Prevalence of Neck Pain and Low Back Pain in a Combat Aviation Brigade

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A high prevalence of neck pain (NP) and low back pain (LBP) has been reported in the military, especially for female and helicopter aircrew (pilots/crew). For injury prevention research, it is essential to establish the prevalence of NP/LBP between genders and between aircrew and non-aircrew. Furthermore, among aircrew, we examined the prevalence based on aircraft and flight experience. **PURPOSE:** To compare a prevalence of NP and LBP based on gender, occupation (aircrew/non-aircrew), aircraft (Blackhawk/Kiowa/Apache/Chinook), and flight experience (junior/senior). **METHODS:** A total of 183 Soldiers reported to the Warrior Human Performance Research Laboratory and completed self-reported pain questionnaires. NP/LBP was operationally defined as any pain, ache, and/or discomfort in the neck/low back region in the past 12 months. Soldiers were categorized based on gender (166 males/17 females) and occupation (151 aircrew/32 non-aircrew). All 151 aircrew were further categorized based on aircraft (65 Blackhawk/36 Kiowa/33 Apache/17 Chinook) and flight experience (102 junior/49 senior aircrew). The senior aircrew were based on flight-hours (1500+hrs) or flight-years (7+yrs). The Fisher’s exact test was used to compare the prevalence between groups (p<0.05). Additionally, Odds ratio (OR) and 95% confidence interval (95%CI) were estimated. **RESULTS:** The prevalence of NP/LBP was as the follows: all: 25.1%/49.7%, males: 24.7%/48.8%, females: 29.4%/58.8%, aircrew: 27.8%/54.3%, non-aircrew: 12.5%/28.1%, Blackhawk: 20.0%/52.3%, Kiowa: 38.9%/63.9%, Apache: 33.3%/51.5%, Chinook: 23.5%/47.1%, juniors: 19.6%/50.0%, and seniors: 44.9%/63.3%. The aircrew had a significantly higher prevalence of LBP compared to the non-aircrew (p=0.011, OR=3.037, 95%CI=1.318-6.996). The senior aircrew had a significantly higher prevalence of NP compared to the junior aircrew (p=0.002, OR=3.341, 95%CI=1.585-7.041). **CONCLUSION:** A high prevalence of LBP in the aircrew and NP in the senior aircrew suggest military occupation specific differences in physical stress and accumulation of stress over time of flight career. The results also urge the need for aircrew- and experience-specific physical training intervention programs to reduce or prevent NP/LBP. Supported by USAMRMC #W81XWH-11-2-0097