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### **“Musculoskeletal Occupational Injuries among Female Adult Reconstruction Surgeons”**

**Background:** Adult reconstruction is a physically demanding and male-dominated surgical subspecialty. A previous study demonstrated that 66.1% of adult reconstruction surgeons (98% male respondents) reported a work-related musculoskeletal injury, with the low back being the most commonly injured area. Given that study's limited female participation, the purpose of this study was to characterize musculoskeletal occupational injuries in female adult reconstruction surgeons. We hypothesized that this cohort would have similar occupational injury rates compared with existing data in literature including their mostly male counterparts.

**Methods:** In May 2020, a prospective survey about workplace musculoskeletal injuries and exacerbations of pregnancy-related conditions was distributed to female attending adult reconstruction surgeons. Participants were identified using the American Association of Hip and Knee Surgeons Women in Arthroplasty committee, the Ruth Jackson Orthopaedic Society, the Orthopaedic Women's Link, a Facebook group for women orthopaedic surgeons, and authors' personal contacts. Results were analyzed using descriptive statistics.

**Results:** A total of 63 female arthroplasty surgeons responded. 65.1% were 30-45 years old, and 42.9% were within 5 years of practice (Table 1). 57.1% worked 41-60 hours per week, and 44.4% performed 251-350 cases per year. Of the respondents, 68.3% sustained a musculoskeletal occupational injury. The most common locations were forearm/wrist/hand (79.1%) shoulder (48.8%) and low back (44.2%) (Table 2). 10.0% of all reported occupational injuries not related to pregnancy resulted in the surgeon requiring time off work, while 48.2% required temporary modifications of job performance and 10.9% required surgical treatment. Of the injured surgeons who reported having been pregnant, 65.4% reported a workplace exacerbation of a pregnancy-related musculoskeletal condition, including low back pain (52.9%), pubic symphysis pain (35.3%), and carpal tunnel syndrome (29.4%).

**Conclusion:** 68.3% of participants reported musculoskeletal occupational injuries or exacerbations of pregnancy-related conditions. Injury patterns differed from prior data studying a predominately male cohort, with forearm/wrist/hand injuries being the most common. Further studies should investigate the factors that contribute to these injuries and how they can be prevented.