

“Inquiring Minds Want to Know!”

2011 OAHPERD Student Research Poster Session

7:30-8:20am, Lobby

Predicting Injury Within a Firefighting Population: Looking Through the Lens of Andersen and William's Sport and Injury model

Ashley Billingsley

*Undergraduate Students, Exercise Science Department
Pacific University*

Faculty Advisor: Rebecca Y. Concepcion, Ph.D.

The purpose of this study is to examine levels of stress symptoms and coping mechanisms in firefighters to determine whether there is a link between those variables and risk of injury.

Should Competitive Swimmers Incorporate ‘Respiratory Muscle’ Exercises Into Their Training Regimen?

Alejandro Contreras

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisor: Shawn O. Henry, Ph.D.

Competitive swimmers appear to be a unique population among athletes, with greater values of pulmonary function than predicted by age and height. The increased pulmonary function may be attributed to genetics, swim-specific training, or both. Regardless, swim performance is relatively dependent upon pulmonary function. Purposefully incorporating breathing exercises – repetitions of breaths with resistance to inspiration— has been suggested by coaches and marketing as a viable means to improve pulmonary function, and therefore improve athletic performance.

Effects of Concurrent Exercise Modality on the Acquisition of Academic Information

Allie Hassenger & Katelyn Liebe

*Undergraduate Students, Exercise Science Department
Pacific University*

Faculty Advisor: Brian H. Jackson, Ph.D.

The purpose of the proposed study is to determine whether college students can effectively learn and retain academic content while in the process of being physically active. In addition, we propose to examine which exercise modality will yield the best learning results. If results allow, educational facilities could implement active classrooms into their curriculum, benefiting students both physically and cognitively.

Burnout and Perfectionism With the Influence of Academic Motivation in NCAA Division III College Athletes

Brittney Anderson

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisor: Rebecca Y. Concepcion, Ph.D.

Many factors can increase burnout in athletes. We are particularly interested in factors specific to

collegiate athletes who have significant academic demands as well. We are also interested in the role of perfectionism in this relationship.

Using Heart Rate to Characterize Physical Activity Habits of Firefighters

Franklin Howard

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisor: Shawn O. Henry, Ph.D.

Although it is generally recognized that firefighters should maintain a degree of physical fitness to be safe and effective in their profession. Typical recommendations for maintaining aerobic fitness suggest engaging in moderately challenging physical activity for at least 30 minutes per day, most days of the week. Although firefighters may engage in strenuous activity associated with some emergency calls, little else is known about the habits physical activity levels of firefighters. The proposed research study will utilize heart rate monitors to examine the activity levels of firefighters during the course of both on-shift days and off-shift days.

Firefighting: Beast, Brawn, and Balance

Shelyce Ichimura, Jenna Matsumoto, & Emily Melzer

*Undergraduate Students, Exercise Science Department
Pacific University*

Faculty Advisor: Shawn O. Henry, Ph.D.

Firefighting is one of the most dangerous non-combatant jobs, and sufficient balance ability is imperative for safety. Firefighters work in unstable and unpredictable conditions, including climbing on structurally-unsound roofs, ascending stairs in poor visibility, and balancing on ladders while wearing bulky protective equipment. Therefore, the purpose of this study is to examine the effect of wearing personal protective equipment on balance ability. Findings may lead to development of improved protective gear and balance-training programs for firefighters.

Free Throw Performance and Stroboscopic Training

Jefferson Lau

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisors: Andrew Alstot, Ph.D. & Brian H. Jackson, Ph.D.

Nike Vapor Strobe glasses have been designed with the intent to improve athletic performance through stroboscopic vision training. The purpose of this study is to examine the effect of training using Nike Vapor Strobes on the performance of a basketball free-throw task.

The Effects of a Rotator Cuff Strength Training Program on the Flat and Kick Serves in Tennis

Evan Liu

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisors: Andrew Alstot, Ph.D. & Brian H. Jackson, Ph.D.

Previous studies have demonstrated that increasing the strength and range of motion of the rotator cuff has benefits on serve velocities. However, the effect on other types of serves (i.e., the “kick” serve) is unknown. Thus, the purpose of this experiment is to examine the effect of a rotator cuff strength training

program on “kick” serve performance. Additionally, the effect on tennis serve velocities will also be evaluated.

The Influence of Self-Efficacy and Adherence to Prescribed Home Physical Therapy in Patients

Lauren Mason

Undergraduate Student, Exercise Science Department

Pacific University

Faculty Advisor: Rebecca Y. Concepcion, Ph.D.

The purpose of this study is to investigate the relationship between adherence to prescribed home physical therapy exercise programs and level of self-efficacy. Additionally, this study will examine reasons for adherence and barriers.

Talking While Exercising: Does it Really Matter? An Examination of the Physiological Consequences of Speech Production During Physical Activity

Kate Mitchell, Haley Brown & Nathan Gilpin

Undergraduate Students, Exercise Science Department

Pacific University

Faculty Advisor: Shawn O. Henry, Ph.D.

In the past several years there has been much debate about the effects of talking on exercise. It has been proposed that phonation during submaximal exercise may increase lactate production, while decreasing cardiopulmonary variables such as VO_2 , VCO_2 , pulmonary ventilation, respiratory frequency, tidal volume, end tidal CO_2 , and heart rate. Therefore, the purpose of this study was to examine the effects of phonation on lactate concentration and cardiopulmonary variables.

Identifying Mediating and Moderating Variables of Goal Setting for Increasing Daily Physical Activity

Dal-Hyun Moon

Doctoral Candidate

Movement Studies in Disability

Oregon State University

Faculty Advisor: Joonkoo Yun, Ph.D.

The purpose of this presentation is to propose a research study that will identify the specific mechanisms by which a goal setting theory increases daily PA. The poster will describe: (a) the needs of study; (b) the current literature; (c) the methods to be employed, and (d) the potential implications.

Using the Theory of Planned Behavior and Self-Efficacy Theory to Explain General Physical Education Teachers' Intentions and Behaviors in Inclusion

Jennifer Morgan

Doctoral Candidate

Nutrition & Exercise Science: Movement Studies in Disability

Oregon State University

Recent studies have laid valuable groundwork for identifying factors that influence general Physical Education teachers' beliefs, intentions, and behaviors towards inclusion, however their use of a single theoretical model has not sufficiently explained intentions and behaviors. Therefore, the purpose of this

project is to utilize two theoretical perspectives to identify potential factors affecting GPE teachers' inclusive intentions and behaviors. This poster is a presentation of a research proposal, including review of current literature, methods that will be employed in this study, and future implications.

Fear of Falling and Fall-Efficacy: What is the Impact of an Exercise Leader?

Marta Richter

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisor: Rebecca Y. Concepcion, Ph.D.

Exercise leaders may positively influence an older adult's participation in exercise and their self-efficacy for maintaining balance. The purpose of this study is to examine the relationship between the presence of an exercise leader and levels of fall-efficacy in the older adults.

The Effects of an Individual-Specific, Result-Dependent Practice Schedule for Learning a Dart Throwing Task

Mark Rohde

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisors: Andrew Alstot, Ph.D. & Brian H. Jackson, Ph.D.

This study will examine the effects of a progressive contextual interference schedule on performance of a dart throwing task. It is hypothesized that individualizing the contextual interference schedule based on the learner's performance outcomes will lead to superior performance.

Firefighting and an In-House Physical Training Program

Trevor Schongalla

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisor: Shawn O. Henry, Ph.D.

Although the firefighting profession has always been associated with physicality, the importance of developing appropriate fitness assessment protocols and fitness programming has been increasingly emphasized in the last several years. The firefighting community has recently endorsed a policy document termed the "Wellness Fitness Initiative," with the goal of promoting overall firefighter fitness and, possibly, lowering risk of preventable injuries while on duty.

Inclusion Intervention for Afterschool Staff

Jennifer Taylor

Doctoral Candidate

*Nutrition & Exercise Science: Movement Studies in Disability
Oregon State University*

This poster will present a research proposal for examining the effects of an intervention for afterschool program staff's behavior and intention to include youth with disabilities. The intervention strategies will be based on a theory of planned behavior. The poster will briefly explain the need for the study, information on the theoretical framework, methods that will be used, and an outline of the training intervention.

The Effect of Stroboscopic Training on Performance of a Balance Task

Edith Tornel

*Undergraduate Student, Exercise Science Department
Pacific University*

Faculty Advisors: Andrew Alstot, Ph.D. & Brian H. Jackson, Ph.D.

The Nike Vapor Strobes are a stroboscopic training device designed specifically for improving athletic performance by limiting the amount of visual stimuli an individual can process. When full vision is restored, it is hypothesized that performance will improve. This study is designed to examine differences in performance of a balance task before and after training with different strobe speeds using the Nike Vapor Strobes.

Does Being Physically Active Predict Perceptions of Better Health and Academic Performance?

Zi Yan

Doctoral Candidate

*School of Biological and Population Health Sciences
Oregon State University*

Faculty Advisors: Patricia Ketcham, Ph.D. & Brad Cardinal, Ph.D.

Physical activity may influence academic performance both directly and indirectly through health status among college students. The purpose of this study was to examine college students' physical activity, general health, and academic performance.

Perception of Body Weight and Physical Activity Among College Students

Zi Yan

Doctoral Candidate

*School of Biological and Population Health Sciences
Oregon State University*

Faculty Advisors: Patricia Ketcham, Ph.D. & Brad Cardinal, Ph.D.

Perception of body weight may influence weight management behaviors including physical activity participation. The current study examined the relationship between perceptions of body weight and physical activity among college students.