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**PREVALENCE OF NECK PAIN AND LOW BACK PAIN IN A COMBAT AVIATION BRIGADE**

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**ABSTRACT**

A high prevalence of neck pain (NP) and low back pain (LBP) has been reported in the military, especially for females 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. Among aircrew, we examined the prevalence of NP/LBP based on gender, occupation (aircrew/non-aircrew), aircraft (Blackhawk/Kiowa/Apache/Chinook), and flight experience (102 junior/49 senior aircrew). The senior aircrew were based on their total 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).

**RESULTS**

A high prevalence of LBP in the aircrew and NP in the senior aircrew may reflect MOS-specific differences in physical stress and accumulation of stress over time of flight. Additionally, a larger sample size will be required to further examine gender-related differences in prevalence of NP/LBP.

**DISCUSSION**

A high prevalence of LBP in the aircrew and NP in the senior aircrew may reflect MOS-specific differences in physical stress and accumulation of stress over time of flight. Additionally, a larger sample size will be required to further examine gender-related differences in prevalence of NP/LBP.

**STUDIES**

• NP and LBP are common in the military, especially in females and helicopter pilots.

• Among aircrew, anecdotally, NP and LBP are thought to occur at a higher rate in experienced pilots and pilots who operate smaller aircrafts (Kiowa and Chinook) and experienced pilots.

• Therefore, the purposes of the study is to compare a prevalence of NP and LBP based on their gender, occupation, aircraft, and flight experience.

**DIFFERENCES AMONG AIRCRAFTS**

A high prevalence of LBP in the aircrew and NP in the senior aircrew may reflect MOS-specific differences in physical stress and accumulation of stress over time of flight.

**METHODS**

It was a cross-sectional study design and was part of the comprehensive injury prevention and performance (CIPP) session. All subjects were recruited from the same combat aviation brigade (65 Black Hawk, 36 Kiowa, 33 Apache, and 17 Chinook) and flight experience (102 junior aircrew and 49 senior aircrew). The senior aircrew were further categorized based on their total flight-hours (1500+ hours) or flight-years (7+ years). The prevalence of NP/LBP was as the follows: all: 25.1%/49.7%, males: 24.7%/48.8%, females: 26.0%/52.3%, Kiowa: 38.9%/63.9%, Apache: 33.3%/51.5%, Chinook: 23.5%/47.1%

**TABLE 1: Demographics of each group in TABLE 2**

**TABLE 2: Prevalence of NP/LBP: Gender and Occupation Differences**

**TABLE 3: Prevalence of NP/LBP: Aircraft Differences**

**TABLE 4: Prevalence of NP/LBP: Aircraft Comparison**

**TABLE 5: Proposed intervention strategies**

**SUMMARY AND CONCLUSIONS**

• A high prevalence of LBP in the aircrew and NP in the senior aircrew may reflect MOS-specific differences in physical stress and accumulation of stress over time of flight.

• A larger sample size will be required to further examine gender-related differences in prevalence of NP/LBP.