EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

Ph.D. IN AVIATION
[update]

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DAYTONA BEACH, FLORIDA

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Ph.D. in Aviation Candidate dissertation defense announcements

Kris Anthony Ostrowski, Ph.D. in Aviation candidate, will present his dissertation, "PSYCHOLOGICAL HEALTH OUTCOMES WITHIN USAF REMOTELY PILOTED AIRCRAFT SUPPORT CAREER FIELDS," on Thursday, June 23, 2016, at 1:00 p.m. in SIM, room 204, on the Daytona Beach campus. The committee is chaired by Dr. Mark Friend, Professor of Doctoral Studies. The presentation is open to the public and will be broadcast via EagleVision at

https://eaglevision.adobeconnect.com/ostrowskidefense/.

Abstract:

Remotely piloted aircraft are now commonplace in modern warfare. Enlisted intelligence personnel in the U.S. Air Force (USAF) who support these activities have reported personal accounts of posttraumatic stress and fatigue, possibly due to viewing high-definition, full-motion-video, remote warfare. Rates of mental health diagnoses and counseling are unknown in this population. Incidence rates of 12 specific mental health outcomes were calculated for all enlisted active duty USAF Intelligence Specialists in the 1N1 and 1N0 career fields from 1 January 2006 through 31 December 2010, while considering various demographic and military variables. The incidence rates were compared to RPA sensor operators and aircraft armament technicians that have similar initial and subsequent psychiatric medical standards and occupational scheduling demands as enlisted active duty USAF intelligence specialists, but differ in the viewing of high-definition, full-motion-video, remote warfare. Unadjusted incidence rates of posttraumatic stress disorder among RPA intelligence specialists (n=7,988), RPA sensor operators (n=196), and aircraft armament technicians (n=11,340) were 3.4 per 1,000 person-years, 2.0 per 1,000 person-years, and 1.5 per 1,000 person-years, respectively. Incidence rate ratios, adjusted for age, gender, time in service, and number of deployments, for posttraumatic stress disorder were: 1) 1.34, 95% confidence interval = 0.19-9.64, for RPA intelligence specialists compared to RPA sensor operators, 2) 1.83, 95% confidence interval = 1.31-.2.55, for RPA intelligence specialists compared to aircraft armament technicians, and 3) 1.36, 95% confidence interval = 0.19-9.85, for RPA sensor operators compared to aircraft armament technicians. Enlisted RPA intelligence specialists displayed significantly higher incidence rates for substance abuse/dependence, family circumstance problems, and maltreatment related mental health categories, and for all mental health outcomes combined compared to RPA sensor operators after adjusting for differences in the two cohorts. Enlisted RPA intelligence specialists also displayed statistically higher incidence rates for life circumstance problems and posttraumatic stress disorder as compared to aircraft armament technicians after adjusting for differences in the two cohorts. Within the surveillance period, RPA intelligence specialists experienced 1.83 times (p < 0.001) the rate of posttraumatic stress disorder compared to aircraft armament technicians, after adjusting for differences in the two cohorts. The statistical findings indicating increased incidence rates of mental health outcomes within RPA intelligence specialists corroborate the theoretical perspective that modern intelligence personnel within the DCGS may be at a higher psychological risk similar to traditional combat veterans, and will likely experience emotional stress, burnout, and PTSD. Military policymakers and clinicians should recognize that RPA intelligence personnel have increased mental health risk while performed their duties.

Kevin O'Leary, Ph.D. in Aviation candidate, will present his dissertation, "THE EFFECTS OF SAFETY CULTURE AND ETHICAL LEADERSHIP ON SAFETY PERFORMANCE," on Wednesday, June 29, 2016, at 1:00 p.m. in SIM, room 204, on the Daytona Beach campus. The committee is chaired by Dr. Alan Stolzer, Professor of Doctoral Studies. The presentation is open to the public and will be broadcast via EagleVision at:

https://eaglevision.adobeconnect.com/olearydefense/.

Abstract:

This dissertation investigated the effects of safety culture and ethical leadership on safety performance in Fractional jet pilots in the United States. The primary objective was to develop a well-fitted model linking these constructs. A composite survey instrument was developed from instruments previously validated in the literature. There were 305 complete and valid responses from Fractional pilots. The hypothesized factor structure consisted of seven factors. The exogenous factor of safety culture was made up of four sub-factors. The endogenous factors included ethical leadership, pilot commitment, and safety performance. Safety performance was a second order factor consisting of errors and attitudes to violations. The hypothesized model was not well fit for the data; therefore, an exploratory factor analysis was conducted. The new model consisted of three factors: safety culture new, ethical leadership new, and not following procedures. A structural equation model was developed to test the relationships between constructs. Safety culture new demonstrated a strong and significant positive effect on ethical leadership new. Safety culture new, unexpectedly, did not have a significant negative relationship with not following procedures. Additionally, ethical leadership new did not have a significant negative effect on not following procedures. These finding conflicted with previous studies in the literature that confirmed a significant relationship between both safety culture and ethical leadership with safety behavior. The main finding illuminates the influence of safety culture new on ethical leadership new. Additional findings showed the factor structure for most of the previously validated survey instruments was not maintained in this study with the Fractional pilot data.

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