: Administrators contacted via email through a list purchased from NJSIAA; forwarded survey link to their coaches. Patients or Other Participants: 84 respondents; males (67.9%), females (32.1%); 88.1% indicated coach, 15.5% indicated administrator. Age Range -18-65 years old, 26-30 (16.75%), 31-35 (19.0%), 56-60(17.9%). Interventions: The survey on the scope of practice of an ATC, defined by the BOC Role Delineation Study. 38 questions regarding ATC's qualifications, knowledge, and skills, administered online (SurveyGizmo). Main Outcome Measures: Frequency counts of correct answers; Mann-Whitney U- coach vs. non-coach, administrator vs. non-administrator; $p < 0.05$; SPSS 16.0. Results: 19 questions answered correctly by over 80% of the respondents, 11 answered correctly by 60-80% of respondents; Two questions answered differently by coaches vs non-coaches (Q3: $p = .046$; Q4: $p = .001$). Three questions answered differently by administrators vs non-administrators (Q8: $p = .027$; Q12: $p = .028$; Q14: $p = .040$). Conclusions: Results indicate that coaches and administrators overall have a good understanding of the role of the ATC; administrators have better understanding of that role as compared to non-administrators.

THE EFFECT OF STATIC VERSUS DYNAMIC STRETCH ON THE PEAK TORQUE OF THE ROTATOR CUFF

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Context: Static stretching is common practice in athletics. Recent studies have shown isokinetic strength is decreased following static stretching while others show an increase. Most research is the lower extremity. Objective: To evaluate the effects of static and dynamic stretching on strength of the rotator cuff musculature. Design: Within-subjects, repeated measures design. Setting: Interventions and data collection were conducted in the Athletic Training room. Participants: 5 males, 4 females, mean age = 21.4(± 2.19), no prior history of shoulder or neck pathology, Interventions: IV was stretch protocol: static, dynamic or no-stretch. Stretches performed while seated in Biodex. Static- passively held at terminal IR, ER 30 seconds each; Dynamic- IR, ER end range rhythmically, 60 seconds; No-stretch- neutral rotation, 60 seconds. Main Outcome Measures: DV was Peak torque IR, ER, pre and post intervention. A repeated measures ANOVA used to determine significant differences between change scores. Paired t-tests used to determine significant differences between each pre and post measures; $p < 0.05$; SPSS 16. Results: IR change score means (± st. dev): Dynamic -0.5 (± 4.06); Static -0.4(± 2.92); No Stretch 1.7(± 3.62). ER: Dynamic 0.7 (± 5.28); Static -0.1(± 2.67); No Stretch -0.3(2.49). No significant differences were detected. Trend analysis indicated dynamic stretch trials were greater than static or no stretch trials. Conclusions: Greater subject numbers may yield significant differences.

A COMPARISON OF HEAT ACCLIMATIZATION BETWEEN MALE AND FEMALE SOCCER PLAYERS DURING PRESEASON

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Context: Warm-weather exercise causes body temperature increases, fluid/electrolyte losses, potentially leading to heat illnesses. There is a lack of research on acclimatization of male vs female soccer players. Objective: Investigate the effects of heat and humidity on male and female soccer players during first 8 days of preseason. Design: Repeated measures design. Setting: Measurements during the month of August ; pre/post-practice in locker room; during-practice on artificial turf field. Patients and Other Participants: Subjects- NCAA DI soccer players; 6 females mean age 20 (±1.17), mean BMI 22.7(±0.93); 4 males mean age 19 (±1.50), mean BMI 23.05 (±1.84). Interventions: IVs- heat index/day, gender. Main Outcome Measures: Daily measures pre/post-practice HR, BT, SG, BW. During-practice measures HR, BT. Repeated measures ANOVA- pre-practice BW, SG, change scores BW, SG. Pearson correlation coefficient- mean heat index and mean male, female BW, SG; $p < 0.05$, SPSS 16.0. Results: No significant differences change scores BW or SG in males or females. No significant differences pre-practice measures of BW or SG. There was a correlation between the mean HI and the mean BW changes scores in the females ($r = -0.701$, $p=0.053$) Conclusions: Trends- as heat index rose, specific gravity increased, body weight decreased; differences between males, females in pre-practice SG patterns.

OPEN REDUCTION INTERNAL FIXATION IN A HIGH SCHOOL FOOTBALL PLAYER

N. Triano*, J. Lee*, and N. Nicholaides†:

* Department of Athletic Training, School of Health and Medical Sciences, Seton Hall University, †Ridgewood High School.

Background: 14 year-old, male high school football player who suffered a complete displaced fracture of mid-humeral shaft. Mechanism of injury was a lateral blow to mid-humeral shaft with shoulder abducted 90 degrees, elbow flexed 90 degrees, forearm fixed to ground. Differential Diagnosis: Shoulder dislocation-fracture, elbow dislocation-fracture, humeral x-ray Treatment: Unsuccessful closed reduction, then open reduction internal fixation with an intramedullary rod. Twenty weeks of rehabilitation protocol with HS ATC. The program was based upon healing process. Examples include controlling pain and swelling initially following surgery, increasing range of motion and strength at the elbow and shoulder, maintaining cardiovascular condition. Special care necessary as the intramedullary rod was initially exposed through the skin. Uniqueness: Injuries of this magnitude are rare in athletics especially for an athlete this age. Intramedullary rod was inserted through the distal humerus, due to the open epiphyseal plate in the proximal humerus. Normally a rod would be introduced in the proximal humerus down through the medullary canal to the distal humerus. The ATC had to initially address the post surgical swelling and pain, in addition to an open wound as the intramedullary rod was exposed through the skin for future removal. Conclusion: Based on the age of the athlete and the injury itself, surgical procedures and rehabilitation protocols must be modified to successfully return an athlete to a fully functional and pre-injury competitive state.

FACTORS INFLUENCING A WOMAN'S CHOICE OF AN OBSTETRICIAN/GYNECOLOGIST

K. Mancini, PA-S, M. Russo, PA-S, D. Saini, PA-S, C. and Biscardi, PA-C, PhD.
Physician Assistant Program, Seton Hall University

Women seeking obstetrical/gynecological (ob/gyn) care use specific criteria when selecting a health care provider and prior research revealed that gender of an ob/gyn does not play a significant role in the decision making process. However, prior studies failed to address provider ethnicity or health insurance affiliation in the selection criteria, or use a diverse population.

This was a descriptive study using a 25-item survey equally distributed to four ob/gyn offices.

One hundred-forty surveys were completed with majority of the participants of Caucasian descent. The important factors were bedside manner, personality, and insurance accepted. The top three reasons for choosing their current ob/gyn were physician's ability, insurance affiliation, and third were both experience and gender. Hospital affiliation and ob/gyn appearance was significantly different across age groups. OB/GYN gender was significantly correlated with office location and type of insurance was significantly correlated with level of education.

Women select their ob/gyn based on a multitude of factors; bedside manner, personality, and insurance being most important. Additionally, respondents stated that gender was significant when they selected their current ob/gyn. While this study did not sufficiently reflect the diverse population of the geographic region, a woman's ethnicity and age were shown to play a role in choosing their ob/gyn. Insurance acceptance also plays an important role, which may have implications in any future health care reform.

THE ASSESSMENT OF COLLEGE STUDENTS' KNOWLEDGE OF ANTIBIOTICS

A. Uzzell, K. Cheu, M. Claricia, J. Neubrander, and D. Rizzolo

School of Health and Medical Sciences, Masters in Physician Assistant Program, Seton Hall University

Introduction: The inappropriate use of antibiotics is a considerable factor facilitating the emergence of antibiotic-resistant strains of bacteria. The purpose of this study was to assess the knowledge of college students regarding antibiotics, evaluate the correlation between the knowledge of antibiotics and actual usage patterns, and to compare the results of antibiotic knowledge and use between non-health and health science majors. Methodology: A convenience sample of Seton Hall University students was used. The study employed a survey created by the authors and distributed via the participants' university email addresses using the Academic Survey System and Evaluation Tool (ASSET). Using SPSS 17.0, the data was analyzed employing the Mann-Whitney U test and the Pearson product moment correlation coefficient test. Results: A total of 232 students completed the survey; 159 were non-health science majors and 73 were health science majors. Health science majors demonstrated a significantly greater amount of knowledge regarding antibiotics ($p < 0.001$). Health science majors reported more appropriate patterns of antibiotic usage ($p < 0.05$). A moderate positive correlation existed between the amount of antibiotic knowledge and appropriate usage behaviors.

DISCOURSE COHERENCE IN WRITTEN NARRATIVES OF CHILDREN WITH LANGUAGE LEARNING DISABILITIES

Victoria Petersen and Anthony D. Koutsoftas

Department of Speech-Language Pathology, School of Health and Medical Sciences, Seton Hall University

The present study examines the quality of children's writing by measuring discourse coherence. Coherence is the conceptual organization of discourse and is divided into two types: global and local. Coherence measures demonstrate good reliability and show promise as an indicator of writing quality. This study compares a group of intermediate grade children with language learning disabilities to peers with typically development on coherence measures. Children participated in a four day experimental protocol that included a hearing screening, standardized language and reading assessments, and production of narrative and expository writing samples. Only written narrative samples were evaluated using a 4-point coherence rating system for both global and local coherence. Additionally a six-trait writing rubric was used to score writing samples and serve as a measure of quality. Group differences by genre were identified and will be reported. Relationships between coherence ratings and an external measure of quality will be

discussed as our method of validating coherence ratings. Implications for clinical and research purposes will be discussed.

THE NEURAL BASIS OF ACQUIRED NEUROGENIC STUTTERING

Jennifer Frahm

Department of Speech-Language Pathology, School of Health and Medical Sciences , Seton Hall University

Developmental stuttering, with an onset between ages two and five, is a disorder in the rhythm of speech characterized by involuntary repetitions, prolongations, or cessation of sounds. A less common phenomenon related to dysfluency is the onset of stuttering beyond childhood, known as acquired neurogenic stuttering, caused by neurological damage. The purpose of this review is to examine the etiologic factors documented and declared causative factors, discuss the neural models/hypotheses as reasons for the acquisition of stuttering, examine the speech characteristics of acquired neurogenic stuttering compared to those of developmental stuttering, and discuss assessment/treatment options for clients.



Interdisciplinary Poster Session

Tuesday, April 12 2:00 – 4:00 PM Jubilee Hall Atrium (4th Floor)

DONG BUSINESS IN INDIA

Nicole Blackford¹, Nicole Blackford² and Amar D. Amar¹

¹Stillman School of Business, ²School of Diplomacy

Since 2009, Stillman School students, graduate and undergraduate, have enrolled in a course titled Doing Business in India. As a requirement of this course, students spend 11 days in India, getting to know the business, culture and history of India with a view to understand the business environment in India. This year, sixteen students from the schools of Business and Diplomacy traveled to India during the Spring Break of 2011. This presentation is designed to share their experiences for all three years of these trips with Seton Hall community. Some students and the professor-in-charge of the course will be available to present their exhibit to the audience.

NEW MAMMOGRAM GUIDELINES

Mamie Osei-Bonsu

Department of Healthcare Administration, Seton Hall University

For many years, guidelines recommended women at the age of 40 annually get mammography screening. The U.S. Preventive Task Force now recommends changes in its breast screening guidelines. The panel which consists of independent medical workers now recommends against routine mammograms for women younger than 50 because some patients are sometimes subjected to unnecessary stress and biopsies. The guideline suggests women ages 50-75 years get mammogram screenings once every two years. With the controversy surrounding the new mammogram guidelines, how does the policy affect women, doctors, foundations and organizations, and insurance companies? So far articles show most women disagree with the new mammogram guidelines and are adhering to the old guidelines by getting screened starting at the age of 40 and doing it every year thereafter.

CHILD LABOR IN INDIA

Jesse Adu-Odei

Department of Political Science and Public Affairs

The purpose of this study is to find out why India has a high rate of child laborers and the cause and affects it has on these children. Child labor is an ongoing problem that affects everyone. according the International Labor Organization, about 73 million children between the ages of 10 to 14 years of age are involved in economics activities over the world. This paper gives an in depth look at child labor in India. Children working as child laborers work in environments that are hazardous to them. The government of India has taken initiatives to combat the issue of child labor by establishing several acts such as the Child Labor (Prohibition and Regulation) Act in 1986 and The Factories Act in 1948 to protect children from being exploited.

SYNTHESIS AND ELECTRICAL CHARACTERIZATION OF $\text{CuIn}_x\text{Ga}_{1-x}\text{Se}$ (CIGS) PHOTOVOLTAIC THIN FILMS

J. Barrientos and C. Reehil

Supervisor: Prof. M. Alper Sahiner

Department of Physics, Seton Hall University, 400 South Orange Avenue, South Orange, NJ

The ability to convert a wider range of the solar spectra into electricity required for the next generation of solar cells. Presently, the correlation between the composition and the photovoltaic (solar energy conversion) properties of these CIGS (CuInGaSe) thins films is not well determined. The objective of this project is to search specific compositions of CuInGaSe based thin films that will be able to tune into broader wavelength ranges of the solar spectrum. The name thin film solar cells is derived from the films exhibiting direct band gaps producing a photovoltaic effect allowing the cells to be a couple of micrometers thin. CIGS thins films are mainly utilized in photovoltaic cells in the form of polycrystalline thin films. In order to explore

this next generation solar cell CIGS thin film will be fabricated by the Pulse Laser Deposition technique and electrical properties will be investigated to determine their photovoltaic efficiency.

CRITICAL INCIDENT IN HEALTHCARE FACILITY AND ITS PREVENTION

Kiza Amatya

Department of Healthcare Administration, Seton Hall University

The purpose of the study is about the causes and the prevention of unprepared critical incidents that can occur in any healthcare facility. I took one of the real incidents that occurred in a healthcare facility. A healthcare coordinator of the organization was interviewed and details were given. In this course of work, different effects of the incident were found and the ways the organization handled the incident and different steps that were taken to prevent such incidents were discussed too. This research can help the society to be aware of incidents that can happen anywhere/ anytime and can give them knowledge on different ways to prevent it. It focuses on how in any work environment, every work or reporting of any incident has to be done efficiently and as soon as possible. Time plays vital role in working environment. Reporting of damaged equipments and other incidents on time and taking action on those matters as soon as possible will help the company or organization to perform the task. This paper is basically written to make people aware of how things can run smoothly in an organization. The paper mainly focuses on the effects and prevention of different causes in healthcare facility both internally and externally.

CHILDHOOD OBESITY IN THE UNITED STATES OF AMERICA

Amber Crosby

College of Nursing, Seton Hall University

The purpose of this project was to comprehensively examine the issue of childhood obesity in the United States. The current statistics, risk factors, impacts on puberty, psycho-social effects and future health ramifications were extensively explored. Nursing research and published newspaper articles on the subject were reviewed, and federal and local prevention programs were examined. Experts in the field were interviewed, including a pediatrician, a weight management consultant and a school nurse, to gain professional perspectives related to this growing problem. The ultimate goal of the project was to provide educational resources to the public based on the findings from the literature. A brochure for parents and an age appropriate poster for children on the effects of obesity were created. A website was also created with the collected information including educational resources for parents and students. It is the hope that this project will help to empower the public, promote education, and aid in the prevention of obesity.

LINING UP AGAINST ELECTRIC LINES IN THE NEW JERSEY HIGHLANDS

Lisa Didow, Dena Zapoluch, & Matthew DiCarlo
Environmental Studies, College of Arts and Sciences
Sponsors: Judith Stark & Marian Glen

In response to many of the environmental concerns our Earth faces today and will face in the future, there are significant individuals and organizations that wish to preserve its beauty and health for further generations. One such organization is Genesis Farm in Sussex County, New Jersey. The main goal of the farm is to understand the environmental controversies happening in our local area and to find alternative environmentally friendly ways to resolve them. A topic that is of great interest to the farm is the proposed Highlands Transmission Line, which would be a 45 mile electric transmission line by PSE&G that cuts through the New Jersey Highlands. Although this high voltage line would provide more power to New Jersey customers and economic gain to our electric companies, it introduces some harmful environmental problems to our local area. Since the transmission line is proposed to cut through wetlands and natural habitats in the Highlands, it poses a threat to ecosystems and wildlife. This proposal has divided citizens, and continues to be a topic of interest to those in New Jersey who want to protect the open space that provides drinking water to half of New Jersey's population. Therefore, the topic of constructing the Highlands Transmission Line is one that should be shared with all citizens of New Jersey in order to participate and voice their opinions in their concerns over the project.



GMOS: SHOULDN'T BE THE FUTURE OF OUR FOODS!

Dena Zapoluch
Environmental Studies, College of Arts and Sciences
Sponsors: Marian Glen & Judith Stark

Over many years of wear and tear on the earth, due to human unawareness and selfishness, there are finally actions taking place. Genesis Farm is one of many organizations that is taking a stand to change human perceptions about themselves and the earth. Through their writings and various programs, Genesis Farm expresses the importance of the relationship between humans and the earth. The organization is an advocate for many topics that strongly affect the alteration of the local environment, including the negative effects of genetically modified organisms (GMOs). GMOs are food plants or animals whose genetic material has been altered by genetic engineering techniques. GMOS bring many controversial discussions to the table. The advantages are that GMOS make sure the food supply will meet everyone's needs, pest resistances, cold tolerance, and disease resistance and contains additional nutrition. On the opposing side, the criticisms against genetically modified foods are such as unintended harm to other organisms, reduced effectiveness of pesticides, and gene transferred to non-target species. Besides having a negative impact on the environment, genetically modified foods may cause unknown effects on human's health as well as allergies. The only way to stop the use of GMOS is for individuals and organizations to speak up. Genesis Farm is not timid in expressing their opinions. Through their dedicated work Genesis Farm will consistently push towards stopping GMO foods.

PREVENTING NURSING HOME FALLS: A CASE STUDY

Titilayo T. Marinho

MHA

The CDC report that although only 5% of US adults age 65 years and only live in residential facilities, they account for approximately 20% of the deaths from falls related cause. This study analyzes a facility's efforts to reduce its falls rate from 13.34 (putting it in the 91-95th percentile nationally) to 4.17 (putting it in the 31-35th percentile) in about 3 year. The facility used a multi-faceted approach to address the problem which focused on refining what a resident fall meant, collecting accurate information about resident falls, following-up on residents who fell and educating staff. Their efforts resulted in a dramatic drop in the number of resident fall and the facility is now in the 30-35th percentile nationally. The cost savings to insurers were significant as the average costs of hospitalizing a resident after a fall is approximately \$12,000. The cost of the methods they implemented were financially negligible, but required intensive in-house training for staff and their methods can be adopted by other facilities hoping to reduce their resident Fall rate.

HYDRAULIC FRACTURING AND THE ENVIRONMENT

Matthew DiCarlo

Department of Biological Sciences and Environmental Studies Program, Seton Hall University

Hydraulic fracturing, commonly known as fracking, is an extraction process typically used for natural gas. Once considered a last resort, this process of extracting natural gas has been on the rise for years. That being said, fracking is a highly controversial issue. From the process itself to the repercussions following, there is cause for concern. Spurred by various chemicals, some toxic, used to maintain the wells, they are now subject to federal regulation. But the long-term impacts of fracking on the environment are for the most part unknown. Genesis Farm, located in Blairstown, New Jersey, is an institution focused on the relationship between humans and nature. The staff is greatly interested in the issues related to hydraulic fracturing, and by investigating the policies and procedures of this process – and recent regulation policies – more individuals will have knowledge on this industry.

JOB ANALYSIS AND JOB DESIGN IN HUMAN RESOURCE MANAGEMENT

Chermine Alce

Department of Political Science and Public Affairs, Seton Hall University

The purpose of this study is to give a review of the various job analysis methods that has been developed for Human Resources (HR). The study highlights the importance of job analysis and why it is performed in HR management as a necessary tool with a primary focus addressing what job analysis entails. It also discusses job functions to HR management activities and suggests best practices in using job analysis.

MODIFIED MODEL FOR MULTI-DRUG LIPID LOWERING THERAPY FOR HYPERCHOLESTEROLEMIA

Andrew Klump¹, Mitra S. Feizabadi¹, and Thomas Marlowe²

¹Department of Physics; ²Department of Mathematics and Computer Science

Recently, a model has been developed that maps the synergistic effects of using a combined therapy of two drugs, statin and Ezetimibe, to treat hypercholesterolemia. Furthering this model, a new term has been added to the equations that represents the effects of exercise as part of therapy. When exercise is considered, the cholesterol level dropped faster and reached a lower equilibrium level than with the drugs alone. Additionally, the daily decay of statins in the system has also been considered. As the concentration of statin diminishes over time, the liver produces more cholesterol than what was assumed when statin was a constant. Thus, the overall time to lower the cholesterol level in the blood to the equilibrium level is increased.

SECONDARY EFFECTS OF CAMP OPEN ARMS UPPER EXTREMITY CONSTRAINT INDUCED THERAPY ON FUNCTIONAL MOBILITY, BALANCE AND SPATIAL TEMPORAL PARAMETERS OF GAIT.

Genevieve Zipp, Joseph Persico, Rebecca Rooney, Gregory Rosequist, Daniel MacDonald
Department of Physical Therapy, Seton Hall University

Purpose: This study reports the secondary effects of a constraint induced movement therapy (CIMT) protocol in children with cerebral palsy on overall functional mobility, balance and spatial temporal parameters of gait. While CIMT studies have focused specifically on upper extremity effects of this approach, and given that the motor system functions as a dynamic system, as proposed by the dynamic systems model of motor control, it is hypothesized that improvements in upper extremity functioning resulting from CIMT would positively influence lower extremity functioning. This hypothesis is based upon the generally accepted theory that central pattern generators (CPG's) located in the spinal cord are involved in the coordination and control of limb and body segment movements used to produce stereotypic locomotor patterns associated with gait. **Methods:** 6 children between 4 and 12 years of age participated in a 3 week CIMT program. Participants were tested on the first and last day of CIMT program on the Standardized Walking Obstacle Course (SWOC), the Pediatric Balance Scale (PBS) and spatial temporal parameters of gait. **Results:** Nonparametric tests and individual subject means were employed on all pre-post measures. The tests showed statistical significance between the number of stumbles recorded during pre and post assessment of the SWOC, as well as the pre-post PBS scores. **Conclusion:** In this study, CIMT was found to be effective in promoting changes in balance and functional mobility level. However, no changes were noted in the participants' spatial temporal parameters of gait.

FALLS AMONG THE ELDERLY AND HOW THEY ARE HANDLED BY A NURSING FACILITY: RECOMMENDATIONS FOR IMPROVEMENT

Hengameh Hosseini

Political Science and Public Affairs, Seton Hall University

American population is aging, leading to more and more falls among the elderly. Since falls often lead to injuries and injuries lead to hospitalization and the rise of medical expenses, the study of the falls and their impact on health care costs is essential, especially since health care costs in the United States are on the rise. The study of falls require understanding of its risk factors, the locations of where they occur, and thus the methods of reducing the number of falls. Attempt to enhance this understanding is done in the paper. Since falls constitute the most common cause given by family members who seek nursing home placement for older adults, it is appropriate to examine how nursing facilities deal with falls of the elderly in their midst, and what they do to prevent them. As a result, the paper examines the way a nursing facility- the Meadows Nursing center- deals with the problem of falling and the methods it utilizes to prevent them. This nursing home is located in Dallas, in northern Pennsylvania – a region in which there is a heavy concentration of older individuals. Although Meadows nursing facility seems to have a relatively appropriate fall management policy, it is not perfect and can be improved. As a result, in the last section, recommendations are made for the facility that can improve its fall management. These recommendations are to involve various stakeholders in the management of falls among Meadows elder residents.



POVERTY AND HEALTH: LOWER INCOME AND HEALTH

Mandy Damoah

Master of Healthcare Administration Program, Department of Political Science and Public Affairs, Seton Hall University

The purpose of this research is to expose the conditions and the factors involving the citizens under the line of poverty. The study was conducted utilizing federal records and life experience interviews found in journals. The research will explain the interrelationship between health and poverty or low-income citizens. In addition, it will examine other factors that are intertwined with the issue such as education, race, obesity, and immigration. Also, the study was conducted to create an open dialogue about the capitalist economy in the USA and how it influences its citizens. In addition, it will analyze what the federal government does to assist the less fortunate when it comes to health, and what programs are available for them.

BEACH EROSION AS RELATED TO WINTER STORMS

Matt Culver

Department of Physics, Seton Hall University

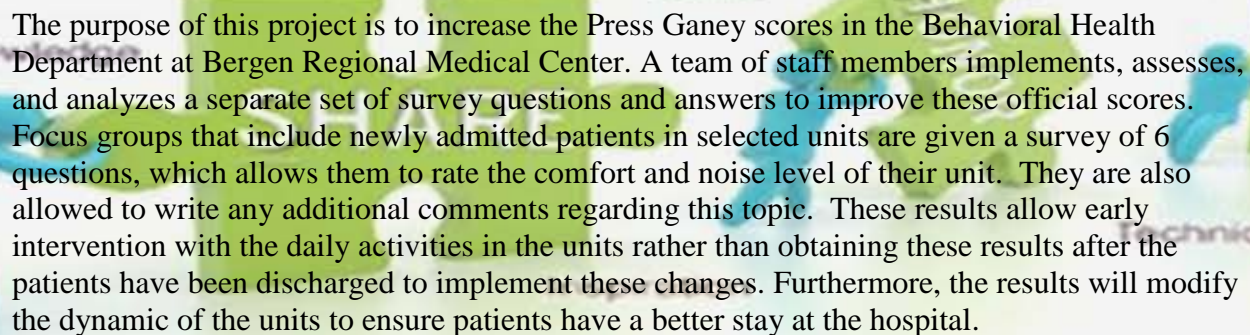
The purpose of my presentation is to bring awareness to the problem of beach erosion and the effects that winter storms have on the rate of beach erosion. Beach erosion is related to winter storms because there is a naturally occurring process of erosion when the ocean water reaches

the beaches. In times when winter storms occur, winds give more energy to the ocean, which propels the waves even faster toward the beaches. When this happens, erosion is increased, because so much more power is added to the waves. Sea level may also increase, which adds more water to erode the sand on the beaches. Global Warming is a major cause of the increase in the intensity and frequency of winter storms. Global Warming can cause sea levels to rise and winter storms to become more powerful, which increases the rate of erosion. It is important for coastal communities to replenish beaches, especially dunes, which not only provide a way for beaches to replenish themselves naturally, but also protect public and private property along coastlines. The planting of vegetation on these dunes is the key to keeping the dunes intact for future seasons. These plants help to keep the dunes from being eroded by holding the sand with their root systems. If we replenish dunes now, and plant vegetation, we can prevent any further damaging erosion from destroying beaches and property in the future, so that our children can enjoy the beach in the years to come.

QUALITY IMPROVEMENT-SURVEY INTERVENTION

Farah Fermin

College of Arts and Sciences, Seton Hall University



The purpose of this project is to increase the Press Ganey scores in the Behavioral Health Department at Bergen Regional Medical Center. A team of staff members implements, assesses, and analyzes a separate set of survey questions and answers to improve these official scores. Focus groups that include newly admitted patients in selected units are given a survey of 6 questions, which allows them to rate the comfort and noise level of their unit. They are also allowed to write any additional comments regarding this topic. These results allow early intervention with the daily activities in the units rather than obtaining these results after the patients have been discharged to implement these changes. Furthermore, the results will modify the dynamic of the units to ensure patients have a better stay at the hospital.

FINANCIAL ANALYSIS OF KYOWA HAKKO KIRIN CO., LTD.

Masumi Shirai

Master of Healthcare Administration / Dept. of Political Science and Public Affairs, Seton Hall University

The purpose of this study is to make a financial analysis and to forecast the future of a for-profit Japanese pharmaceutical company, Kyowa Hakko Kirin Co., Ltd. This study was conducted based on three types of financial statement (income statement, balance sheet, and cash flow) and the analysis of the transition of business environment.

Kyowa Hakko Kirin was established through the merger of Kyowa Hakko Kogyo Co., Ltd. and Kirin Pharma Co., Ltd. on October 1, 2008. It is engaged in the manufacturing and marketing of medical products and pharmaceuticals, and manages the business activities in the Bio Chemicals and Chemicals segments as the parent company of the Kyowa Hakko Kirin Group.

Kyowa Hakko Kirin's financial result during the first half of the year 2010 is considered to be better compared to 2009. This is caused by mainly the end of tasks related to the merger

including the payment for the bank loans and the investment for the facilities. Kyowa Hakko Kirin, as same as other pharmaceutical companies, is a for-profit company; therefore, it is critical to make continuous profit for its growth and well-management. To maintain the favorable financial results and the future development, the next two or three years will be significant for Kyowa Hakko Kirin because the results will reflect the true value of the merger and its business strategy, such as the decision of the personnel restructuring including downsizing or the overseas activities.

POLYMERIZATION OF HELA CELL TUBULIN

Manye Otu, Jimmy Barrientos and Carly Winton
Department of Physics, Seton Hall University

HeLa Cell tubulin are extracted from cervical cancer cells. These tubulin are a sample of non-neural tubulin. The Microtubules polymerized from HeLa cell tubulin consist of different β -tubulin isotopes as compared to the different Bovine Brain microtubules. In the following study, our primary results of our attempts to find a polymerization protocol for HeLa cell tubulin is reported and comparisons made with the polymerization protocol of bovine tubulin. Our results verify that HeLa Cell tubulin experience much slower polymerization time than Bovine Brain microtubules.

A FOUR COMPARTMENT MODEL OF THE EPIDEMIOLOGICAL CONSEQUENCES OF THE DRIFT MECHANISM FOR INFLUENZA A VIRUSES

Daniel Guerrero, Nicholas Abolafia, and Kiryako Mutafooulos
Department of Physics, Seton Hall University

The epidemiological consequences of the drift mechanism for influenza A viruses is studied under a four compartment model. The dynamics of the compartments are expressed in a system of coupled differential equations. In this work, we investigated the dynamic of each compartment when the contact rate is constant and while it is decreasing exponentially under a different decaying constant.

LEADERSHIP DEVELOPMENT TRAVEL ABROAD TO DUBLIN, IRELAND

K. Scotto
The Leadership Development Honors Program, Center for Leadership Development, Stillman School of Business, Seton Hall University

The purpose of the Leadership Study Abroad trip to Dublin, Ireland is to provide the Leadership Development students a global perspective on the way that businesses are run so that they are prepared to effectively lead in an ever-changing global economy. It provides the opportunity to meet, dialogue and network with global business executives. Their exposure to a different cultural experience will not only strengthen their ability to work effectively across geographic boundaries, but also develop their interpersonal skills in communicating and working with

people of diverse backgrounds. The highlights of the business visits, interaction with global leaders and sightseeing of the beautiful country of Ireland will be presented in an interactive and exciting media presentation, including visual posters, computer slideshows and question and answer sessions with the Leadership Development student that attended the Study Abroad Trip to Dublin.

FREQUENCIES OF EUSPERM VS. PARASPERM IN DROSOPHILA

PSEUDOOBSCURAJenna Alloush, Angelo Montero, William Washington, and Crystal Pristell
Department of Biological Sciences, Seton Hall University

Spermatogenesis is a process in which male spermatogonia develop into mature sperm cells. Cells undergo post-meiotic maturation to become functional sperm. Within the species *Drosophila pseudoobscura* two types of sperm, eusperm and parasperm as a result of the maturation. When sperm enter the female reproductive tract of this species, spermicide reduces the sexual conflict between the sperm destroying the parasperm and preserving the eusperm for fertilization. Observation has shown that the parasperm are smaller in size than the eusperm and are therefore easily distinguishable. Based on previous work in successfully developing an *in vitro* system for culturing *Drosophila* sperm cells, we will compare the frequencies of these two sperm types within *D. pseudoobscura* in culture. Our hypothesis is that there would be more parasperm than eusperm within culture, which would increase the selectivity of fertilization. Our population would include 3 slides, each containing the sperm of 8 to 10 seminal vesicles, the male reproductive organ where sperm mature. The sample would then be the number of eusperm in comparison with parasperm. To ensure that this is a simple random sample, any male of that species can be chosen causing the number of sperm to differ from each slide. After all the data is collected the frequency of each sperm type would be analyzed through graphical representations. Error will be factored in through calculation of the standard deviation and outliers.

LEADERSHIP DEVELOPMENT TRAVEL ABROAD TO DUBLIN, IRELAND

Kristine Scotto, Samantha P Lee, Christina L Baker, Bradley B Childs, Anthony J Cramond, Alexander S Curto, Brian P Daniels, Gregory M Gay, Scott B Giveans, Kathryn M Green, Andrew J Kriner, Andrew J Misura, Joseph J Mola, Matthew C Sadowski, Michael A Spizzuco, Andrew J Weinstein, and Christine M Wotton

The Leadership Development Honors Program
Center for Leadership Development, Stillman School of Business, Seton Hall University

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Their exposure to a different cultural experience will not only strengthen their ability to work effectively across geographic boundaries, but also develop their interpersonal skills in communicating and working with people of diverse backgrounds. The highlights of the business visits, interaction with global leaders and sightseeing of the beautiful country of Ireland will be

presented in an interactive and exciting media presentation, including visual posters, computer slideshows and question and answer sessions with the Leadership Development student that attended the Study Abroad Trip to Dublin, Ireland.

WHO REVEALS? TRANSPARENCY AND THE IMF'S ARTICLE IV CONSULTATION

Daria Preston and Kelsey Coolidge

John C. Whitehead School of Diplomacy and International Relations, Seton Hall University

A dramatic change has taken place in the manner in which the IMF conducts its annual surveillance of member state economies. These annual consultations (known as Article IV consultations) were originally viewed as private matters that were never intended to be made public. Starting in 1997, the IMF released summary information about a country's consultation on a voluntary basis. Recently, countries could choose to release the consultation team's report itself. Despite these new efforts at transparency, only about 70-80% of these Article IV reports are made public in a given year. The proposed paper aims to explore the sources of this variation and to test three alternative explanations for variations in cross-country transparency. First, there might be country-level correlates: regime type, trade dependence, and the state of the economy. Second, a country's scope of engagement with the IMF might be a factor. Finally, we will test for regional relationships, as information release may be based on what neighboring countries do. Understanding which of these explanations has greater explanatory power tells us about the sources of transparency in the global economy.

THE ROAD WEST

Mary Ciccone

Department of History, College of Arts and Sciences, Seton Hall university

Master's thesis in European History incorporates a comprehensive filmed interview with John Kushnir, born in Soviet Ukraine in 1930. After two years under German occupation from 1941-43, and the subsequent retreat of German forces from Stalingrad, the Kushnir family evacuates their homeland and begins the trek west. Through Moldavia, Romania, Hungary, Poland and finally into forced labor in Germany, the family remains together through many trials. Facing repatriation after liberation by Allied forces, the Kushnirs remain steadfast in their desire to head west.

Virtual Presentations

Tuesday, April 12 5:45 – 7:30 PM Language Lab, Fahy Hall Room 222

PUBLIC HEALTH OFFICIALS' ACTIONS IN RESPONSE TO THE OIL SPILL

Helder T. Mendes

Department of Political Science and Public Affairs, Seton Hall University

The purpose of this paper was to illustrate how the Department of Health and Human Services monitored and responded to the community's health threat from the oil spill on Pirate Island. By working collaboratively with the Centers for Disease Control and Prevention and the American Association of Poison Control Center, the incidence rate and severity of illnesses were tracked and any health trend that required further investigation notified public health officials of this required action. A toll-free helpline was established to support and counsel anyone directly or indirectly impacted by the oil spill and served as a useful surveillance resource. A mobile medical unit was also implemented to triage and provide basic care for responders and residents concerned about the health effects of the oil spill. By working with the National Institute of Environmental Health Sciences and the Occupational Safety and Health Administration, the media and other communication means were used to alert and educate residents, workers, tourists, and responders of precautions measures and the importance of seeking and reporting any potential direct or indirect exposure.

SUSTAINING A SALT MARSH COMMUNITY ON PIRATE ISLAND

Svitlana Brinzan

Master of Healthcare Administration, Seton Hall University

The purpose of this research was to identify the main health themes of the largest accidental marine oil spill in the history of the petroleum industry in the Salt Marsh on Pirate Island. Experts state that the impact of the disaster on human health and well-being has not even begun to be quantified. Many national and local organizations are trying to assess the effects on human health with many response activities still occurring. This accident spilled more than 100 million gallons of crude oil into the Salt Marsh. The oil and its residue has killed countless birds, fish and other wildlife, and harmed numerous industries that depended on the Salt Marsh for survival. This research was trying to determine what dimension of human health was most vulnerable: the physical, social, mental, emotional or spiritual. The findings pointed that hazards related to this oil spill and the range of potential acute and long-term effects of oil spills on human health is incomplete and leads to uncertainty. The findings suggest a need for long-term commitment to coordinated research activities in order to identify acute, chronic and long-term health effects of oil spill on the Salt Marsh Community.

MENTAL AND SOCIAL IMPACTS BY THE GULF OIL SPILL

Masumi Shirai

Master of Healthcare Administration, Seton Hall University

The gulf oil spill damaged not only the environment, but also people and communities along the Salt Marsh on Pirate Island. This catastrophic disaster changed them visibly and invisibly. There exists three types of health problems: (1) physical impacts, (2) mental impacts and (3) social or behavioral impacts. These problems are highly associated and complicated to solve. Through the social services work activities, interviews and questionnaires were conducted to analyze the impact of the oil spill on the mental health, and the social or behavioral changes in the affected population. The sample comprised 1,000 residents from the Salt Marsh affected by the oil spill. Interview and questionnaire were held every 3 months to collect and analyze the data. As to the questionnaire, scales referring to health-related quality of life (SF-36) were administered. The results suggest that the affected population express similar concerns which stem from uncertainty and the more affected people tend to suffer from mental symptoms like anxiety, depression and anger more. As time goes by, there is an increase in behavioral or social impacts among the population, such as substance abuse, domestic violence, and child abuse. Many of them also suffer from the financial worries, and some have language and ethnic problem. These factors also influence on them more mentally and socially. It is assumed that the longer the affected people suffer from the disaster, the more complicated and diverse the mental and behavioral impacts will become. Social services workers should be closer to the vulnerable people and help them recover their peace through their activities such as counseling.

THE IMPACT OF THE OIL SPILL ON OUR SCHOOL SYSTEM

Cesar Diaz

Master of Healthcare Administration Program, Seton Hall University

The purpose of this research was to track the development of gastro-intestinal illnesses within the student population, as a result of ingesting sea food coming from the oil spill affected area. In order to lower the levels of sea food-related food poisoning in our school system, the Board of Education decided to develop a close partnership with the Local Public Health Office; The goal of this partnership is to educate parents and students in ways of preventing illnesses coming from ingesting polluted sea food. The Pirate Island Board of Education decided to eliminate sea food (until the end of the current school year) from our schools' menus, to prevent any food intoxication cases within our schools' grounds. To achieve that goal, The Board of Education decided to work with its vendors, to distribute more menus based on vegetables, and white meats (chicken, turkey) to provide our children with safe and nutritious foods.

THE ROLE OF THE INFECTIOUS DISEASE SPECIALIST IN THE GULF OIL DISASTER

Ilavarasi Dharmarajan

Master of Healthcare Administration, Seton Hall University

The purpose of this research was to identify the community role of the Infectious Disease Specialist in the Gulf Oil Spill disaster. The Gulf Oil Spill has created major environmental havoc and has also greatly harmed the ecological food chain. The Infectious Disease Society of America (IDSA) is playing an active role in reducing and preventing harmful effects of various diseases due to this disaster. Infectious Disease Specialists are conducting research on the various contaminations due to this oil spill via water, food and air surveillance. Water samples are reviewed on a periodical basis for the concentration of chemicals to see if the water is safe for aquatic animals and ways to reduce the chemical concentration. Air samples are being tested for odor, if it is safe for people to travel in the affected zones. The various tests have helped identify the appropriate type and quantity of oil dispersants. IDSA has played a major role in restricting the damage caused by the oil spill in preventing the spread of food contamination by closing the waters for commercial shipping and also by the various tests on air, water and food contamination. Despite the uncertainty and the complexity of potential long-term health effects, Infectious Disease Specialists will continue to monitor the communities affected by the Gulf Oil Spill for years to come.

THE HUBBARD GLACIER AND MT. MCKINLEY

Kelly Wostal

Department of Physics, Seton Hall University

This presentation is a video slideshow with my own narration of my trip to Alaska, focusing on the Hubbard Glacier and helicopter ride to see Mt. McKinley. The narration will focus on glaciers, glaciations, and the effects that the melting of the glaciers have on the Geology of Alaska. It will discuss how human activities are increasing the natural rate of glacial melting. It will also include personal reflections how important it is for people to become aware of what is happening to these beautiful works of nature. The presentation will include pictures of McKinley the summit and the scenes along the mountain ascent. Including where the glaciers have traveled and the glacial troughs left behind. These tell about the mountain and its history. This trip to our 49th State was fun and educational I would love to be able to share some of my experiences with others. Please watch listen and focus on the beauty and information in the following presentation.

THE ROLE OF THE CENTER FOR CONTROL DISEASE WORKER IN THE GULF OIL DISASTER

Jesse Bright Adu-Odei

Master of Healthcare Administration, Seton Hall University

The Purpose of this research was to identify the community role of the Center for Disease Control (CDC) worker in the Gulf Oil Spill disaster. The Gulf Oil Spill has created major environmental destruction and has also greatly harmed people in the areas affected. The role of the CDC worker is to use surveillance system to help track changes in the number and severity of illnesses and injuries in a population. The Center for Disease Control will also be providing health protection guidance to workers, coastal residents, and Gulf Coast visitors through public service announcements, fact sheets, Twitter postings, Web postings, and the news media

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) RESPONSIBILITIES: OIL SPILL AT PIRATE ISLAND

Mandy Damoah

Master of Healthcare Administration Program, Department of Political Science and Public Affairs, Seton Hall University

The purpose of this paper is to research the role of OSHA in the oil spill at Pirate Island. The complexity of the oil spill in Pirate Island is beyond description, causing several health and environmental hazards. Our commitment here at OSHA is to assure that the workers obtain the appropriate training to monitor Pirate Island that meets our requirements. We have been active since April 26th sending many of our personnel to Pirate Island. Our staff has visited many sites and has identified many health hazards. Our main health concern is to ensure workers are safe from all hazards particularly the chemical exposure and the heat related illness. OSHA makes sure that the workers are not exposed to toxic chemicals, by bringing our own team of hygienists to monitor the shore and the cleanup vessels air. Also, we provide protective equipments, such as protective gloves, boots, coveralls, and more, for all workers. Our focus is the worker, and we want to minimize health problems as much as possible. They also have the right to work in a safe place as other workers. In addition, workers are encouraged to report any safety risk related issues ignored by Pirate Island officials. OSHA ensures that cleanup workers are protected if fired because of safety risk related issues. We understand cleanups have to be done as soon as possible however the workers have to be safe as well.

Virtual Tour of Seton Hall's Second Life Activities

Tuesday, April 12 5:45 – 7:30 PM Fahy Hall Room 222

"Pirate Island"



THREE DEPARTMENTS ONE ISLAND

Mary Balkun, Anne Hewitt, Martha Schoene, Marian Glenn and Heidi Trotta
English Department, Seton Center for Community Health, Department of Physics,
Department of Biological Sciences & Department of Information and Technology, Seton Hall
University

This presentation will take participants on a guided field trip within Second Life. No experience with Second Life is necessary, but participants who have Second Life avatars are invited to join the explorations "in person." Information on how to create a Second Life Avatar is provided at the end of this abstract.

Meet us on Tuesday April 12, 2011, in the language lab, room 222 of Fahy Hall, from 5:45-7:30PM EST to explore Pirate Island. Visit the House of the Seven Gables, the gardens, graveyard and atmosphere. Listen to 5 minute taped talks to showcase the Community Health student's research from their Oil Spill project. Discover the diverse causes that can lead to an unexpected fish kills in a Salt Marsh.

The House of 7 project was initially designed (Fall 2007) to give students the opportunity to co-create a learning environment, specifically Nathaniel Hawthorne's House of the Seven Gables. Based on research into the period and the principles of material culture theory, students created projects and assignments that enable visitors to the House in Second Life to learn about such nineteenth-century topics such as the cult of domesticity and true womanhood, the impact of the railroad on the economy, and gardens as gendered space. Since the project's inception, the scope has expanded to the House of 7 becoming a Gothic Center where Second Life residents can come to experience, learn, read, write, and discuss Gothic Literature.

The Dynamic Salt Marsh is a simulated coastal environment designed for use in Earth Science, Ecology, Environmental Science and Geology courses for Undergraduates and Graduate students on any college campus, within Second Life, a multi-user virtual environment.

This project was piloted (Fall, 2009) in BIOL2341AA - Ecology, an undergraduate face-2-face course taught by Professor Marian Glenn and in ENVL1019WB-Environmental Geology, a web based undergraduate class taught by Martha Schoene.

For their capstone project (Fall of 2010) the students from the Masters of Healthcare Administration online classes created the content and information needed to introduce an oil spill activity into the salt marsh. They focused on the epidemiology (types of disease and distribution) and the contribution of the environment to the quality of life. Subsequently the web based Environmental Issues in Geology students cleaned up the oil spill and restored the marsh to a healthy state. The students from all three Pirate Island projects will meet to share their contributions to this Virtual World.

The Salt marsh virtual environment is based on the salt-water marsh ecosystem, at Horseshoe Cove, Sandy Hook, NJ, a popular site for educational field trips. The simulated marsh presents a variety of real world challenges in coastal zone management that are best addressed using systems thinking and collaborative data-sharing. Student activities focus on collaborative inquiry-based exploration and synthesis.

The Dynamic Salt Marsh activity demonstrates how to gather, interpret and analyze data to solve real-world problems - - a mysterious fish kill an accidental oil spill... without harming any plants or animals. This presentation will take participants on a field trip within Second Life. No experience with Second Life is necessary, but participants who have. Second Life avatars are invited to join the explorations "in person."

Prior to the presentation Participants will need to Download Software -

<http://secondlife.com/support/downloads.php> , create an avatar and join the Second Life NMC group <http://sl.nmc.org/join>.

Special Note:

These directions are for creating a *free*, standard account on the *adult* (age 18 and older) Second Life ® Linden Lab grid using the NMC Second Life Account Website portal found at: <http://sl.nmc.org/join>. Fill out the registration form. Upon creation, you will enter Second Life via NMC's Orientation Island, a welcome center specifically designed for the educational community. Click on the Map button and Select Seton Hall - Teleport and head southeast towards the shoreline. We will meet outside the Visitor Center by Welcome bulletin board.

For tutorials in How to begin in Second Life use the link below.

http://tltc.shu.edu/virtualworlds/mediawiki/index.php/Virtual_Marsh#Implementation

Link to You Tube to preview videos posted in the Second Life Salt Marsh

http://www.youtube.com/view_play_list?p=F70072D3385F2F46

For additional Student and Visitor Instructional Materials: *Creating Your Second Life Account for Salt Marsh Dynamics* and *Finding the Virtual Marsh on Pirate Island* - [Instructions](#)
(2) *Second Life Quick Start Guide* - [Second Life Skills](#)

STUDENT RECITAL AND EXHIBITION

Opening reception on Wednesday, April 13th from 5:00-8:00pm
Walsh Gallery Hours: Weekdays 10:30am-4:30pm Admission Free

THE DEPARTMENT OF COMMUNICATION AND THE ARTS STUDENT RECITAL AND EXHIBITION

Christine Krus, Dena Levine, Lauren Schiller

The Divisions of Art, Art History & Design and Performing Arts present their seventh annual student recital and exhibition featuring the work of Seton Hall University's most talented students in the arts. Paintings, drawings, prints, sculpture, photographs and design work will be on display in the Walsh Gallery from April 11-22. The opening reception will take place on Wednesday, April 13th from 5:00-8:00pm. Refreshments will be served.

The recital will be held in Jubilee Hall Auditorium on April 13th at 3pm, preceding the opening reception. The performance will feature soloists as well as select smaller ensembles of the music program including the Vocal Chamber Ensemble, Jazz Ensemble, and chamber groups from the Chamber Orchestra.



ORAL PRESENTATIONS

A SYMPOSIUM ON GLOBAL HEALTH AND HEALTH ISSUES IN THE PHILIPPINES

Wednesday, April 12 12:00 – 2:00 PM Main Lounge, University Center

Philip Paragas, RN, Stephanie Rigor, Rachel Sabatura, B and D Scholars, Aleena Paragas Samantha Quevedo , Rebecca Rondinella, Undergraduate Students, Mary Ann Scharf, Ed.D, RN, Maria Serrano, MSN, RN, Kathleen Sternas, Ph.D, RN, Faculty , Seton Hall University

Nursing students and faculty participated a study abroad educational opportunity in the Philippines in January 2011. This opportunity was a collaborative endeavor between the College of Nursing, University of the Philippines and the College of Nursing, Seton Hall University. Fifteen nursing students, two Clinical Nurse Leader graduate students, an RN to BSN student and 12 undergraduate nursing students participated. Seton Hall University nursing faculty organized the study abroad program in collaboration with the Deans of the two Universities. The objectives for the study abroad experience were: to explore community health nursing in urban and rural settings; and explore cultural experiences in the Philippines. Students learned about the health problems and health care delivery system in the Philippines.

This symposium focuses on students' research on health problems in the Philippines. Through a B & D scholarship or independent study experience, students further investigated selected health problems in the Philippines and researched the problem from a global perspective. Health problems addressed in this symposium are: dengue fever, malaria, HIV/AIDS, tuberculosis, and malnutrition. Prevalence of the health problem, signs and symptoms, prevention and treatment strategies were researched.

Presentations will focus on: Further Study of Dengue Fever, Stephanie Rigor, B&D Scholar; Malaria in the Philippines and as a Global Health Issue, Rachel Sabatura, B&D Scholar; HIV/AIDS as a Global Health Problem: HIV/AIDS in the Philippines, Philip Paragas, RN, B&D Scholar. Students will present on: Tuberculosis as a public health issue in the Philippines, Aleena Paragas; Differences between dengue fever and malaria, Samantha Quevedo; and Malnutrition as a global health problem, Rebecca Rondinella.

Students and faculty participating in this study abroad experience will present on their healthcare and cultural experiences in the Philippines. Additional student participants included: Isa Bacardi, Kaiann Chu, Peta Kaye Johnson, Mohini Patel, Jessica Shremshock, Christopher Weathers, Undergraduate Students, and David Darius, Ron Reda, Serge Wandji, Clinical Nurse Leader, Graduate Students.

Through students exposure to global health problems, students have a better understanding of health care problems and interventions utilized to solve these problems in different countries.

ORAL PRESENTATIONS

SYMPOSIUM ON THE FIRST YEAR EXPERIENCE

Friday, April 15, 2011, 10:30 - 11:30, NU Room 101

Rev. Dr. Forrest Pritchett

Freshman Studies

First year students will share their accomplishments and insights in the areas of academics, technology and leadership endeavors. This symposium will feature participants in the university's honors program; first year students who received a 4.0; and participants in the Business and the Dr. Martin Luther King, Jr. Leadership Programs. Selected e Portfolios will be highlighted from within the first year student population. All participants will also identify and discuss a "benchmark of institutional quality" that is most significant to them.



ORAL PRESENTATION

Psychology Club Presentation

Tuesday, April 12, 6:00 – 7:00 PM Jubilee Hall Room 383

THE HISTORY OF PSYCHOLOGY IN THE COLLEGE OF ARTS AND SCIENCES AT SETON HALL UNIVERSITY

Michael Vigorito

Department of Psychology, Seton Hall University

The discipline of psychology became "modern" and scientific when it adopted the experimental methods at the end of the 19th century. But Catholic colleges struggled with the new scientific psychology as departments attempted to incorporate the new science into a changing curriculum in a manner consistent with the Catholic mission of the colleges. We will explore the events and struggles that took place at Seton Hall- from the contributions of a Benedictine monk trained in two of America's influential experimental psychology programs to a student revolt that made the national headlines as the turbulent 1960s came to a close.

ORAL PRESENTATIONS

Psychology Department Research Symposium

Saturday, April 16, 1:00 – 3:30 PM Jubilee Hall Room 383

IDENTITY SALIENCE WITHIN A PARAMILITARY HIERARCHY

Anthony W. Caputo and Andrew F. Simon

Department of Psychology, Seton Hall University

The purpose of the study is to investigate the effects of identity salience on decision making. Police officers served as participants and were presented with stimulus information intended to prime a particular component of identity. This sample was selected because police officers embrace multiple identities, including membership in a paramilitary organization separate from a community, as well as membership in a public-service organization that works with a community. After priming a component of identity, participants read a vignette in which a real-world dilemma was presented. The vignette was designed to elicit potentially-competing aspects of identity as police officers. Decision options for resolving the dilemma were then presented. Findings will facilitate insight regarding the priming of identity, identity salience, and how these factors impact decision making.

MATCHING FACES

Jesse Hynes and Marianne E. Lloyd

Department of Psychology, Seton Hall University

This main purpose of this study was to extend upon research--that demonstrated people comparing side by side photos make a mistake 15 percent of the time (Megreya & Burton 2008). As well as whether the size of a simultaneous witness line-up has an effect on a subject's facial recognition ability. Participants were asked to perform a facial recognition task in which they were asked to study a face and then make a decision as to whether that face was present in a simultaneous line-up of two or three faces, which were comprised of faces that were similar to the face studied, possibly including the same person's face taken with a different camera. Both prior to and after being shown the line-up of faces, the participants were asked to rate their confidence in the ability to do the task. The results of this study show that there was no significant difference in performance in the two or three person conditions, $t(55)=1.46$, $p<.15$, and both groups performed significantly above chance ($M=.73$, $t(21)=7.93$, $p<.001$ and $M=.68$, $t(34)=14.34$, $p<.001$ for the 2- and 3-person lineups, respectively. Implications for the results in regards to eyewitness memory will be discussed.

EXPERIENCES OF INTERNET EMBARRASSMENT IN COLLEGE STUDENTS

Joseph J. Tucciarone Jr. and Paige H. Fisher

Department of Psychology, Seton Hall University

Media technology (e.g. Internet via social networking, email, texting, etc) has changed the way we interact with one another. For instance, the more time college students spend communicating on Facebook, the less time they spend socializing in face-to-face settings. While studies have predominantly examined Internet experiences of college students in general, specific attention has also been paid to Internet experiences of shy and socially anxious individuals. Prior research suggests that individuals who fear social rejection prefer the anonymous nature of the Internet. Additionally, shy and socially anxious individuals seem to prefer online relationships to in-person relationships, though they have fewer Facebook friends than those without impairment. It is possible that the anonymity of the Internet might lessen fears of embarrassment typically experienced by shy individuals. To date, no research has explored the impact of technology on embarrassment for any population. The current study investigates differences in levels of embarrassment during face-to-face interactions compared to online interactions. Participants will respond to scenarios that describe either embarrassing Internet interactions or embarrassing face-to-face interactions. The impact on both shy and non-shy individuals will be investigated.

ATTITUDES TOWARDS ADULTS WITH ATYPICAL BEHAVIOR

Caitlyn A. Cafferty and Paige H. Fisher

Department of Psychology, Seton Hall University

This study explores the attitudes of adults toward an adult peer with autism and assesses the efficacy of two stigma-reducing interventions. Previous studies on attitudes of children and adults towards a child with autism have found that both adults and children rate a child displaying autistic behavior less favorably than a child displaying typical behavior. These studies have also assessed several different interventions designed to improve attitudes towards children with autism. The two most commonly used interventions involve providing descriptive information or explanatory/neuropsychological information regarding individuals with disabilities. Descriptive information emphasizes shared characteristics and interests between the reader and the individual with the disability. Explanatory information provides information, typically medical/neuropsychological, explaining the cause of the disability and related behaviors. Given that autism affects adults as well as children, it is important to investigate public attitudes toward an adult with autism as well as the impact that different types of information have on those attitudes. The current study investigates the efficacy of descriptive and neuropsychological information in reducing the stigma of an adult with autism. Participants were randomly assigned to a descriptive or neuropsychological condition. After watching a short

video of a man displaying stereotypical autistic behaviors, attitudes and intended behavior toward the individual in the video were measured to compare the benefits of each intervention.

REMEMBERING YOU: GENDER IDENTITY AND EXTRACTION MODE'S EFFECT ON AUTOBIOGRAPHICAL MEMORY

Annette C. Resenhoeft and Janine P. Buckner
Department of Psychology, Seton Hall University

This study examined how mode of narrative recall (written or oral) and gender identity mediates individuals' expressions of autobiographical memory. Based on previous research, it was predicted that individuals who identified as “feminine” expressed significantly more emotions, detail, and social themes than other gender-identified participants, across both recall modes. Results confirmed this hypothesis. Moreover, as predicted, “Masculine” individuals expressed more emotions, detail, and social themes in written than oral narratives.

REDUCING CONJUNCTION ERRORS: THE ROLE OF SEMANTICS AND PICTORIAL ENCODING ON MEMORY

Shane Pierre and Marianne E. Lloyd
Department of Psychology, Seton Hall University

An experiment was conducted to test whether or not there is an advantage to low or high semantic overlap in avoidance of memory conjunction errors as previously researched (Odegard, Lampinen, & Toggia, 2005). During the study phase of the experiment, participants were shown words with either two pictures describing the root words within the conjoint word or one picture describing the entire conjoint word, and in the test phase were shown either old words which were previously shown or conjunction words, which were made up of two previously studied words, which semantically was highly or lowly related to its root word in the study phase. The results of the study are discussed in terms of two models of avoiding conjunction errors: metacognitive process or impoverished familiarity.

REGULATORY FIT IMPACTS SPEED-ACCURACY TRADE-OFF, NOT WORKING MEMORY

Justin T. Maxfield and Kelly M. Goedert
Department of Psychology, Seton Hall University

Traditionally, cognitive psychology has paid little heed to motivational factors that may influence performance on cognitive tasks. Recently, however, researchers have demonstrated that regulatory focus and the reward structure of a task interact to influence cognitive performance (Maddox, Baldwin, & Markman, 2006). Regulatory focus is a person's sensitivity to potential gains or losses in the environment. When participants' focus matches the task reward structure (known as a regulatory fit) they demonstrate cognitive flexibility and they demonstrate cognitive perseveration when it does not. However, little is known about the cognitive mechanism, or mechanisms, that underlie this effect. One possible explanation for the increased

cognitive flexibility under regulatory fit is that the fit enhances the executive attention function of working memory. In this talk, I will describe my current study designed to test the hypothesis that regulatory fit exerts its cognitive effects by selectively enhancing working memory “operations” – hence, executive function – as opposed to working memory capacity. Data collected to date suggest that working memory is not the system in which regulatory fit exerts its effects. Instead, I observed a speed-accuracy trade-off, with people in fit adopting a more deliberate mode of processing than those in a mismatch. These findings may be used to elaborate on the knowledge of cognitive changes that regulatory fit brings about.

SIGN-TRACKING AND DRL: AN EXPLORATION OF SIGN-TRACKING AS A FORM OF IMPULSIVE RESPONDING AMONG F344 AND HIV-1TG RATS

Nicole Anastasides^{1,2}, Michael Vigorito^{1,2}, and Sulie L. Chang²

¹Department of Psychology and ²Institute of NeuroImmune Pharmacology, Seton Hall University

In the laboratory rats will approach and interact with objects, sometimes excessively, that reliably precede the presentation of food. Research has demonstrated that this behavior, called sign-tracking, may be a form of impulsive responding. The current experiment examined the correlation between sign-tracking and performance on a DRL schedule, an operant procedure that measures impulsivity. Eight Fisher (F344) rats and eight HIV-1 transgenic (HIV-1 Tg) rats previously given sign-track training were used as subjects. Three phases composed the experimental procedure. In the first phase the rats were given daily sessions of training to emit lever presses. In Phase 2, rats were given DRL 15 sec training, where rats were required to withhold their next lever press until after a minimum of 15 seconds had lapsed. During DRL training some rats were provided with objects to promote collateral behavior as a means to assist with DRL efficiency. Finally, rats were tested with the same sign-tracking procedure given prior to the start of this present experiment. The efficiency of lever pressing and interresponse times (IRTs) during DRL training were evaluated, as well as the correlation between DRL performance (Impulsivity) and sign tracking. Rats that learned sign-tracking faster are expected to do more poorly on the DRL 15 sec procedure compared to those that took a longer time in learning sign-tracking, indicating a greater impulsivity. Strain differences among the F344 and HIV-1 Tg rats were also examined.

A COMPARISON OF THE EFFECTS OF DIFFERENT FORMS OF METHAMPHETAMINE ON PHARMACOKINETICS, LOCOMOTOR ACTIVITY, AND SIGN-TRACKING PERFORMANCE IN RATS

Christine Michaels¹, Michael Vigorito¹ and John R. Sowa²

¹Department of Psychology and ²Department of Chemistry and Biochemistry (Seton Hall University)

Methamphetamine (METH) abuse is a major public health concern. According to the 2009 National Survey of Drug Use and Health (NSDUH), 502,000 individuals abused the drug within a month of taking the survey. METH obtained for research purposes adhere to a strict process of synthesis which tracks purity of a drug. According to law enforcement, METH has been

increasingly produced in clandestine laboratories using a variety of ingredients available in stores. Thus, the effect of impurities resulting from clandestine METH production on METH pharmacokinetics and drug use is poorly understood. Using rats as subjects, the present study examines the effects of d-METH and d-METH adulterated with the levo form of the drug on pharmacokinetics and two behaviors associated with drug addiction, behavioral sensitization and sign-tracking. We hypothesize differences in locomotor sensitization, with more robust locomotor activity in the groups treated with d-METH and d,l-METH, than in the l-METH and untreated controls. Sign-tracking reflects the impact of incentive salience on behavior. Stimuli associated with rewards (incentives) such as food and drugs of abuse can attain the same rewarding properties as the rewards themselves. The acquisition of incentive salience by reward-related cues has been suggested to underlie the pathology of drug addiction (Robinson & Berridge, 1993). In the sign-tracking procedure an object is imbued with incentive properties by pairing the object with food reward. We hypothesize that more robust sign-tracking behaviors will emerge in the d-METH-treatment groups compared with the l-METH and untreated controls. Data is currently being collected for this experiment.

