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## The Effects of an Adjustable Workout System on Performance Gains in Collegiate Lacrosse Athletes

Sabrina M. Murphy<sup>1</sup>, Cory T. Walts<sup>2</sup>, David J. Stearne<sup>1</sup>, Kenneth P. Clark<sup>1</sup>, <sup>1</sup>West Chester University, West Chester, PA, <sup>2</sup>Haverford College, Haverford PA

While research on the topic of periodization is plentiful, there is limited evidence on the effects of different periodization strategies in varsity collegiate athletes. Furthermore, how the state of preparedness and autonomy effect daily workouts is largely unknown at present. **PURPOSE:** to determine if significant increases in performance variables would be present between a Traditional Periodization (TP) versus Flexible Periodization program (FP). **METHODS:** 34 intercollegiate lacrosse players of both genders volunteered and provided informed written consent. Pre-and post- test measures included bench press, deadlift, vertical jump, sprinting speed and change of direction. After initial testing, subjects were assigned to one of two training groups: a) TP (n=17, age=19.9±1.3 years, height=1.73± 0.07m, mass=73.33±14.19 kg) or b) FP (n=17, age=19.4±1.4 years, height=1.72± 0.10m, mass=72.32±13.73 kg). Both groups trained three days per week (MWF) for eight weeks. The TP group completed all workout volume and intensity as prescribed by the Head Strength and Conditioning Coach. However, the FP group adjusted the workout volume and intensity based on a daily state of preparedness questionnaire. **RESULTS:** Pre- to post- test improvements were observed for the subject population as whole (deadlift: +9.5%, bench press: +4.5%, vertical jump: +4.9%, sprinting speed: +1.7%, and change of direction: +1.2%). However, a series of ANOVA tests demonstrated no statistically significant between-group differences for pre- to post-test changes in any of the performance tests (range of *p*-values: 0.21 – 0.86). **CONCLUSION:** Although FP does not appear to be more effective than TP for eliciting performance gains, it may provide greater levels of autonomy while eliciting equivalent levels of improvement. Therefore, flexible periodization based on state of preparedness may be a viable training strategy.