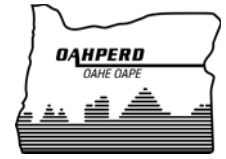


# **2009 POSTER SESSIONS**



***(Commons Starting at 7:30-12:00 noon)***

## **2009 OAHPERD Poster Presentation Abstracts**

### **The Effect of Instructor and Student Gender on Demonstration Effectiveness**

Kaitrin Bassett

*Recent Graduate, Exercise Science Department  
Pacific University Oregon*

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

The purpose of the current study was to determine the effect that instructor gender had on one's ability to learn a motor skill. This study also examined possible factors affecting performance beyond gender of the model, such as attitudes and experience. Male and female participants were provided video instruction on how to perform a forehand Frisbee throw, delivered by either a male or female instructor, and participants completed a post- and transfer-test on their ability to accurately perform (form and accuracy) the skill. In addition, participants completed questionnaires regarding the perceptions of each instructor, views of the interaction between coaching and gender, and experience levels with opposite-gendered coaches were correlated to performance. It was found that although some perceptions of the model differed, the gender of the instructor did not affect the performance (technique and accuracy) of the task used in the study.

### **Does Transition and/or Cognitive Processing Time Influence the Contextual Interference Effect?**

Jennifer Boling

*Student, Exercise Science Department  
Pacific University Oregon*

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

Research has shown that when learning multiple skills, practicing those skills in a random order results in greater performance in retention than practicing the skills in a repetitive or blocked order (termed the Contextual Interference Effect) (Battig, 1979). Unfortunately, in many real-world learning environments (e.g., PE class), switching from task to task randomly would require more overall time than if they skills were performed repetitively. Therefore, it is hard to determine whether the benefits of random practice are due to the schedule itself, or the additional time that the schedule provides. The proposed study will examine the effect that transition time and cognitive processing time have on performance under blocked and random practice conditions.

## **The Development and Test of a Brochure to Assist Parents in the Transition of Their Child with Intellectual Disabilities from High School to Adult Life**

Abby Coleman

*Student, Exercise Science Department*

*Pacific University Oregon*

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

Transition programs for high school students with disabilities to move from high school to work or college have been created to respond to the poor transition success rates (Alwell & Cobb, 2006). Parents are often equally unprepared for this transition, thus the aim of this study is to develop a brochure of “transition tools” and test changes in parents’ self-efficacy in supporting their child’s transition.

## **Roles of Self-Efficacy and Social Support on Physical Activity Behavior for Older Adults with and without Intellectual Disabilities**

Alicia Dixon

*Masters Student; Movement Studies in Disability*

*Oregon State University*

Faculty Advisor: Miyoung Lee, Ph.D.

By 2050, 1 in 5 individuals will be 65 years or older (Perkins et al., 2008). It is proven that regular physical activity (PA) can improve health and quality of life for older adults; however, the older population is one of the most sedentary population with less than 40% participating in regular PA (Hughes et al., 2009). In addition, PA patterns of older adults with intellectual disabilities have not been the focus of empirical research studies, with age only appearing to be negatively associated with PA. The key to determining why older adults with and without disabilities are not participating in sufficient amounts of PA is to not only look at the barriers associated with physical limitations, but also the psychological and environmental barriers that decrease older adults’ confidence to perform physical activity. The purpose of this study is to compare the roles of self-efficacy and social support, as outlined in Social Cognitive Theory (Bandura, 1987) on the PA behavior, of older adults with and without intellectual disabilities.

## **Shoes for Enhancing Health & Fitness:**

### **Does an Unstable Shoe Really Help You Lose Fat Faster, Decrease Stress on Joints, and Balance Better?**

Alyssa Finn, Kayleen Mitchell, & Liane Nakamae

*Students, Exercise Science Department*

*Pacific University Oregon*

Faculty Advisor: Shawn Henry, Ph.D.

Recently, the idea of constructing an unstable shoe surface has become quite popular in the shoe industry. Researchers claim that this type of shoe has healthy benefits such as better posture, decrease in joint pain, and more muscle activation. However, no study has investigated if physiological responses, such as energy expenditure alterations and balance functioning, are altered during the first 30 minute training session. This study will investigate the effects of wearing the unstable shoes for the first time.

## **So You're Familiar With Muscle Fatigue... But How Much Do You Really Know About It?**

Kevin Fujimoto & Matthew Kinoshita  
*Students, Exercise Science Department*  
*Pacific University Oregon*

Faculty Advisor: Shawn Henry, Ph.D.

By definition, skeletal muscle fatigue occurs when the force-generating capacity of the muscle is compromised. However, many people do not realize that there are different types of skeletal muscle fatigue. If one does shorter-duration higher-intensity activity such as sprints, sometimes termed "anaerobic" exercise, fatigue results from a buildup of lactic acid. If one does longer-duration, lower-intensity activity such as running several miles, sometimes termed "aerobic" exercise, the resultant fatigue is usually caused by depletion of fuel (e.g. muscle glycogen). Although muscle fatigue is known to impair balance and proprioception (awareness and control of body parts in space and time), no studies have examined if there is a difference due to the type of muscle fatigue. The proposed study will investigate this scientific question.

## **Caffeine and Human Physical Performance**

Landon Kurata & Lee Moyers  
*Students at Pacific University Oregon*  
Faculty Advisor: Shawn Henry, Ph.D.

Caffeine is the most widely consumed psychoactive substance in the world and, due to its potential physical performance enhancing properties, is commonly consumed by athletes and other physically-active people. It is suggested that caffeine may enhance neuromuscular performance by increasing maximal force output and endurance (delaying fatigue) via several mechanisms, including adenosine receptor antagonism, phosphodiesterase inhibition, and altered intracellular calcium. Regardless of the specific mechanisms, it behooves the exercise science/physical education professional to understand the real effects of caffeine, as supported by scientific research. Furthermore, this understanding will enable one to separate these real effects from unsubstantiated claims. This poster presentation and the associated research project seek to accomplish that goal.

## **Effects of Acculturation and Clinic Care on the Self-Efficacy and Rehabilitation Behavior of Hispanics Receiving Occupational Therapy**

Sarah Lange  
*Student, Exercise Science Department*  
*Pacific University Oregon*

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

The study is concerned with the adherence to therapy in Hispanic adults who currently undergo occupational therapy in Washington County. Research suggests that patients who are more integrated into the dominant culture will demonstrate better adherence to therapy protocol. Additionally, the characteristics of the clinic (i.e. a family focused approach) can also impact adherence to therapy as it may influence the self-efficacy of the patient. This study will examine if levels of acculturation, socioeconomic status, and clinical care received effects self-efficacious behavior in patients.

## **Does the Cut of a Shoe Have a Significant Effect on Jumping and Landing Performance?**

Shannon Oketani

*Student, Exercise Science Department*

*Pacific University Oregon*

Faculty Advisor: Philip K. Schot, Ph.D.

Sports performances require numerous jumps and landings (often in a crowd), quick cuts and stop-and-go situations; sprains and strains of ankle ligaments are very common in these environments. Particularly in basketball, high-top shoes are generally recommended for athletes to wear to prevent such injury. However, this effort to avoid one injury may increase the likelihood of other types of injury or impair performance. When high-top shoes are used to enhance ankle joint stability (with emphasis on foot eversion prevention), there is also a compromise to its mobility, particularly for flexion and extension. Limited ankle flexion range of motion has been shown to impair natural shock absorption strategies which may lead to overuse trauma (e.g., joint inflammation and degeneration, stress fracture, osteoarthritis). Limited ankle extension range of motion is likely to impair force production needed to propel jumping, cutting and running. The purpose of this project is to examine the effect of high- and low- top shoes on select biomechanical features of jumping and landing.

## **Pulmonary Power: An Explanation of Pulmonary Function & Testing in Adolescents**

Whitney Osborn

*Students, Exercise Science Department*

*Pacific University Oregon*

Faculty Advisor: Shawn Henry, Ph.D.

Pulmonary function refers to how efficiently the lungs can move air in and out of the body. This process is vital to replenish oxygen and remove carbon dioxide from the blood and tissues. Pulmonary function is especially important during adolescence because the body tissues need ample oxygenation to properly develop. Impaired pulmonary function during adolescence may lead to a reduction in maximal level of pulmonary function reached in adulthood. This poster will provide a review of literature regarding factors that affect pulmonary function, as well as, the process for testing and evaluating pulmonary function measures.

## **Development of an Instrument for Assessing Intention of Afterschool Program Staff to Include Youth with Disabilities**

Jennifer Taylor

*Doctoral Student, Movement Studies in Disability*

*Oregon State University*

Faculty Advisors: Joonkoo Yun, Ph.D. & Jeff McCubbin, Ph.D.

Afterschool program are an ever important and growing area of concern for special education services. It is essential that skills developed in physical education programs are linked to community recreation. However, little is known about how the leadership and direct service staff in afterschool programs feel about including youth with disabilities. This study will develop an instrument to assess the intentions of afterschool staff to include youth with disabilities in their programs. The study is based on the theory of planned behavior (Ajzen, 1991) and includes the development of the instrument and an examination of the validity and reliability of the developed measure. This is the first step to gain a better understanding of staff needs to include youth with disabilities in afterschool programs.

## **Acute Effects of Shoulder Vibration Treatment on Proprioception and Selected Muscle Performance Characteristics in Athletes and Non-athletes**

Maya Velez & Abe Moland

*Students, Department of Exercise Science*

*Willamette University*

Faculty Advisor: Junggi Hong, Ph.D.

Functional changes following the exposure to whole-body vibration (WBV) treatment has been attributed to adaptations in the neuromuscular system. However the lack of standardization in protocols and studies makes difficult to gain a complete understanding of the underlying mechanism. The present study examined the acute effect of shoulder vibration treatment on proprioception and selected muscle performance characteristics (peak torque, time to peak torque, and power). Forty young individuals (18 athletes and 22 non-athletes) with no history of upper body injuries were randomly assigned to an experimental or control group. The experimental group received shoulder vibration treatment (3 bouts of 1 minute with 30 Hz and 5 mm). During the treatment session, the subjects held the push-up position on the vibration platform with the elbow extended. The control group performed the same position as the experimental subjects. To assess shoulder proprioception, active and passive joint position sense were measured on both internal and external rotation of the shoulder. The muscle performance variables (peak torque, time to peak torque, and power) were measured using isokinetic dynamometer with the velocity of 60 deg/sec. After three bouts of 1 minute vibration treatment, the athletes in the experimental group demonstrated a significant improvement in the joint position sense and peak torque ( $p < 0.05$ ). However the non-athletes in the experimental group didn't show any changes either on joint position sense or muscle function following the treatment. Our findings suggest that short bouts of vibration treatment appear to have an effect on the shoulder proprioception and also the muscle strength in athletes.

## **The Influence of Culture on Dietary Behaviors: “Hawaiian” Asian-Pacific Islander Culture Compared to “Mainland” Caucasian Culture”**

Candace Yonashiro

*Student, Exercise Science Department*

*Pacific University Oregon*

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

A person's health is largely influenced by their dietary choices. College students who are often making independent dietary decisions for the first time are vulnerable for developing poor dietary behaviors. Recognizing the role that culture plays in diet, we are interested in the nutritional decisions of college students from Hawaii, those who remain in Hawaii and those who enter a Caucasian-dominant “mainland” culture. This study will employ the Theory of Planned Behavior as a basis of understanding how culture influences dietary intentions and behaviors. Three groups of Hawaiian college students will be compared: those from Hawaii who attend college in Hawaii, those from Hawaii who attend college on the mainland, and those who are from and attend college on the mainland.