Esports: The Need for More Research to Reducing Neck and Back Pain?

Smith JC*1

*1Department of Kinesiology, Coastal Carolina University, Conway, SC 29526 USA

Corresponding author: Jason Chadwick Smith, Department of Kinesiology, Coastal Carolina University, Conway, SC 29526 USA, Tel: 011-843-349-4043; E-mail: jsmith6@coastal.edu

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Editorial

With the growth of esports, electronic sports, and its integration into the athletic departments in recent years, the notion of an athlete being physically fit may be changing. Collegiate esport athletes spend an average of 5.5 to 10 hours per week practicing with more than 40% getting less than 60 minutes of physical activity a day [1]. The sedentary nature of esports combined with very little physical activity may contribute to some injuries encountered by these athletes. In fact, musculoskeletal pain is a commonly reported issue among esport athletes [1,2]. Lindberg et al. [2] reported a lower training volume in participants that reported musculoskeletal pain compared to those that did not report any musculoskeletal pain. Interestingly, they also reported no difference between physical activity levels between participants who reported musculoskeletal pain and those participants who did not report any musculoskeletal pain. It appears that musculoskeletal pain may have reduced the player’s esport training but not their physical activity. Lindberg et al. [2] suggested that most of the physical activity for these participants may have come from physical education class. It is possible that the location of injury and the type of physical activity did not overlap (e.g., wrist pain will unlikely inhibit running a mile). It appears that the nature of physical activity performed could be an important factor in preventing or reducing the prevalence of musculoskeletal pain in esport athletes. Two of the most commonly reported sites of musculoskeletal pain in esport athletes were the back and neck [2].

It has been hypothesized that the cause of neck and back pain in esport athletes was due to poor posture (prolonged neck flexion and slouching) [3]. Indeed, sitting upright in a chair with no arm or back support while playing on a smartphone increases neck and trunk flexion within 5 minutes of gameplay and increase pain within 16 minutes of gameplay [4]. While esport athletes practice several hours each day [5], the use of gaming chairs or other chairs that have arm rests and back supports may help to attenuate this increased neck and trunk flexion and pain that results from sitting upright during gameplay. Future research may wish to evaluate the furniture used as well as any changes in position during gameplay to gain a better understanding of this incidence of injury.

With more than 40% of collegiate esport athletes getting less than 60 minutes of activity a day [1], musculoskeletal fitness could be another contributing factor to neck and back pain. A more thorough evaluation of the type of physical activity and/or exercise that esport athletes are getting weekly could be fruitful in helping to determine if muscular weakness is a contributing factor to...
neck and back pain. While current strength and conditioning programs for esport athletes may focus on improving general health and fitness, assessment of muscular endurance for the neck and back extensors of these athletes could provide some insight into the risk of injury to these areas.

With the integration of esports into athletic departments, esport athletes will presumably have access to the sports medicine team, which could allow for more detailed documentation about the nature and severity of injuries incurred in these athletes. This information combined with the duration of excessive neck flexion and slouching, furniture used during gameplay, device used during gameplay (computer versus handheld device) and other important details to identify the causes and contributing factors to other injuries can help to make possible ergonomic design changes in equipment as well as implement changes in training and competitions in order to reduce the incidence of injury to the neck and back for these athletes.

References