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Quantification of the frequency, magnitude, and direction of impacts incurred by adolescent football players

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Subconcussive impacts accrued during sporting participation have been associated with long-term neurological impairment, but variations in the degree of head impacts that occur across playing positions of adolescent football players are not well understood. Recognizing this, the American Medical Association has identified player position as a key risk factor for concussions in football and called for additional research in this area. Accordingly, we instrumented players' helmets with Shockbox sensors and recorded hits incurred to the helmet during the 2014 football season. We then used SPSS to analyse the difference in the number of hits, magnitude, and direction of hits incurred by various player groups. Analysis revealed significant differences between position groups in the number and direction of subconcussive hits.

Biography

Cristy Phillips is an Assistant Professor of Physical Therapy at Arkansas State University in Jonesboro, AR. She is also CEO of Kids and Company, LLC., a pediatric physical therapy provider. She has over 16 years of experience in working with individuals with neurological and cognitive impairment. Her main research interests pertain to how physical activity can be deployed to mitigate impairments associated with neurodevelopmental and neurodegenerative disorders, particularly Down syndrome and Alzheimer's disease.

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