Sunshine ERC Research Poster Session 2017

and Interdisciplinary Research Training

in Collaboration with

USF Health Research Day

February 23 – 25, 2017
UNIVERSITY OF SOUTH FLORIDA

Sunshine ERC Research Poster Symposium and Interdisciplinary Research Training - 2017
in Collaboration with USF Health Research Day
February 23-25, 2017

AGENDA

Thursday, February 23, 2017 – Hampton Inn & Suites - 8210 Hidden River Parkway, Tampa, FL  33637 (Faces E. Fletcher Ave. Entrance is just before Hidden River Corporate Park Entrance)

5:00 pm – 7:00 pm – Meet & Greet Networking – ALL (light dinner) Location: Hampton Inn & Suites
Interdisciplinary networking with SERC student colleagues from Florida International University, Florida Institute of Technology, University of Central Florida, Clemson University, University of Georgia, Colorado State University, Baruch College, and the University of Puerto Rico.

Friday, February 24, 2017 - USF Marshall Center - Tampa campus

8:00 am – 10:00 am – Registration and Poster Set-up for SERC students in Plaza Room - 2708

9:00 am - 10:00 am – 11th Roy H. Behnke Distinguished Lectureship – Oval Theater: Jack A. Gilbert, PhD, Professor of Surgery and Director, Microbiome Center, University of Chicago and Group Leader of Microbial Ecology, Argonne National Laboratory – “Invisible Influence: The Microbiome and Human Health”.

10:00 am – 12:00 pm – SERC Interdisciplinary Poster Presentation Session – Plaza Room - 2708

12:00 pm – 1:00 pm – Lunch provided (ALL) SERC Interdisciplinary Networking over lunch – Oak Room – 3707
(SERC Students and Invitees can remove poster any time after lunch)

Luncheon speaker – Lida Orta, PhD, Professor, Industrial Hygiene, Department of Environmental Health, Graduate School of Public Health, University of Puerto Rico Medical Sciences Campus – “Participation of Nursing Personnel in the Reduction of Work Related Physical and Psychosocial Risk Factors, Attitudes and Perceptions of Effects.”

1:00 pm - 2:00 pm – USF Health Invited Oral Presentations, Oval Theater SERC Students and Invitees invited to attend as interested.

2:30 pm - 4:00 pm – SERC Students and guests Busch Gardens behind the scenes safety tour. Meet at the Busch Gardens main entrance at 2:30 pm. Maps will be provided. Students may remain at the park for free until closing at dark.

Saturday – February 25, 2017 - USF Riverfront Park (A few miles from USF campus on Fletcher Ave. Maps to be provided.)

11:00 am - 2:00 pm – Picnic - Sponsored by the SERC Student Association – Interdisciplinary Networking and Fun for SERC students, faculty, families and invitees.
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On display you will find research conducted by our graduate students and faculty at USF’s Sunshine Education and Research Center that span our five training programs in Occupational Medicine (OHM), Occupational Health Nursing (OHN), Industrial Hygiene (IH), Occupational Safety (OS), and Occupational Health Psychology (OHP). You will also find research conducted by graduate students and faculty at University of Puerto Rico, Florida International University, Florida Institute of Technology, Clemson University, University of Georgia, Colorado State University and Baruch College/CUNY.

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Objective: The aim of the current study was to broaden the conceptualization of workplace harassment by measuring and modeling multiple forms of harassment to determine their simultaneous impact on employee attitudinal, behavioral, and health consequences.

Methods: Data were collected from two samples: a sample of working adults employed in the retail industry and a sample of employed adults currently enrolled in courses at a large university. Confirmatory factor analysis was used to assess support for the broadened conceptualization of workplace harassment and structural equation models were tested to estimate the relationships between broadly-measured harassment and employee outcomes.

Results: Results showed support for conceptualizing and modeling multiple forms of workplace harassment as a single construct. Results also demonstrated that broadly-defined workplace harassment is more strongly related to employee behaviors and health outcomes than previous estimates indicate.

Conclusion: The current study documents the importance of expanding our view of workplace harassment to consider multiple forms of harassing behaviors simultaneously. It also changes our understanding of how damaging workplace harassment can be, highlighting the importance of organizational and legal efforts aimed at combating workplace harassment.
Poster # 431: Impact of Job Performance of Sleep Apnea Syndrome

Lead Author Name: Janice Maisonet

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: The objective of this study was to evaluate how the sleep apnea syndrome (SAS) can affect the performance and environment of workers during working hours. SAS is an involuntary cessation of breathing while people sleep causing excessive daytime sleepiness affecting their quality of life. Approximately 50-70 million American adults have sleep disorder or insomnia, being more common in men. To evaluate this disorder a case report was designed based on the experience of workers to determine the impact on the job. SAS increase the risk of accidents, decreased productivity and effectiveness of employees in their tasks affecting their job performance.

Objectives: Analyze the impact of sleep apnea syndrome among workers’ lives and work. Present recommendations about how employers can do to help to create a safe and effective working environments.

Results: Through the case reports and the interviews to three participants we observe that the risk of accidents increase and the job performance decrease if workers with sleep apnea go without treatment. Quality of their lives as well as job performance will improve with the appropriate treatment

Conclusions: Is important for employers and co-workers to understand the condition of sleep apnea, so they can create a safe work environment for all.
Poster # 432: A Longitudinal Test of Work Stress Among Older Workers

Lead Author Name: Xin Peng

Institution: University of Central Florida

Short Description: The present study explored how work stress changed over time in older workers, baby boomers particularly, using archival longitudinal data. Adopting a longitudinal confirmatory factor analytical approach, the present study found a significant but small increase of work stress from Time 1(2006) to Time 2(2010).

Objectives: The aim of the study was to examine potential longitudinal work stress change in older workers by means of a confirmatory factor analytical approach.

Methods: Data were drawn from the Health Retirement Study (HRS), a nationwide longitudinal panel study of health, retirement, and aging in which the majority of participants were over the age of 50. The present study used data in the Leave-Behind (LB) questionnaire from the 2006 wave and the 2010 wave. The work stress construct was measured by six items, rated on a 4-point Likert scale ranging from 1 (Strong Disagree) to 4 (Strong Agree). The six items tapped into psychological job demands, physical job demands, and decision authority. The final sample size was 1000 respondents (55.2% female). The mean age was 58 years old (SD = 6.9 years) at baseline (Time 1). The majority of the respondents (46.7%) had high school degree and 21.9% of respondents had two-year college degree and beyond. The analyses were conducted in three phases. In the first phrase, a confirmatory factor analysis (CFA) was performed separately on each time point to confirm the one-factor structure of work stress. In the second phrase, longitudinal measurement equivalence between the two time points was evaluated at different levels including configural invariance, metric invariance, and scalar invariance. After establishing longitudinal measurement invariance of work stress, the final phrase was to examine the change of the latent mean of work stress across the two measurement occasions. In this study, R programming language was used for data preparation. Mplus 7.0 and an R package “Lavaan” were used for data analysis.

Results: The factor structure of the six work stress items were examined at Time 1 and Time 2 separately. The one-factor solution with all six items fit poorly in both time points, which might be due to the poor quality of Item 4 ("Considering the things I have to do at work, I have to work very fast"). After removing Item 4, the one factor structure with the rest five items fit adequately in both time occasions. The three sequential models of longitudinal measurement equivalence with the five items all showed good model fit, indicating that the measurements of work stress were factorially invariant across time. The results showed that there was a significant increase of the latent means of work stress (from 1.97 at Time 1 to 2.01 at Time 2), but the effect size was very small (Cohen’s d = .09), which might be caused by individual differential change.

Conclusions: The results have provided new insights into work stress research in at least two aspects. First, by testing longitudinal measurement invariance in a hierarchical sequence (i.e., configural invariance, metric invariance, and scalar invariance), this study has confirmed that the psychometric properties of the five-item work stress scale are transportable at two time points over a period of four years. The five work stress items were perceived in the same way by older workers across time, illustrating the consistency of the work stress measure used in Health Retirement Study. Second, the study found a small but significant increase of the latent mean level of work stress from Time 1 to Time 2. One possible explanation of the small effect size was individual differential change. That is, some older workers had experienced increasing work stress over four years, whereas others experienced decreasing work stress, which canceled out each other and led to the small effect size. The moderate correlation did support the presence of differential individual change since only about 39% variance of work stress remained stable over four years.
Poster # 433: Ability of Physiological Strain Index to Discriminate Between Sustainable vs Unsustainable Heat Stress Exposures

Lead Author Name: Dwayne Wilson, MD

Additional Authors: Yougui Wu, Garzon-Villalba, PhD, Thomas E. Bernard, Ph.D., Candi Ashley, PhD

Institution: University of South Florida Sunshine ERC Occupational Health Medicine Program

Short Description: Heat Strain is the body's response to heat stress. Heat strain indicators have been used for monitoring physiological responses to hot environments. Indicators of heat strain are body core temperature (Trectal), Heart Rate (HR), Tskin, and the Physiological Strain Index. The Physiological Strain Index is a composite of HR and Core Temperature. Using data from the Progressive Heat Stress Trial, we determined the threshold between cases and non-cases, and to assess the accuracy of discrimination of Sustainable and Unsustainable heat exposures.

Objectives: Determine how well the Physiological Strain Index can predict sustainable vs unsustainable heat exposures.

Methods: Data was collected from the progressive heat stress trials at USF. From this data, an alternative method to heat stress exposure was proposed. The method would use physiological heat strain indices (PHSI) to determine the threshold between sustainable and unsustainable heat strain. These indices would also be used to assess the accuracy of discrimination for sustainable and unsustainable heat exposure. During the USF progressive heat stress trials, the researchers began with an environment that allowed participants to achieve thermal equilibrium. Once thermal equilibrium was achieved, the temperature and humidity was increased incrementally. The ambient, rectal, and skin temperature were recorded every 5 minutes. The patient's heart rate was also recorded Q5min. The metabolic rate was calculated from oxygen consumption via expired gases sampled every 30 minutes. The transition from a steady value for rectal temperature to values that are steadily increasing mark the critical condition. Thus test subjects served as their own controls in this cross-over study. Different clothing ensembles were tested at a fixed metabolic rate 160 W/meters (squared). This metabolic rate closely approximates lmoderate work. At this fixed metabolic rate, the environment was manipulated. The three environments that test subjects were subjected to were:

1) warm and humid at 70% relative humidity
2) Hot and dry at 20% relative humidity
3) Midrange at 50% relative humidity

The outcomes were defined as:

a) unsustainable - 15 minutes after the critical condition in which the study subject was not able to maintain thermal equilibrium when exposed to progressively rising heat stress.

b) sustainable - 15 minutes prior to the critical condition.

c) The critical condition was also classified as sustainable if the rectal temperature was less than 38 degrees celsius, and if the change in rectal temperature was < or equal to 0.1 degrees celsius over the preceding 20 minutes.

This data gleaned was used to fit conditional logistic regression models with PHSI as predictors and unsustainable and Sustainable conditions as the dichotomous outcome.

Results: Resultant area under the curve were compared among models and it was determined which models had more accuracy. Metabolic rate was found as not statistically significant associated with unsustainable conditions. The combination of Tskin, HR, and Trectal is the best model to predict unsustainable conditions (AUC=0.89)

Conclusions: PSI has very good ability to discriminate sustainable vs unsustainable heat exposures. Heart rate explains most of the discrimination at p= 0.05 for unsustainable, PSI =1.24
Poster # 434: An Exposure Assessment and Characterization of Paper Dust in a Coupon Manufacturing Facility

Lead Author Name: Danny Fink

Institution: University of South Florida Sunshine ERC Industrial Hygiene Program

Short Description: This exposure assessment and characterization was performed to measure the concentrations of paper dust that employees working in a coupon manufacturing facility are exposed to during a normal working shift. Personal air sampling for total and respirable dust was performed in accordance to NIOSH 0500 and 0600. There are a lack of research studies that document the health effects of workers in occupational settings that produce paper dust.

Objectives: Exposures to paper dust, classified as PNOR, in an industrial setting can cause irritation to the eyes, skin, throat and upper respiratory tract. An exposure assessment and characterization was conducted to recognize, evaluate, and control the dust exposures in a couponing manufacturing facility during a normal production working period.

Methods: Total and respirable personal dust sampling was performed according to NIOSH 0500 and 0600. Collectively, six total dust samples and seven respirable dust samples were taken from the Press Room, Baler Room, and Collation Area where airborne paper dust was produced to evaluate the TWA of the employees exposed.

Results: Results showed that the projected TWAs for total dust within the three sampling areas ranged from 0.3% to 4.6% of the OSHA PEL and 0.5% to 6.8% of the ACGIH TLV. Projected TWAs for respirable dust within the sampling areas were exactly 0.8% of the OSHA PEL for all samples and ranged from 1.3% to 1.4% of the ACGIH TLV. Statistics showed the sample standard deviation for both total and respirable dust is below 1.0. The coefficient of variation for total dust in the Press Room was 31.3% while the other coefficient of variations ranged from 1.1% to 2.9%.

Conclusions: Since the TWAs from total and respirable dust ranged from 0.4% to 6.8% of either the OSHA PEL or ACGIH TLV, the exposure to paper dust was not over the exposure limit and was perceived as very low exposure. The engineering and administrative controls were accepted as adequate. Respiratory PPE was not considered a requirement but should be available if requested.
Poster # 435: Back strain frequency and Ito test duration

Lead Author Name: Ronald Figueredo, MD

Institution: University of South Florida Sunshine ERC Occupational Health Medicine Program

Short Description: This research sets out to prove that the utilization of a simple physical exam test can be used to prevent workplace back injuries and help make job placement recommendations. If the test is validated it is conceivable that endurance times could be used as a consistent standard for job matches by employers.

Objectives: The main objective of this research is to examine the relationship between back injury frequency and duration of Ito test.

Methods: This will be a cross-sectional observational pilot study using validated survey questionnaire instrument and timed Ito test. 30 males that meet the inclusion/exclusion criteria will be enrolled for this project through investigator soccer club. Confounding will be controlled per sampling inclusion/exclusion criteria. The average age is planned to be 35.6 years (age range from 21 to 45) to represent working age range. Individuals with no current use of pain medication will be enrolled.

Inclusion: Male > 21  Male < 45  Manual labor jobs  Non- smoker  No previous back surgery  No history of Degenerative Joint Disease  No on chronic pain medication

Exclusion: Female  Smoker BMI >40 < 21  > 45  Sedentary labor jobs  Previous back surgery  History of Degenerative Joint Disease  Using chronic pain medication

Recruitment will be conducted through validated surveys (see attached survey instrument)

Age  Weight Height (BMI) Hobbies  Job description  Previous back injury  Previous back surgery

Informed consent will be obtained from all subjects.

We are planning to use a 2x2 table due to small sample size for chi square or fisher exact analysis. The table will be divided into Ito test duration and back injury frequency, where 0-1 will be categorized as low back injury frequency and 1-2 will be categorized as high back injury frequency. (low) 0-1 (high) 1-2

Hypothesis testing will be tested per chi-square test (or if cell value too low will use Fisher exact test). Correlational testing may also be performed with BMI over ITO test duration. OR with CIs may be considered.

For this cross-sectional study our independent variable will be back injury frequency and our dependent variable will be Ito test duration.

It is hoped that if pilot renders expected results of a statistically significant inverse relationship between back injury frequency and Ito test duration, that a prospective study will ensue with the predictor variable being Ito test duration and the outcome variable being back injury frequencies over the prospective study period (possibly over 1 year). The clinical significance of the results will also be discussed.

Results: Ho: Back injury frequency and Ito test duration are independent.
Ha: Back injury frequency and Ito test duration are not independent

The Ito test could have a role in the occupational pre-placement examination, both as a predictor for incident LBP and for job placement recommendations that will help in the prevention of workplace back injuries.

Conclusions: Ho: Back injury frequency and Ito test duration are independent.
Ha: Back injury frequency and Ito test duration are not independent

The Ito test could have a role in the occupational pre-placement examination, both as a predictor for incident LBP and for job placement recommendations that will help in the prevention of workplace back injuries.
Poster # 436: Buffering Effects of Relational Uncertainty on Perceived Cyber Incivility

Lead Author Name: Danielle Wald

Institution: Baruch College/City University of New York (CUNY)

Short Description: While previous research has largely focused on the detrimental impact of workplace incivility in a face-to-face form, only a limited number of studies have focused on how incivility may influence employees in an online context. The concept of cyber incivility has only recently been introduced into the organizational psychology literature and refers to rude or discourteous behaviors occurring through Information and Communication Technologies (ICTs), such as email or text messages. Expanding our knowledge in this area is crucial because engaging in such mistreatment online may be interpreted differently and elicit different employee behaviors. The current study examines the relationship between cyber incivility and counterproductive work behavior (CWB) in a moderated mediation model with state self-esteem as a mediator and relational uncertainty with one’s supervisor as a moderator. Using a sample of 267 full-time employees, results showed that cyber incivility positively related to CWB through self-esteem degradation. Both of these direct and indirect relationships were moderated by relational uncertainty, with the relationships being stronger for those with higher levels of relational uncertainty. PROCESS software by Hayes (2013) was used to test the theoretical moderated mediation model.

Objectives: While previous research has largely focused on the detrimental impact of workplace incivility in a face-to-face form, only a limited number of studies have focused on how incivility may influence employees in an online context. The concept of cyber incivility has only recently been introduced into the organizational psychology literature and refers to rude or discourteous behaviors occurring through Information and Communication Technologies (ICTs), such as email or text messages. Expanding our knowledge in this area is crucial because engaging in such mistreatment online may be interpreted differently and elicit different employee behaviors. The current study examines the relationship between cyber incivility and counterproductive work behavior (CWB) in a moderated mediation model with state self-esteem as a mediator and relational uncertainty with one’s supervisor as a moderator.

Methods: Participants included 267 full-time employees working in a variety of occupations. The sample was mostly male (57%), with an average of 24 (SD = 5.4). Participants worked an average of 37 hours per week (SD = 14.9). Participants responded to either recruitment advertisements posted around 1 US University or those sent via personal networks. Participants received a $5 Amazon gift card or course credit for their time. Participants completed scales of cyber-incivility (fifteen-items adapted; Giumetti, 2016; e.g. “How often has your supervisor ignored your emails, text messages, chat, etc.?”), state self-esteem (ten-items; Rosenberg, 1989), CWB (ten-items; Spector, Bauer, & Fox, 2010), and relational uncertainty (eight-items adapted; Knobloch, & Solomon, 1999).

Results: Results indicated that there was a cyber-incivility to degraded state self-esteem direct effect (-.18, p < .0001), degraded self-esteem to CWB direct effect (-.31, p < .001), and indirect effect through degraded self-esteem (.05, 95% CI .03-.09). Examination of the direct effect of cyber-incivility to CWB (.36, p < .0001) indicates partial mediation (Baron & Kenny, 1986). Additionally, relational uncertainty moderated the cyber-incivility to CWB direct effect (-.08, p < .0001) as well as the mediated pathway (-.10, p < .001), with the bootstrapped confidence interval around the index of moderated mediation not including zero (.02, 95% CI -.05 -.01), supporting Hypotheses 4-5. Specifically, low levels of relational uncertainty had stronger positive indirect effects (.06, 95% CI .02-.12) than high levels of relational uncertainty (.02, 95% CI .003-.05).

Conclusions: The current work contributes to the expanding literature on cyber incivility as a meaningful workplace stressor. Results suggest that subordinates with higher supervisor relational certainty will more likely suffer damage to self-esteem and subsequently engage in CWB, perhaps because of a lack of trust or stability in their interpersonal relationship(s). As cyber-incivility is argued to be the most common form of incivility in the workplace today (Giumetti et al., 2013), organizations would benefit from implementing training sessions that identify and reduce employee-perceived acts of cyber-incivility.
Poster # 437: Can BMI, Anthropometry predict low back injury?

Lead Author Name: Erika Santana, BS

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: The prevalence of obesity in Puerto Rico has become one of the major health concerns in the workplace. Scientific research, has found an association between Body Mass Index (BMI) and musculoskeletal injuries in the industry. The study focused on test whether there is an association between the horizontal functional reach, elbow-fist distance, BMI and the prevalence of musculoskeletal injuries in the lower back. A cross-sectional study was performed and existing database Anthropometry of employees of private industry in Puerto Rico was used. Employees were classified according to the scale of BMI: normal weight (18.5-24.9 kg/m²), overweight (25.0-29.9) and obesity (30+).

Objectives: To determine if body dimensions related with reaching and high BMI are predictors of low back injuries.

Methods: An anthropometric database of employees from private industry in Puerto Rico was developed. A total of 2,288 industrial employees were classified according to the BMI scale.

Results: Association was found between BMI, functional reach, distance elbow-fist in the development of low back injuries. Low back injury and BMI were associated with a Pearson coefficient of 0.959.

Conclusions: Overweight, obesity, functional reach and distance elbow-fist seems to have an impact on the development of injuries. Establishment of weight control programs and adjustable work stations are recommended.
Poster # 438: Carbon Monoxide Levels above PEL in a Forklifts Battery Charging Room

Lead Author Name: Adelmarie Bones

Institution: University of South Florida Sunshine ERC Industrial Hygiene Program

Short Description: Concern regarding the possibility of air contaminants produced by the charge and storage of forklift batteries where evaluated. Carbon Monoxide Levels were found above the Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) of 50 ppm. Room characteristic where analyzed and recommendation were made to install and relocate the local exhaust ventilation system. It is expected to lower current levels at or below the PEL.

Objectives: The purpose of this survey was to conduct an Industrial Hygiene Evaluation in the interior areas of a Grocery Warehouse located in Lakeland, Florida. The survey was conducted on August 23, 2016, by Adelmarie Bones qualified Industrial Hygienist. The internal facility Safety personnel shared their concern regarding the possibility of air contaminants produced by the charge and storage of forklift batteries. Recommendations were made to the facility safety management and a post verification assessment will be performed to measure the efficiency of the controls after in place.

Methods: A Compact Wireless 4 Gas Direct Reading Meter (Manufacturer: RAE Systems by Honeywell, Model: QRAE 3 (PGM-2500, Serial Number: M02A007449) will be used for the monitoring of gases present in the area. The instrument determined the presence of gases as of the percentage Lower Explosive Limit (%LEL), concentration of Hydrogen Sulfide (H$_2$S ppm), percentage of Oxygen (% O$_2$); and concentration of carbon monoxide (CO ppm). Measurements are going to automatically collected and recorded by the instrument every five seconds at approximately 60 to 70 inches from the floor. Sampling will be conducted for an 8-Hr Time Weighted Average (TWA).

Results: Table I presents the summary of findings for the direct reading gas sampling in air. The direct reading gas data along with calibration data can be found in Appendix B. Figure 1 presents complete recorded data for the morning interval and Figure 2 presents complete recorded data for the afternoon interval. Data recorded did not identify detectable levels of H$_2$S or LEL. O$_2$ percentage was 20.9 throughout both monitoring intervals. CO concentrations were detected at a maximum level of 75 ppm in the morning and 66 ppm in the afternoon intervals.

Conclusions: Based upon direct reading gas sampling results, levels fluctuated from 0 to 75 ppm for carbon monoxide. The Occupational Health and Safety Administration (OSHA) established a Permissible Exposure Level (PEL) of 50 parts per million (ppm) of carbon monoxide gas (CO). The PEL is based on an 8-hour time weighted average that is typically based on full shift personal monitoring. Therefore, the potential for an 8-hour exceedance of the PEL exists within the study area.

CO is a colorless, odorless, and toxic gas, which is predominately produced by incomplete combustion of carbon containing materials. Exposure to carbon monoxide impedes the blood’s ability to carry oxygen to body tissues and vital organs. As a result, small amounts of carbon monoxide can dramatically reduce hemoglobin’s ability to transport oxygen. Common symptoms of carbon monoxide exposure are headache, nausea, rapid breathing, weakness, exhaustion, dizziness, and confusion. No apparent concern is observed for LEL, H$_2$S and O$_2$ percentage.
Poster # 439:   Formative and Reflective Conceptualizations of Broad Discrimination

Lead Author Name: Henry R. Young, BA

Additional Authors: Mindy Shoss, PhD, Benjamin Farmer, Erica Harris, Aten Zaandam

Institution: University of Central Florida

Short Description: Research has hinted at many commonalities among different types of discrimination, but little research has suggested how discrimination can be broadly conceptualized. Therefore, this project aims to provide formative and reflective discrimination models, and compare their utility in predicting broad job attitudes.

Objectives: Although there have been many calls for generalized models of discrimination (Dipboye & Colella, 2005; Sims & Dalal, 2008; Joseph & Rousis, 2012), no empirical tests of generalized discrimination have been performed. To address this gap in the literature, we provide empirical tests of formative and reflective models of discrimination broadly across race, gender, age, disability, and religion discrimination. These two discrimination models are further compared in terms of their utility for predicting broad job attitudes.

Methods: We analyzed data collected from 93,659 civilian personnel across the United States Army, Navy, Marines, Air Force, and Coast Guard. These participants indicated whether they had experienced discrimination as a result of their race, gender, age, religion, and disability over the past year. Participants also indicated their degree of job satisfaction and organizational commitment.

Results: Confirmatory factor analysis was conducted for the generalized discrimination factor (CFI=.994; TLI=.987; RMSEA=.017), which showed excellent fit. We therefore tested the reflective discrimination model, adding a structural path between the discrimination and broad attitudes factor. The model fit well (CFI=.997; TLI=.997; RMSEA=.012), revealing a moderate relationship (γ_standardized = -.442, p < .001) with job attitudes (R² = .195). Next, we followed guidelines outlined in past research (Edwards & Bagozzi, 2000) to test the formative model by modeling an aggregate discrimination factor to predict job attitudes (γ_standardized = -.250, p < .001, R² = .062).

Conclusions: In line with past calls for the study of generalized discrimination (e.g., Dipboye & Colella, 2005), we provide two generalized discrimination models and show their comparative utility in predicting job attitudes. Results suggest a reflective model of discrimination may have better utility in predicting job attitudes compared to the formative model of discrimination. As such, there appear to be overlap among many types of discrimination, suggesting the presence of a generalized discrimination factor as implied by previous researchers (e.g., Joseph & Rousis, 2012).
Poster # 440: Helping and Emotional Exhaustion: A Chicken and Egg Problem?

Lead Author Name: Seulki Jang

Additional Authors: Victor Mancini, Tammy D. Allen, PhD

Institution: University of South Florida Sunshine ERC Occupational Health Psychology Program

Short Description: In OCB theoretical models, some researchers consider OCB as a predictor of employee health, while other researchers regard OCB as an outcome of employee health. This study examines the directionality between helping and emotional exhaustion, using four waves of data. Results suggest that helping and emotional exhaustion may be in a feedback loop that starts with helping.

Objectives: For several decades, organizational citizenship behavior (OCB) has been viewed mainly as a performance criterion, and considered a performance outcome of employee health (e.g., Chang et al., 2009). However, more recently researchers have conceptualized OCB as an antecedent of employee health (e.g., Halbesleben & Wheeler, 2011). In the current study we investigated the directionality between OCB and health. To be specific, we operationalized OCB as helping and health as emotional exhaustion. We contribute to the existing literature in several ways. First, this study has the potential to advance theory by critically examining the causal direction between helping and emotional exhaustion. Second, this study examines the long-term effects of helping on emotional exhaustion and the long-term effects of emotional exhaustion on helping. Third, by using auto-regressive specification, this study demonstrates how consistently people perform helping behaviors and experience emotional exhaustion over time.

Methods: Data comes from the randomly assigned control group of a publicly available data set, the Work, Family, and Health Study. Participants worked in an information technology company. Participants were assessed on psychological variables at baseline, then 6, 12, and 18 months post baseline, resulting in four waves of data. A total of 507 employees participated at baseline. 439 employees at Wave 2, 430 employees at Wave 3, and 407 employees at Wave 4 completed the survey. Sample demographics are not provided in the publicly available data set. Helping behaviors were assessed at each time point with four items from Lambert (2000) that measured the extent employees were willing to provide assistance to fellow coworkers (e.g., “To what extent do you help coworkers with questions they have about their work?”). A 5-point Likert-type response scale was used. Responses ranged from 1 (never) to 5 (all of the time). The scale showed moderate reliability across all four waves (Cronbach’s alpha = .67 - .72). Emotional Exhaustion was assessed at each time point with three items from the Maslach Emotional Exhaustion Inventory (MBI; Maslach & Jackson, 1986) (e.g., “You feel burned out by your work. How often do you feel this way?”). A 7-point Likert response scale was used. Responses ranged from 1 (never) to 7 (everyday) (Cronbach’s alpha = .89 - .91).

Results: We used a cross-lagged autoregressive model with auto-correlations in Mplus 7.2. Results showed good model fit [χ2 (294) = 533.88, p < .01, CFI = .97, RMSEA = .04]. All autoregressive paths were significant. In addition, two cross-lagged paths were significant. Specifically, helping at wave 1 predicted emotional exhaustion at wave 2 (γ = -.080, p < .05), and emotional exhaustion at wave 2 predicted helping at wave 3 (β = -.110, p < .05). We also tested two constrained models to compare model fit. The first model constrained all cross-lagged paths from helping to emotional exhaustion to be equal; the second model set all cross-lagged paths from emotional exhaustion to helping to be the same. Both models showed adequate fit, and did not show significant chi-squared differences from the proposed model. It indicated that there were no significant differences in all three cross-lagged path coefficients from helping to emotional exhaustion. Similarly, no significant differences were found among the three cross-lagged path coefficients from emotional exhaustion to helping. In the constrained models, the significant paths in the proposed model remained significant.

Conclusions: The current study investigates directionality between helping and emotional exhaustion. Results revealed that helping seems to be the precursor of emotional exhaustion. However, emotional exhaustion also predicted future helping. It suggests that helping and emotional exhaustion may be in a feedback loop that starts with helping. Implications and suggestions for future research will be provided in the presentation.
Poster # 441: Impact of Age and Gender

Lead Author Name: Tania Isabel Garcia-Martinez, BS

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: Many workers suffer musculoskeletal injuries due to the lack of adequate designs in work areas. The prevalence of occupational musculoskeletal injuries is useful to determine which groups should have priority when are making designs in work areas. The purpose of the study was to determine which gender suffered and reported the largest number of occupational musculoskeletal injuries in the private industries in Puerto Rico. Also, to determine if occupations classified as repetitive had the highest number of musculoskeletal injuries. By the findings of previous studies was expected that female population over 60 years was the group with the highest prevalence of occupational injuries. Analysis of Puerto Rico’s Body Dimensions Study Database was performed using STATA Software. Preliminary results showed that women report a higher proportion of musculoskeletal injuries. Women’s suffer a higher number of musculoskeletal injuries in the work environment because they do not have appropriate workstations designs.

Objectives: The purpose of the study was to determine which gender suffered and reported the largest number of occupational musculoskeletal injuries in the private industries in Puerto Rico. Also, to determine if occupations classified as repetitive had the highest number of musculoskeletal injuries.

Methods: Analysis of Puerto Rico’s Body Dimensions Study Database was performed using STATA Software. Descriptive statistics and Pearsons’ coefficients were developed.

Results: Preliminary results showed that women report a higher proportion of musculoskeletal injuries.

Conclusions: Women’s suffer a higher number of musculoskeletal injuries in the work environment because they do not have appropriate workstations designs.
Poster # 442: Indoor Biological Agents in Relation to Ambient Conditions

Lead Author Name: Benjamin Fishman

Institution: University of South Florida Sunshine ERC Industrial Hygiene Program

Short Description: A study that takes the concentrations of certain biological agents and compares the count of each agent to specific indoor conditions such as temperature, humidity, and carbon dioxide.

Objectives: To determine which biological fungal agents are most prevalent under specific conditions. To see if overall concentrations of biological agents are impacted by these conditions.

Methods: Agents were collected via Andersen N6 Impacter and sent out to a lab for interpretation. Upon receiving results, the count and concentration of the agents were filed into a chart with their respective temperature, humidity, and CO2 levels upon field testing. After a sufficient number of results were filed, statistical analysis was ran in order to see which agents were most prevalent under which condition.

Results: TBD

Conclusions: TBD
Poster # 443: Depletion Today Keeps the Apple Away: Effects of Workplace Resource Processes on Daily Health Behavior and Recovery

Lead Author Name: Chelsea A. LeNoble

Additional Authors: Erin M. Richard & Zhiqing E. Zhou

Institution: Florida Institute of Technology

Background and Purpose: Employees must invest limited physical, cognitive, and emotional resources in order to do their jobs each day. In the increasingly demanding work environment today, the constant depletion of these self-regulatory resources leads to low productivity, exhaustion, and burnout. The extent to which employees are able to recover from the demands of their job is an important predictor of performance, health, and well-being. In general, research has generally regarded all recovery activities as positive as long as they promote psychological detachment. However, there are activities that promote detachment that may have negative effects on one’s health. One aim of the present project was to examine the extent to which healthy versus destructive recovery activities contributed to energy levels at the end of the workday. In addition, many organizations require that their employees recover only during non-work hours, which can be difficult for employees who are exhausted at the end of the workday and have other obligations after work. Although employees are expected to engage in recovery during their own time, many have obligations after work that prevent adequate recovery. Therefore, the second aim of the present work was to examine the impact of non-work recovery interferences on after-work recovery and well-being.

Method: A daily diary study was conducted over 10 consecutive workdays. Participants completed surveys before their lunch break, at the end of the workday, and at bedtime. Self-report surveys of energy levels, healthy recovery behaviors during work, destructive recovery behaviors during work, the Recovery Experience Questionnaire (Sonnettag & Fritz, 2007), Non-work recovery interferences, and bedtime well-being were administered using the Qualtrics online survey platform. Healthy recovery included having a healthy snack, engaging in physical activity, or taking a nap. Destructive recovery included smoking, drinking, or having an unhealthy snack. Participants (64% female, 73% Caucasian) represented a wide range of industries and primarily worked over 8 hours a day (80%).

Results and Discussion: Energy levels in the morning were significantly negatively related to destructive recovery later in the workday and unrelated to healthy recovery. Similarly, destructive recovery was negatively related to energy levels at the end of the workday (while healthy recovery was again unrelated). Interestingly, healthy and destructive recovery during the workday were negatively related. Energy levels at the end of the workday were significantly related to both non-work recovery interferences (NWRI) and recovery experiences (RE). Finally, both NWRI and RE were significantly related to one another and to bedtime well-being. Figure 1 presents the proposed and supported relationships (red indicating nonsignificant results).

This study is the first to distinguish between recovery activities that can be considered healthy versus those that are more destructive in nature. These results suggest that employees will have poorer outcomes if they engage in destructive activities during the workday. Additionally, energy levels impact recovery activities both during work and after work, providing support for the idea of personal resource spirals. Energy levels in the morning predicted destructive recovery in the afternoon, and energy levels at the end of the workday predicted recovery experiences after work. Finally, the environmental context outside of work plays a significant role in employee recovery. When there are obligations in one’s life that interfere with recovery, well-being is negatively impacted.
Poster # 444: Mindfulness as a Buffer of Work-to-Family Spillover’s Effect on Mood and Voluntary Work Behaviors

Lead Author Name: Anqui Li, MS

Institution: Florida Institute of Technology

Short Description: This is a 7-day diary study that investigated the buffering effect of state mindfulness on the relationship between yesterday’s work-to-family spillover on the next day’s employee organizational citizenship behaviors (OCBs) and counterproductive work behaviors (CWBs) via morning mood.

Objectives: First, the study aimed to examine the effect of yesterday’s work-to-family spillover on employee next day’s morning mood and the effect of morning mood on the rest of the day voluntary work behaviors. Second, this study explored whether state mindfulness attenuated the effect of spillover on mood as well as the effect of mood on both OCB and CWB.

Methods: Eighty-two U.S. full-time employees were recruited from Amazon Mechanical Turk to participate in a 7-day diary study. They all met our inclusion criteria based on our baseline survey. Every morning at 8 am they received an email which directed them to an online survey. The survey asked them report yesterday’s OCBs and CWBs, yesterday’s work-to-family spillover at home, and the same morning’s mood and state mindfulness.

Results: Positive and negative work-to-family spillover predicted next day’s morning mood in the expected directions. Results also supported that morning positive mood had less effect on the number of OCBs carried out during the rest of the day if individuals had higher state mindfulness in the morning.

Conclusions: Positive and negative work-to-family spillover happened in family domain had prolonged effect on employees’ next day morning mood, which in turn, may affect the number of OCBs or CWBs carried out in the work domain. This study also provided some evidence regarding the potential dark side of mindfulness that higher state mindfulness may prevent happy employees from engaging in more OCBs.
Poster # 445: Noise Exposure among Bar Workers

Lead Author Name: Deniel Rivera

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: Noise is the main physical pollutant in work environments and the second leading cause of hearing loss after aging. The 16% of disabling hearing loss in adults is attributed to occupational noise. We need to pay more attention in workers of nontraditional jobs in where exposure to noise is equal or greater than traditional jobs because of the health risk it represents. We measured the sound pressure level in a bar and designed a noise map identifying each area with the sound pressure level. Finally, we made an 8-hour dosimetry in the area with the greater exposure with OSHA standards.

Objectives: The objective of this study is collect information, describe and measure the sound pressure level of noise exposure from night bar workers.

Methods: We sampled sound pressure level in the bar and design a noise map identifying areas with sound pressure level values, in the highest area we made a dosimetry.

Results: Values measured were compared with OSHA standards to the area with the greater exposure. It is expected that noise level measurements will be higher among areas where the DJ is located.

Conclusions: Improved worker’s training and acoustic material could be used to mitigate sound levels.
Poster # 446: Noise Exposure Assessment in a Group of University Groundskeepers

Lead Author Name: Monica E. Garcia

Institution: University of South Florida Sunshine ERC Industrial Hygiene Program

Short Description: Noise induced hearing loss (NIHL) is one of the most common occupational illnesses and it is one hundred percent preventable, but once it occurs it is permanent. The purpose of this research study was to gather occupational noise exposure data on grounds keeping personnel in a Florida university campus. While historically many jobs have been extensively studied and listed as having the most extreme noise exposures, there is not much information on noise exposure to groundskeepers.

Objectives: The specific objectives of this study were:
To collect personal noise exposure data from a university groundskeeper personnel from the landscaping division for six consecutive days, and compare the results to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 90 dB for an 8-hour TWA, and to the 1983 Hearing Conservation Amendment action limit of 85 dB for an 8-hour TWA.
To determine which activity done by the grounds keeping personnel caused the highest exposure to noise.

Methods: The exposure assessment took place from Monday, September 12th 2016 to Friday, September 16th 2016 and resumed on Monday September 19th, 2016. The participants in this study included seven male groundskeepers in charge of various maintenance tasks throughout the campus such as mowing, trimming, edging, weed eating and pressure washing. Personal noise assessment of the employees was done using 3M personal noise dosimeters. The 3M Edge Model eg5. dosimeter can be programmed to three different measuring parameters. The first is the OSHA Conservation Amendment measurement parameters: A weighting, slow response, 80 dB criteria threshold, and 5 dB exchange rate. The second parameter is the OSHA Noise Standard compliance parameters: A weighting, slow response, 90 dB criteria threshold, and 5 dB exchange rate. The third measuring parameter is the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) measurement parameters: A weighting, slow response, 80 dB criteria threshold, and 3 dB exchange rate. Programming of the dosimeters was done using the manufacturer docking station and provided software (Detection Management Software). The noise dosimeters were individually calibrated at 1000 hertz (Hz) and 114.0 dBA before and after each assessment, using the manufacturer calibrator (AcoustiCal AC-300, 3M). The dosimeters were turned on at the start of each shift at around 7:00 am and left to run for approximately 8 hours. The dosimeters were attached to the groundskeepers’s collars as directed by manufacturer instructions. At the end of the shift, the noise dosimeters will be collected by the principal investigator and the data collected was downloaded using the manufacturer software and port.

Results: Results for this study is still being analyzed and a final conclusion has not been reached.

Conclusions: Results for this study is still being analyzed and a final conclusion has not been reached.
Poster # 447: Occupational Sedentary Behaviors: A Potential Hazard for the Development of Musculoskeletal Disorders

Lead Author Name: Lilliam E. Gaud Figueroa

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: Sedentary behaviors has increased significantly in most workplaces because occupations are principally office-based, highly dependent on computers and because of the rise of technology. Using an existent database, we identified the tendencies of musculoskeletal injuries in occupations considered sedentary in different private industries of Puerto Rico. We obtained that low back pain are the most common injuries reported in which administration-based workers and laboratory technician’s kind of work are the most affected. The increase of occupational sedentary behaviors creates a necessity of develop effective and appropriate interventions to reduce musculoskeletal injuries and improve the performance of the employers.

Objectives: To identify tendencies of musculoskeletal injuries especially on low back, neck and shoulders between occupations that require long sitting time during their work shift.

Methods: We evaluated occupations considered as sedentary in several private industries in Puerto Rico to identify the prevalence of musculoskeletal injuries specifically low back pain, neck and shoulders pain.

Results: Low back pain is the most common injury reported among administration-based workers and laboratory technician’s employees.

Conclusions: The increase of occupational sedentary behaviors creates a necessity of develop effective and appropriate interventions to reduce musculoskeletal injuries and improve the performance of the employers.
Poster # 448: Performance Evaluation of the NIOSH Prototype Two-Stage Bioaerosol Sampler under Moving Air Conditions - Phase I: Design, Construction, and Characterization of the USF Wind Tunnel

Lead Author Name: Jason S. Garcia, MPH

Additional Authors: Dr. Yehia Hammad, Sc.D.

Institution: University of South Florida Sunshine ERC Industrial Hygiene Program

Short Description: Industrial hygienists utilize sophisticated instruments to evaluate physical, chemical, and biological hazards in the work environment. Initial performance evaluation of these instruments occurs under controlled conditions in test chambers. These studies provide baseline data on instrument performance however, they may not be representative of conditions encountered in the occupational setting. Exposing instruments to moving air conditions can provide insight into performance under simulated field conditions. Phase I of this project was to design, construct, and characterize the capabilities of a new wind tunnel to be used for occupational health research at the University of South Florida’s College of Public Health.

Objectives: The major objective was to investigate the capabilities of the new USF COPH wind tunnel by measuring the range of air velocities and associated turbulence levels in the testing section of the tunnel.

Methods: The USF COPH wind tunnel is 20 feet in length. The major components are two sets of HEPA filters, a settling chamber, a contraction, a testing section (62 inches long, with a square cross-section of 10.25 inches x 10.25 inches), a diffuser, and a fan. The design of each component was based on best practices reported in the wind tunnel design literature. The wind tunnel can be run in two configurations, with and without a Stairmand disk. The Stairmand disk is needed in the testing section for aerosol mixing. It should be noted that this wind tunnel is the only one available on the campus of the University of South Florida.

Results: Turbulence levels were measured at fan power ranging from 1.0 to 25.0 Hz and air flow rates ranging from 7 cfm to 340 cfm. With a Stairmand disk in place, turbulence levels peaked at 8 percent. Without a Stairmand disk in place, turbulence levels peaked at 1 percent. Turbulence levels lower than 10 percent in wind tunnel testing sections are considered satisfactory for aerosol research.

Conclusions: With the air velocities and air flow rates described above and associated turbulence levels less than 10 percent in both testing section configurations, the wind tunnel is operating at optimum conditions and well within the parameters described in the literature. The next phase of this research project will be to evaluate the performance of the NIOSH prototype two-stage bioaerosol personal sampler using an isokinetic sampling probe in the wind tunnel at velocities ranging from 50 to 250 fpm.
Non-work time. Employees may respond to this pressure by performing communication-based technology assisted supplemental work (C-TASW). Further, availability pressure may produce anticipatory stress in employees, which may be associated with reduced psychological detachment. A sample of 236 employees was surveyed twice over a two-week period to test a partial mediation model in which availability pressure at time-1 is negatively related to time-2 psychological detachment directly and indirectly via employee psychological detachment. Results supported the proposed model but only when looking at the cross-sectional level. Hayes (2013) PROCESS macro for SPSS was used to test the theoretical mediation model and bivariate correlations were used to test the direct links.

Objectives: The stressor-detachment model posits that, while psychological detachment aids employee recovery and mitigates the detrimental effects of certain work stressors, certain stressors can impede employee detachment. Limited research has examined detachment in relation to contemporary technology-related stressors, such as availability pressure, which is defined as employee perceptions of organizational expectations for remaining available during non-work time via communication technologies. Additionally, there is a need to parse the different effects of aspects of employees’ connectivity behaviors in regards to the availability pressure-detachment pathway. Advancing our knowledge in this area is essential given the changing nature of work. The present study aims to address these deficiencies by examining the relationship between availability pressure and psychological detachment in a partial mediation model, with employee performance of communication-based technology assisted supplemental work (C-TASW) as a mediator.

Methods: 236 Amazon Mechanical Turk (MTurk) workers were recruited via TurkPrime (50.6% female; 78.5% Caucasian; mean age = 34, SD = 9.4 years, mean tenure = 5.7 years). The present study employed a time-lagged design with variables measured at two time points two weeks apart. Data collection was conducted online, using Qualtrics.com. All variables were measured at both time points. Participants received $1.50 total for completing both surveys. Participants completed scales of availability pressure (ten items adapted; Day et al., 2012; e.g. "I am expected to respond to e-mail messages immediately.") and psychological detachment (four items; Sonnentag & Fritz, 2007; e.g. "I didn’t think about work at all."). C-TASW was assessed by having participants reference device histories to indicate the frequency and duration with which they utilized e-mail, phone calls, text messages, instant messages, videoconferencing, and pagers to conduct work during non-work hours on their last full workday. Participants then estimated their C-TASW on a typical day (time-1) and on a typical day in the past two weeks (time-2).

Results: Although the hypothesized relationships were proposed across time, only the negative C-TASW-psychological detachment link was supported ($r = -.30$). In light of these results, we examined the relationships at time-2 only to understand why the hypotheses were unsupported and to understand better the relationships between the variables of interest. Within time-2, availability pressure was directly negatively linked to psychological detachment ($r = -.46, p < .01$) and positively linked to C-TASW ($r = .37, p < .01$). C-TASW negatively predicted psychological detachment during time-2 ($r = -.30, p < .01$). C-TASW did not mediate the availability pressure-psychological detachment link across time ($B = .00$, Bootstrapped SE = .01, 95% CI -.04, .04) but did partially mediate this link within time-2 ($B = -.05$, Bootstrapped SE = .03, 95% CI -.12, .01).

Conclusions: The present study contributes to our knowledge of the relationship between technology-related stressors and psychological detachment. The results suggest that availability pressure and C-TASW do play an important role in predicting psychological detachment, albeit in a manner different than that hypothesized. Our findings suggest that availability pressure is an important proximal but not distal predictor of psychological detachment, which may be attributable to significant variation in availability pressure. These findings provide insight into psychological detachment’s nomological network and the process employees undergo when facing availability expectations. Specifically, we found that availability pressure and C-TASW predicted psychological detachment but that C-TASW did not mediate the stressor-strain link across time. Thus, alternative mechanisms may be responsible for explaining how availability pressure relates to psychological detachment. As many organizations are adopting communication technologies to facilitate access to employees, these results could help prompt organizational initiatives surrounding use of these technologies to improve employee well-being.
**Poster # 450: Prevalence of Musculoskeletal Disorders among School Teachers and the relationship with Labor Tasks**

**Lead Author Name:** Isolina M. Vargas

**Institution:** University of Puerto Rico - Medical Sciences Campus

**Short Description:** Musculoskeletal pain (MP) is a multi-factorial event that can be influenced by lifestyle, social, psychological, physical and personal aspects of a person. In many occupations, Musculoskeletal Disorders (MSD) include a wide range of inflammatory and degenerative conditions affecting the muscles, ligaments, tendons, nerves, bones and joints; and can occur from a single or cumulative trauma (Erick & Smith, 2011). Musculoskeletal diseases are common among Professional educators because of their workload and types of tasks that require physical strength or poor postures such as give class standing or sitting, clean the blackboard, write, read, talk, administrative work, among others. In addition the high absenteeism caused by MP among teachers can result in a high cost to Public Health System. In Puerto Rico, the only provided information is that teachers from the Public Education System lead the cases in the State Insurance Corporation lead from 2014-2015.

**Objectives:** The goal of this study is to show the prevalence of musculoskeletal disorders among primary school teachers, identify causes, and provide recommendations to control prevalent disorders.

**Methods:** A survey was administered to a group of primary school teachers of the northern part of Puerto Rico using a convenience sample. The collected data was analyzed by statistical methods, using Excel.

**Results:** A high prevalence of Musculo-esqueletal Disorders is expected due to description of tasks performed and actual data from Puerto Rico’s Worker’s Compensation Fund.

**Conclusions:** Improved processes will provide safer tasks performed by school teachers.
Poster # 451: Prevalence of the Work-Related Exposures and Injuries Registered on Workers from a University Campus in Puerto Rico from 2011 to 2015

Lead Author Name: Abadi M. Medina-Laabes, BS

Institution: University of Puerto Rico - Medical Sciences Campus

Short Description: Using a cross-sectional design, we estimated the prevalence of occupational injuries and exposures on employees who worked at the Medical Sciences Campus of the University of Puerto Rico, UPR MSC. Data was provided by the Occupational Health Clinic and its analysis based on a review of accident and occupational exposure records for the period of 2011 to 2015. Variables examined were, demographic characteristics, workplace location, type of occupational injury or exposure, referred to the Worker Compensation System. We analyzed frequencies and distribution of the mentioned events.

Objectives: Describe the frequency of occupational injuries and exposures among employees who worked in UPR MSC during the period from 2011 to 2015.

Methods: The distribution of each occupational exposure and injuries was analyzed using measures of central tendency.

Results: The workplace with highest frequency of occupational injuries is the School of Medicine. The type of injury most frequently registered were falls.

Conclusions: Establish changes to standardize the type of footwear used by employees. Also, improve training, preventive maintenance, warning labels and signs.
Poster # 452: The Effects of Bullying on Military Retention

Lead Author Name: Aten Zaandam

Additional Authors: Alice Che, Erica Harris, Benjamin Farmer

Lead Author Institution: Florida Institute of Technology

Short Description: The military spends over $7,000 in yearly training costs for each of its employee’s and therefore views turnover as extremely detrimental to their organizational success. This study seeks to identify both the direct and indirect effect bullying has on turnover in order to discern the total effect that bullying has on turnover. A serial mediational model was conducted in order to identify the pathway through which bullying influences turnover. These research efforts will help inform military leaders of the importance of reducing bullying and provide pathways for mitigating its effects on turnover.

Objectives: The current research represents an important step in better understanding the processes through which bullying influences turnover intentions. Given that the average company spends approximately $1,208 per year on training, turnover is an act that is relevant to all workplace environments (Miller, 2014). However, given the disproportionately high amount the military spends on training its members, preventing turnover is of particular interest within this domain. Revealing the total effects bullying has on turnover in the military will provide further evidence to support the increased allocation of monetary and human capital resources to combating bullying in the military. Furthermore, the identification of the process through which bullying influences turnover will help them military to devise pointed policies and procedures that both mitigate its effects on turnover and increasing organizational commitment in the military.

Methods: This study included 33,556 active duty US military members from all branches of Service except the US Coast Guard.

Results: In order to evaluate the three aforementioned hypotheses, we tested the full serial mediation model using PROCESS macro 6 (Hayes, 2012). A serial mediation model allows one to simultaneously test the indirect effect the mediators have together as well as individually (i.e., controlling for the other mediators in the model). The model coefficients are presented in Figure 1. Results indicated that there was a significant total effect for bullying on turnover intentions, b = .62, SE = .04, t = -14.46, p < .001. The total indirect effect (i.e., the total mediation effect including both mediators) was also significant b = -.27, BootSE = .03, BootCI_95 = [-.3189, -.2154]. Hypothesis 2 was not supported as indirect path through trust and leadership alone, b = .05, BootSE = .03, BootCI_95 = [-.0143, .1157] was not significant. Hypothesis 1 was supported as the indirect path through Organizational commitment alone, b = -.07, BootSE = .01, BootCI_95 = [-.1001, -.0531] was significant. These findings suggest organizational commitment serves as an independent mediator between bullying and turnover intentions; however, trust in leadership does not. Hypotheses 3 was supported as the serial mediation indirect effect path was significant, b = -.24, BootSE = .03, BootCI_95 = [-.2968, -.1939], providing support for a multi-step mediation effect from Bullying -> Trust in Leadership -> Organizational Commitment -> Turnover Intentions.

Conclusions: Consistent with predictions and past research findings (Blackstock, Harlos, Macleod, Hardy, 2015), bullying was found to have a negative relationship with intentions to stay of military Service Members. It was expected that both organizational commitment and trust in leadership would mediate the relationship between bullying and turnover intentions. Organizational commitment was found to serve as an independent mediator. Although this had not previously been observed, these findings expound upon those of Dumitru, and colleagues (2013) who observed that organizational commitment moderated the relationship between bullying and turnover intentions. Trust in leadership was expected to, but did not serve as an independent mediator of bullying and turnover intentions. This relationship had not previously been observed in the literature and thus adds substantively to the knowledge base of the processes through which bullying influences turnover intentions. The results from the full serial mediation model determined that trust in leadership and organizational commitment sequentially mediated the relationship between bullying and turnover intentions. This means that when military members experienced or witnessed bullying at the workplace, their trust their trust in leadership decreased. This decreased trust in leadership they experienced subsequently reduced their level of organizational commitment. This reduced organizational commitment they experienced ultimately caused them to desire to leave the military.
Poster # 453: Unexpected Health Risks Associated with Self-Driving Cars

Lead Author Name: Drew Morris


Institution: Clemson University

Objectives: Autonomous vehicles will be entering the user market in the next couple years, both as personal vehicles and autonomous taxi services. Though the level of automation will vary by manufacturer and model, many proposed models are fully autonomous and strictly limit user input. Using self-driving vehicles may place an undue amount of stress on users who are not comfortable with these autonomous systems. One method of objectively measuring stress is by recording psychophysiological measures of the sympathetic branch of the autonomic nervous system; skin conductance and trapezius muscle tension. Stress/anxiety is an especially pressing issue for older adults, who are more likely to report a distrust in automation and more likely to suffer from medical conditions that may be exacerbated with stress.

Method: Nineteen individuals (13 females, 19.51±1.31 years) participated in a series of driving tasks during a single testing session. Participants reported driving an average of 4±2.5 times per week and all considered themselves average to good drivers. Trapezius muscle activity from a surface EMG, and hand skin conductance was monitored continuously using a ProComp Infiniti multichannel data logger (Thought Technology; Montréal, Canada). All driving and simulated autonomous driving were performed in a high fidelity driving simulator. After completing the driving habits questionnaire, participants completed a five minute physiological resting baseline and a five minute vanilla baseline by driving an uneventful track. During the vanilla baseline, drivers also became comfortable with the simulated environment and the vehicle handling. After the baseline measures, the driving simulator was put into an autonomous mode and drove the participants through two scenarios in a randomized order. One scenario involved the autonomous vehicle driving cautiously and obeying all the rules of the road while the other scenario involved the autonomous vehicle driving in a risky fashion by speeding and nearly hitting surround traffic. After each scenario, participants completed a 12-item Automation Trust Survey.

Results: The result of paired samples t-test showed that based on the Automation Trust Survey, participants trusted the autonomous vehicle less while in the risky driving mode (2.00±0.90) than in the safe driving mode (3.66±0.55), t(18)=8.28, p<0.001, r²=0.79. There was no significant difference in surface EMG from the trapezius muscle, however participants showed significantly higher skin conductance while in the risky driving mode (4.42±3.59) than in the safe driving mode (4.09±3.46), t(18)=4.09, p=0.001, r²=0.482. Additionally, participants showed significantly higher skin conductance while in the safe driving mode (4.09±3.46) than when driving themselves (3.40±2.96), t(18)=2.95, p=0.009, r²=0.33. A bivariate correlation between feelings of familiarity with the autonomous vehicle and skin conductance showed that familiarity significantly predicted skin conductance during safe driving (r(17)=0.500, p=0.029) and risky driving (r(17)=0.542, p=0.017).

Conclusion: Results showed that the use of autonomous vehicles may increase health risks for conditions sensitive to stress levels. While using an autonomous vehicle, participants showed an increased stress response compared to when they were in control of the vehicle. When participants felt the vehicle was driving in an unsafe manor they showed an even larger stress response. In this case, more feelings of familiarity with the autonomous vehicle were associated with a larger stress response. This may suggest that associating an autonomous vehicle with a traditional vehicle accentuates the oddity of it being able to drive itself, which in turn lead to more stress. Those in the transportation industry should explore design methods that emphasize how autonomous vehicles are unique from traditional vehicles. Those in the health care industry should make an effort to understand how autonomous vehicles will impact their patients as the technology becomes more ubiquitous.
**Poster #454:** A Latent Profile Analysis of Promotion and Prevention Foci

**Lead Author Name:** Weiwei Liu, M.S.

**Institution:** Florida Institute of Technology

**Very short description:** We used a person-centered approach to identify subgroups of employees based on combinations of their trait promotion and prevention foci. Findings from 1251 participants showed a four-profile structure that was predicted differentially by positive and negative affectivity. Distinct profiles showed different levels of turnover intention, silence, and regulatory resource depletion.

**Objectives:** Self-regulation is crucial to workplace on-task focus (Beal, Weiss, Barros, & MacDermid, 2005) because individuals need to regulate their attention and work behaviors to resist off-task temptations in pursuit of work goals (Baumeister, Heatherton, & Tice, 1993). Regulatory focus theory posits that during goal pursuit, people cater to either nurturance-related needs by promotion focus or security-related needs by prevention focus (Higgins & Spiegel, 2004). A promotion focus prompts people to seek positive outcomes, attain ideal end states, and obtain potential gains. A prevention focus induces people to avoid negative outcomes, ensure absence of mistakes, and prevent potential losses (Higgins, 1997, 2000). Given the different motivation processes, they might lead to different workplace outcomes. For example, promotion focus was found to be positively related to task performance, job satisfaction, and organizational citizenship behavior (De Cremer, Mayer, van Dijke, Schouten, & Bardes, 2009; Pierro, Cicero, & Higgins, 2009), while prevention focus was positively related to safety performance, organizational commitment, and counterproductive work behavior (Markovits, Ullrich, van Dick, & Davis, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; Wallace & Chen, 2006).

Researchers (Lanaj, Chang, & Johnson, 2012) suggested promotion and prevention focus are orthogonal, meaning they are two distinct constructs instead of two ends on a continuum. However, to the best of our knowledge few studies (an exception [(Koopmann, Lanaj, Bono, & Campana, 2016)]) have examined the joint effect between the two foci. In fact, most past research treated the promotion focus and prevention focus as they were mutually exclusive and only tested the bivariate relationships of the two foci with their outcomes, leaving their joint effect unexplored (Gorman et al., 2012). Nevertheless, just as it’s possible for an individual to use only one strategy all the time, it’s also possible for another individual to adopt both promotion and prevention foci strategies at the same time. A person-centered approach is thus useful to identify different subpopulations that differentially combine promotion and prevention foci strategies, and to explore antecedents and outcomes of these combinations. This is the goal of this current study.

**Results:** We found four latent profile structures based on the profile indicators. This finding contributes to the literature that distinct subpopulations combine their regulatory foci strategies differently, such that the two strategies can coexist in certain subpopulations. Moreover, we found that PA and NA predicted different class memberships that showed various levels of turnover intention, employee silence, and resource depletion.

**Conclusions:** Using a person-centered approach, the current study revealed a four-profile structure based on participants’ levels on promotion and prevention foci. PA and NA predicted participants’ profile membership, and promotion and prevention foci jointly predicted participants’ levels on turnover intention, employee silence, and regulatory resource depletion.
Poster # 455: Being Called to Safety: Occupational Callings and Safety Climate in the Emergency Medical Services

Lead Author Name: Stephanie A. Andel

Additional Author: Paul Spector

Institution: University of South Florida Sunshine ERC Occupational Health Psychology Program

Short Description: The objective of this study was to investigate the importance of safety climate in the Emergency Medical Services (EMS), and to assess occupational callings as a boundary condition for the effect of safety climate on safety behaviors. Specifically, 132 EMS professionals participated in a three-wave survey study. Hierarchical linear regressions were conducted to test the moderating effects of occupational callings. Results showed that safety climate was significantly related to safety behavior, and occupational callings moderated this direct relationship ($\Delta R^2 = .02-.03, p < .05$). Specifically, when occupational callings were high, the relationship between safety climate and safety behaviors was stronger, and when occupational callings were low, the relationship was weaker. Overall, safety climate was an important predictor of safety behavior within this EMS sample. Further, occupational callings moderated this relationship, suggesting that callings may serve as a boundary condition.

Objective: To investigate the importance of safety climate in the Emergency Medical Services (EMS), and to assess occupational callings as a boundary condition for the effect of safety climate on safety behaviors.

Methods: EMS professionals ($n = 132$) participated in a three-wave survey study. Hierarchical linear regressions were conducted to test the moderating effects of occupational callings.

Results: Safety climate was significantly related to safety behavior, and occupational callings moderated this direct relationship ($\Delta R^2 = .02-.03, p < .05$). Specifically, when occupational callings were high, the relationship between safety climate and safety behaviors was stronger, and when occupational callings were low, the relationship was weaker.

Conclusion: In this EMS sample, safety climate was an important predictor of safety behavior. Further, occupational callings moderated this relationship, suggesting that occupational callings may serve as a boundary condition.
Daily Workplace Motivational Processes: Resource Efficacy and Effort

Lead Author Name: Keemia Vaghef

Additional Author: Chelsea LeNoble

Institution: Florida Institute of Technology

Short description: A highly motivated workforce is a key component of organizational success. However, mixed findings in motivation research make the practical application of self-regulation theory difficult. The present poster integrates self-regulatory theories to introduce the construct of resource efficacy. In a daily diary study, the authors examined self-regulatory processes of resource efficacy and employee effort. The cross-level effects of self-control and organizational recovery climate were also explored. The results suggest that resource efficacy drives employee effort throughout the workday, and organizational support for recovery buffers this relationship. These findings clarify self-regulatory theory and encourage organizations to support employee recovery.

Objectives: The present study extends previous theory and research on the impact of energetic resources and self-efficacy on workplace behavior. By integrating research on personal resources and self-efficacy, we introduce the construct of resource efficacy, or a person’s belief in their capability to perform a task based upon the perceived ratio of current personal energy levels to the amount of energy demanded by the task. We discuss the expected relationships among workplace motivational processes related to resource efficacy and effort, including the impact of between-person and environmental factors (Figure 1). We describe and present the results of a daily diary study conducted to examine the within-person patterns of employee effort exertion based on their perceived resource efficacy.

Methods: An experience sampling method was used over 15 consecutive workdays. There were 145 useable Level-2 data points, which falls within the recommendations for appropriate statistical power when a cross-level interaction effect is hypothesized (Sonnentag, Binnewies, & Ohly, 2013). Surveys were administered electronically through the Qualtrics survey platform at three times over the course of the day. Participants were instructed to complete each survey upon entering the workplace, before they take their lunch break, and at the end of the workday before they depart.

Results: To test the relationships among sleep quality, morning resource efficacy, and effort before lunch (Hypothesis 1a, Hypothesis 1b, and Hypothesis 1c), the Preacher, Zyphur, & Zhang (2010) 1-1-1 mediation model was used in MPlus. Sleep quality was significantly positively related to morning resource efficacy (γ = .50, p < .001), providing support for Hypothesis 1a. Additionally, morning resource efficacy was significantly positively related to work effort before lunch (γ = .05, p < .02), providing support for Hypothesis 1b. Finally, a significant indirect effect of sleep quality on effort before lunch through morning resource efficacy was found (γ = .03, p < .02, 95% CI = .004 to .05), providing support for Hypothesis 1c. Effort before lunch was positively related to effort at the end of the workday (γ = .24, p < .001). Finally, effort before lunch was found to be a significant mediator of the relationship between morning resource efficacy and end of workday effort (γ = .02, p < .01, 95% CI = .01 to .03), providing evidence for Hypothesis 2b. Self-control was tested as a cross-level predictor of intercepts for end of workday effort. The relationship between self-control and end of day effort was significant (γ = .01, p < .05). Therefore, Hypothesis 3 was supported. Personal energy recovery climate was found to be a significant cross-level moderator of the within-persons relationship between morning resource efficacy and end of workday effort (Figure 2), providing evidence for Hypothesis 4.

Conclusions: Our finding that resource efficacy is a key mechanism for effort throughout the workday provides theoretical and practical contributions. Resource efficacy helps clarify the ongoing debate (Bandura, 2015) regarding whether self-efficacy positively or negatively impacts performance. Self-efficacy may not positively predict resource allocation when individuals are too exhausted and their personal energy is depleted, even if they are usually capable of performing a task successfully. This study highlights the theoretical importance of how influential humanistic values like well-being and belief in one’s own ability to perform play a role in employee’s exertion of effort throughout the workday.
Poster # 457: Faculty Time Allocation: A Latent Profile Approach

Lead Author Name: Kimberly A. French, MS

Additional Authors: Tammy D. Allen, PhD, Michelle Hughes-Miller, PhD, Grisselle Centeno, PhD, Eun Kim

Institution: University of South Florida Sunshine ERC Occupational Health Psychology Program

Short Description: We investigate faculty time allocation using latent profile analysis. Four profiles emerge that reflect research, teaching, service, and long hours patterns. Profiles differ in well-being. The teaching profile is associated with more work-family balance, but lower vitality and overall health, relative to the service and long hours profiles.

Objectives: The purpose of the current study is to examine time allocation latent profiles among faculty members. Using time scarcity perspectives (Becker, 1965; Edwards & Rothbard, 2000), we test relationships between time allocation latent profiles and gender and family-related hours (gender, household hours, childcare hours, and eldercare hours) in addition to well-being correlates (work-family balance, life satisfaction, vitality, and overall health). Our study builds on previous faculty time allocation research (e.g., Misra et al., 2012; Winslow, 2010) by using a person-centric, latent profile approach. Our findings revealed five profiles. Three profiles reflected a focus on research, teaching, and service. The remaining two profiles had relatively fewer total work hours and a more balanced workload across research, teaching, and service obligations. Gender and well-being did not significantly differ across these time allocation profiles. However, consistent with the time scarcity perspective, individuals in profiles with a high total number of work hours spent less time caregiving than individuals in profiles with fewer total work hours. Overall, our findings reveal promising insights into the diversity of faculty time allocation profiles. Profiles and correlates align with and extend previous findings that indicate time allocation reflects family time obligations, although we find no support for gender or well-being differences across profiles of time allocation.

Conclusions: Overall, our initial findings reveal promising insights into the diversity of faculty time allocation profiles. Profiles and correlates align with and extend previous findings that indicate time allocation is gendered, reflects family time obligations, and is important for work-family balance and well-being. We anticipate the additional data we are collecting will provide additional power for testing our hypotheses, allow us to replicate our profiles and findings, and allow us to examine additional factors, such as STEM versus non-STEM differences and gender by family hours interactions.
Poster # 458: How Multitasking at Work Affects Employee Well-Being: A Review

Lead Author Name: Vanessa Quiroz, BA

Institution: Florida International University

Short Description: Multitasking is defined as the ability to engage and shift attention between two or more tasks in relatively short periods of time. The use of information communication technologies at work (e.g., email, instant messaging, text messaging, etc.) has increased the speed of communication and information, resulting in more time pressures. Despite this inherent need of multitasking to increase productivity, there is a paucity of studies looking at the relationship between multitasking and employee’s occupational health and well-being.

Objectives: Understanding multitasking and its consequences for occupational health; particularly on employee mental strain can be fruitful in many ways. First, the information gained will help clarify what are the drawbacks and benefits of a multitasking approach to task completion. Secondly, although multitasking practices can never be eliminated, understanding the differential outcomes of multitasking on employee well-being can help researchers identify factors which can counterbalance the negative effects of multitasking without the cost of organizational productivity.

Methods: Literary review

Results: If an employee perceives that the use of ICT increases their workload through a work intensification process (i.e., increased task demands, increased work pace, and cognitive overload), they can experience mental strain, which in turn can lead to burnout. The divided attention necessary to multitask can inhibit the employee’s capacity to complete more complex tasks. Conversely, some research has highlighted the beneficial aspects of multitasking like when it is used to alleviate boredom or when it is used to combine activities that require different levels of attention. A key factor in these differential outcomes however, is that the employee uses multitasking as a preference and not as a necessity.

Conclusions: Multitasking can be a broad topic. Unfortunately, a review of the literature suggests that some researchers have merged vastly different concepts (like interruptions and distractions) under the umbrella of multitasking despite their clear nuances. In the same manner, terms like simultaneous activities, overlapping activities, concurrent activities, parallel activities, secondary activities, multitasking and polychronic time use have been used to examine this very same construct. We believe that making a clear distinction between these terms will be conducive to an objective examination of its value for organizations in terms of productivity and employee well-being.
Poster # 459: Job Demands, Control, and Commitment: Does Full-Time Status Matter?

Lead Author Name: Jimmy Zheng

Additional Authors: Xinyue Zhao

Institution: University of Central Florida

Short Description: The majority of recent studies examining differences between full-time with nonstandard employees have focused primarily on temporary workers (Connelly, Gallagher, & Gilley, 2007; De Cuyper & Witte, 2006, 2007). Fewer studies investigate the psychological experience of part-time employees. We propose the psychological contract theory to explain why part-and full-time employees respond to work-related experiences.

Objectives: Popular job design theories such as the Job Demands-Control Model (Karasek, 1979) have been examined using primarily full-time employees, as such, their results should not be assumed to generalize to those who do not work full-time (Schaufeli & Bakker, 2004). We leverage psychological contract theory as an explanatory framework to understand the differential impact of job demands and control on affective commitment among workers with full-time and part-time status. Because they are more likely to hold transactionally-oriented psychological contracts, we anticipate that part-time employees will respond particularly negatively to high job demands because they may perceive an immediate imbalance in monetary rewards for the work they put in. In other words, the negative effects of high job demands may be more salient for part-time than full-time employees (Hypothesis 1). In contrast, we argue that control is a stronger driver of commitment among full-time employees (Hypothesis 2). This is because full-timers are more likely to hold relational contracts that place emphasis on non-monetary rewards including resources such as job control. Finally, given evidence of the association between relational contracts and commitment, we propose that full-time employees will experience greater levels of affective commitment (Hypothesis 3).

Methods: The data used for this study comes from the work orientation module of the International Social Survey Programme (ISSP, 2005) and only includes employees that are currently working part- or full-time (N = 24,492; 81.2% full-time and 18.8% part-time; 52.4% male and 47.6% female; mean age 41.35 years, SD = 12.09). Affective commitment was assessed using three items (e.g., “I am proud to be working for my firm or organization”), job demands via four items (e.g., “do you work in dangerous conditions?”), and control via a single item asking how “daily work is organized.” We controlled for gender, age, and work preference.

Results: As expected, we found that part-time v. full-time status moderated the effects of job demands and job control on affective commitment. In support of hypothesis 1, the relationship between job demands and affective commitment was stronger for part-time employees (B = -.11, SE =.02, p = .00) than for full-time employees (B = -.07, SE = .01, p = .00). In support of hypothesis 2, the relationship between control and affective commitment was stronger for full-time employees (B =.26, SE =.01, p = .00) than for part-time employees (B = .18, SE = .02, p =.00). There were also main effects of employment status (less commitment with part-timers).

Conclusions: Our results have several important implications. First, organizations employing part-timers to reduce labor costs may discover that the consequences of lower affective commitment may outweigh the benefits. Less committed workers quit more often and display lower levels of job performance (Cooper-Hakim & Viswesvaran, 2005). Second, organizations attempting to increase commitment by reducing job demands and increasing job control should not assume a one-size-fits-all intervention for both part-and full-time employees. It may be more effective to develop specific interventions for each employment type. For example, focusing on reducing job demands for part-time employees and increasing job control for full-time employees.
Poster # 460: Occupational Noise Exposure

**Lead Author Name:** Dorwayner Evans, ASN, BSN

**Institution:** University of South Florida Sunshine ERC Occupational Health Psychology Program

**Short Description:** The noise levels in an airport can be particularly stifling when first close enough to hear the whirring of the engines, the vibrations of machinery and the overall hustle of the thousands of people that frequent the airport (Alam, Wahab, Rahman, Asaduzzaman, Al-Azad, Karim & Sultana, 2014). Typically, noise is measured in sound pressure units, which at high frequencies can cause severe impairment and hearing loss. Annually, about twenty-two million workers are predisposed to potentially harmful noise at work each year (Yankaskas, 2013).

**Objectives:** Discuss Occupational Noise Exposure and describe implications for Occupational Health nursing

**Methods:** Review of research, best practices and other evidence-based practice literature

**Results:** Implications for Occupational Health Nursing practice and research will be presented

**Conclusions:** Implications for Occupational Health Nursing practice and research will be presented
Poster # 461: Order Effects and Affectivity in Survey Research: A Pilot Study

Lead Author Name: Rebecca Marie Brossoit

Additional Authors: Tori L Crain, Ryan C Johnson

Institution: Colorado State University

Short Description: The purpose of this study is to investigate the influence of survey order effects and affectivity on responses to school-family conflict items.

Objectives: We investigated the influence of survey order effects and affectivity on responses to school-family conflict measures.

Methods: University subject pool participants were randomized to one of four conditions: 1) School-to-family conflict (STFC), family-to-school conflict (FTSC), International Personality Item Pool (IPIP), 2) STFC, IPIP, FTSC, 3) FTSC, STFC, IPIP, 4) FTSC, IPIP, STFC.

Results: Responses for STFC and FTSC were higher when not preceded by a neutral distractor measure. STFC and FTSC were lower for individuals with higher positive affect when they received the IPIP between conflict measures.

Conclusions: These results suggest that the order measures are presented impact responses to role conflict measures.
Poster #462: Parental Occupation Effects: Academic Outcomes for Children of ERs

Presenter/Author: April D. Schantz, M.S.

Institution: Florida International University, Industrial-Organizational Psychology

Short Description: Previous research has found high levels of work-family conflict for occupations of police, firefighters, and physicians. This study examined the indirect effect of work-related stress spillover into families of Emergency Responders (ERs). Specifically, we examined student academic outcomes in math and reading, and evaluated the impact of parental occupation in emergency services upon these achievement outcomes. A multilevel model design was used to account for effects at both the student and community level.

Objectives: Workplace stressors have been found among the strongest predictors of negative work-nonwork spillover. Specifically for ERs, we posited that job-inherent stress and traumatic situations experienced by those employed in emergency services (e.g. police, firefighters, paramedics, emergency dispatchers) would threaten family equilibrium and have potential to disrupt involvement in their children's academics. Accounting for individual characteristics related to academic outcomes (e.g. gender, SES, ethnicity), this study hypothesized a negative effect upon outcomes experienced by children who have one or both parents employed in emergency services.

We also posited that higher levels of neighborhood crime would increase frequency and intensity of job-inherent risks for ERs and have an additional cross-level effect on student outcomes. Therefore, we hypothesized a cross-level interaction effect upon student outcomes, such that stronger adverse effects would be found for ER children who reside in higher crime areas.

Results and Discussion: Results from multilevel modeling found students with parents employed in emergency services had an average math score almost 2 points lower than other students. However, while trending in the expected direction, effects of ER parents for reading scores were not significant in the final model. Cross-level effects from increases in neighborhood crime level were found non-significant.

This raises interesting questions regarding differential effects between math and reading. Specifically, while this finding was consistent with differences found in parental practices affecting students' attitudes towards reading and math, it does not explain how this difference would be tied to parental occupation. Additionally, given that 9.7% of variance was found in level two of the model, yet cross-level effects were non-significant, further study regarding community level effects on student outcomes should examine other potential moderators.

Conclusions: Findings from this study suggest areas for stress interventions to include facilitation of parental involvement in math achievement, and opportunities to increase math proficiency for girls and reading proficiency for boys.
Poster # 463: Passive Leadership and Employee Outcomes: Examining Job Insecurity, Workload, and Role Ambiguity as Mediators

Lead Author Name: Zhiqing Zhou

Additional Authors: Mr. Timothy Davis

Institution: Florida Institute of Technology

Short Description: This study examined passive leadership as the predictor of employee burnout, organizational commitment, and performance; workload, role ambiguity, and job insecurity each mediated some of the relationships between passive leadership and the outcomes.

Objectives: Kelloway et al.’s (2005) “root cause” framework suggests that passive leadership can potentially increase traditional stressors such as workload, job insecurity, and role stressors that might further affect employee health. Adopting this framework, the objectives of this study included examining passive leadership as a predictor of employee burnout, organizational commitment, and job performance, and investigating whether workload, job insecurity, and role ambiguity have differential mediating effects in these relationships.

Methods: Two hundred and forty-two full-time employees in North America were recruited to complete a Time 1 survey (passive leadership, workload, job insecurity, and role ambiguity), and contacted them again for Time 2 survey 3 months later (burnout, organizational commitment, and job performance). One hundred and sixty-eight (168) participants provided valid data for both surveys and their data were used for final analyses. Fifty-eight percent of them were male, with the majority (81.5%) being white. They were from various industries, including service (20.8%), finance (12.5), education (11.3%), and manufacturing (10.7%).

A path analysis was conducted using Mplus 7.3 (Muthén & Muthén, 2010) to examine direct and indirect effects of passive leadership on the outcomes through the three mediators with 5000 iterations of bootstrapping.

Results: Passive leadership at Time 1 was a significant predictor of employee workload, job insecurity, and role ambiguity at Time 1, and employee burnout, organizational commitment, and job performance at Time 2. Passive leadership had significant indirect effects on employee burnout at through all three mediators, significant indirect effects on employee organizational commitment through workload and job insecurity but not role ambiguity, and significant indirect effects on employee job performance through job insecurity and role ambiguity but not workload.

Conclusions: The current study contributed to the literature by showing that passive leadership significantly predicted traditional stressors of workload, job insecurity, and role ambiguity. Further, passive leadership might predict different outcomes through unique mechanisms. For example, workload, job insecurity, and role ambiguity each uniquely mediated the effect of passive leadership on employee burnout. However, only workload and job insecurity each uniquely contributed to mediating the effects of passive leadership on employee organizational commitment, while only job insecurity and role ambiguity each uniquely contributed to mediating the effects of passive leadership on employee job performance. Lastly, our results suggested that job insecurity plays the most important role in mediating the effects of passive leadership on employee outcomes.
Poster # 464: The Effects of Sharing Work Events on Employees and Partners

Lead Author Name: Malissa A. Clark

Additional Author: Melissa M. Robertson

Institution: University of Georgia

Objective: To understand how disclosure of positive and negative workplace events affects employees and their partners.

Methods: Experience sampling methodology was used; employees and their partners completed online surveys every day for ten consecutive work days.

Results: On days when employees experienced negative work events, greater disclosure about negative work events to partners was marginally associated with employees’ lower negative affect and with partners’ higher positive affect that evening. In contrast, on days when employees experienced positive work events, greater disclosure about positive work events was unrelated to employee or spouse affect that evening or to employees’ next morning recovery.

Conclusion: Sharing negative work events with one’s partner may beneficial for employees and their partners.
Poster #465: Work, Interrupted: Measuring Subjective Interruption Experience and its Strain Outcomes

Lead Author Name: Keaton A. Fletcher, M.A.

Additional Authors: Britany N. Telford, M.A., Sean M. Potter

Institution: University of South Florida Sunshine ERC Occupational Health Psychology Program

Short Description: Interruptions in the workplace can put a great deal of strain on employees, costing organizations both time and money. Most research on interruptions involves direct observation and primarily assessing distractions. However, research suggests that subjective experiences of interruptions better predict strain. Furthermore, the model of interruptions we used suggests there are four different types of interruptions. We developed a scale based on this framework to capture the subjective experience of these four types of interruptions. The scale was then used to predict employee strain. Results suggest different types of interruptions differentially predict affective, psychological, and physical strain.

Objectives: Interruptions place unnecessary or unexpected cognitive demands on individuals during task execution and skill acquisition, making successful outcomes difficult, if not impossible. Eyrolle and Cellier (2000) found that interruptions related to failed attention monitoring and increased time required to complete tasks, thus ultimately resulting in human error. For organizations, this translates to process loss and, ultimately, profit loss. Beyond monetary cost, the consequences of interruptions in high-reliability organizations, such as nuclear power plants or hospitals, may include injury or death. Jett and George (2003) put forth a taxonomy of interruptions, characterizing each type of interruption by its origin and predictability, as well as its benefits and costs to the employee and the organization. It is important to understand each of the four distinct types of task interruptions (i.e., intrusions, distractions, breaks, discrepancies) so as to fully comprehend the potential mechanisms by which interruptions affect task performance.

Most existing subjective measures of interruptions do not capture all four dimensions making it difficult to compare the differential impact of each interruption type. To the authors’ knowledge, there does not yet exist a single measure that captures perceptions of the frequency of intrusions, breaks, distractions, and discrepancies. The purpose of this study is to create such a measure, based on the theoretical framework set forth by Jett and George (2003), and to examine the differential effects of each type of interruption on psychological and physical strain. Specifically, we hypothesize (1) higher levels of perceived frequency of any type of interruption will be correlated with higher levels of affective, psychological, and physical strain. Also, given that they represent a lack of job control, a known stressor (Liu, Spector, & Jex, 2005), we hypothesize (2) higher levels of interruptions that originate externally (i.e., intrusions and distractions) will be correlated with higher levels of affective, psychological, and physical strain compared to those that originate internally (i.e., breaks and discrepancies). Lastly, we propose a research question: when looking at all four types of interruptions to predict strain, which among on these interruption types will appear to best explain affective, psychological, and physical strain?

Methods: Item Generation. Fifty-one items were generated to capture the four dimensions of the interruptions construct as defined by Jett and George, 2003. Participants were recruited through an undergraduate psychology pool.

Results: Distractions were significantly and positively related to negative emotions, psychological strain, and physical strain. Breaks were significantly and positively related to negative emotions, psychological strain, and physical strain. Finally, discrepancies were significantly related to negative emotions, psychological strain, and physical strain. The results support our hypotheses that higher levels of perceived frequency of any type of interruption are related to increased affective, psychological, and physical strain.

Conclusions: As our results suggest, interruptions on the job—whether they are intrusions, breaks, distractions, or discrepancies—are significant predictors of affective, psychological, and physical strain. Specifically, these findings lend support to the notion that the subjective experience of interruptions is an important predictor of strain outcomes. This is encouraging for researchers and practitioners alike, indicating that our 20-item measure will be able to predict a large portion of the variance in strain outcomes. Our study also lends support to the theoretical distinctions between different types of interruptions, outlined by Jett and George (2003). Specifically, we found that the conceptual distinctions between intrusions, breaks, distractions, and discrepancies held-up when individuals were asked to consider their subjective experiences with interruptions.
Poster # 466: Workplace Exposure to Dermatological Irritants

Lead Author Name: Victoria Jacobs, RN, BSN

Institution: University of South Florida Sunshine ERC Occupational Health Nursing Program

Short Description: Contact dermatitis resulting from exposure to irritants in the workplace is one of the most common work related injuries in the United States. Skin presents a large portal of entry for potentially toxic substances and injuries. Occupational health nurses can play a pivotal role in protecting workers and managing exposures.

Objectives: Discuss Dermatological exposures and implications for occupational health nursing.

Methods: Review of research, best practices and other evidence-based practice literature.

Results: Implications for occupational health nursing practice and research will be presented.

Conclusions: Implications for occupational health nursing practice and research areas.
Poster # 467: Worksite Lifestyle Change Program to Reduce Risk for Cardiovascular Disease for Shift Workers

Lead Author Name: Leonie James

Institution: University of South Florida Sunshine ERC Occupational Health Nursing Program

Short Description: Cardiovascular disease (CVD) is a major health concern for shift workers. A health and wellness program that will provide a lifestyle change is an opportunity to identify, assess & provide interventions to reduce modifiable cardiovascular risk factors at the workplace.

Objectives: Discuss how a worksite lifestyle change program can reduce the risk for cardiovascular disease for shift workers and describe the implications for occupational nursing.

Methods: Review of research, best practices and other evidence-based practice literature.

Results: NA

Conclusions: A worksite lifestyle change program can reduce the risk of cardiovascular disease in shift workers. The program will provide health protection and health promotion by improving workers’ quality of life and organization’s profitability.
Poster # 468: Zika Virus and The Threat of Exposure to Workers: Implications for The Occupational Health Nurse

Lead Author Name: Kristin L. Gardner, BA, BSN

Institution: University of South Florida Sunshine ERC Occupational Health Nursing Program

Short Description: Zika virus was recently declared a global public health emergency by the World Health Organization. Workers from many industries have the risk of infection. Prevention is the primary line of defense. Occupational Health Nurses can be instrumental in helping to protect and prevent workers from getting infected.

Objectives: Discuss Zika virus and describe the implications for occupational health nursing.

Methods: Review of research, best practices and other evidence-based practice literature

Results: Implications for occupational health nursing practice and research will be presented.

Conclusions: Occupational health nurses can help reduce the threat of Zika virus exposure to workers.
Instructions for the Interdisciplinary Poster Presentation Session

From 10:00 am – 11:00 am, student researchers with Florida International University, Florida Institute of Technology, University of Central Florida, Clemson University, University of Georgia, Colorado State University, Baruch College/CUNY and the University of Puerto Rico who are associated with odd numbered posters will be available to answer questions regarding their research while researchers with even numbered posters can circulate and visit those posters. From 11:00 am – 12:00 pm, student researchers associated with even numbered posters will be available to answer questions while the researchers associated with odd numbered posters circulate.

Student trainees and invitees are asked to secure the signatures of at least 5 student researchers who verify that you have visited their poster and asked a question about their research. This unique interdisciplinary session represents the opportunity to learn from other student researchers, so all signatures should be from researchers outside your own training area. Please write your name at the bottom of this sheet and drop this page in the designated box. Have fun!

Your name, academic program and institution:
__________________________________________________________________________________

Signatures of other student researchers from University of South Florida, Florida International University, Florida Institute of Technology, University of Central Florida, Clemson University, University of Georgia, Colorado State University, Baruch College/CUNY and the University of Puerto Rico:

(1) ______________________________________________________________________________
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