ABSTRACT

TITLE:	Differences in Concussion Symptoms in Males and Females
AUTHOR(S):	Harmelink, Ashley; Meyer, Dr. Carrie; Parsons, Nina
PRESENTED AT:	2015 Undergraduate Research and Creative Activities Symposium, Fort Lewis College

ABSTRACT: Concussions have received significant attention in the past few years as research has brought to light the seriousness of mild traumatic brain injuries in sports. Differences in symptom presentation between males and females have been shown in other serious medical conditions such as heart attacks, PTSD, depression, and migraines. The aim of this study was to examine whether or not females and males reported different symptomology after sustaining a concussion. Data was collected from 87 (M = 43, F = 44) Fort Lewis College athlete medical files from the years 2006 - 2015. All subjects were NCAA Division II athletes between the ages of 18 - 27. They all suffered from one or more concussions at Fort Lewis College and had proper medical documentation of these concussions. Data was only gathered from the first documented concussion at Fort Lewis College. Numbers were obtained from concussion symptom checklists within these medical files and recorded in Excel. The symptoms included in the study: headache, nausea or vomiting, dizziness, blurred vision, tinnitus, feeling like "in a fog," difficulty concentrating, difficultly remembering, drowsiness, neck pain and other pain. All data was analyzed using an independent samples t-test for each symptom. Overall significant difference found for dizziness ($p = 0.028$, M=1.16, F=1.93) and "Feeling in a fog" ($p = 0.037$, M=1.37, F=2.11) both mean scores were higher for females. No other symptoms presented with significant differences. Difficulty remembering and neck pain were the only two symptoms that males reported a higher mean score, but not at a significant level. All other symptoms observed: headache, nausea, tinnitus, difficulty concentrating, drowsiness, and other pain were higher for females but not at a statistically significant level. Nine out of the 11 total symptoms reported had higher mean scores for females. These findings were not statistically significant, but may be clinically relevant for athletic trainers to be aware of. However, given the current results, the current, non-gender specific concussion checklist is adequate for both genders.