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## ***Impact of Athletic Trainers on Coaches' Knowledge and Attitudes of Concussions in Appalachia***

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### **OBJECTIVE**

The objective of this research project was to use a validated tool to determine if access to an Athletic Trainer (AT) influences a coaches' knowledge and attitudes regarding concussions.

### **DESIGN and SETTING**

Cross-sectional online survey.

### **PARTICIPANTS**

Participants for this study were high school head coaches whose schools are members of the Ohio High School Athletic Association (OHSAA), West Virginia Secondary School Athletic Commission (WVSSAC), or Kentucky High School Athletic Association (KHSAA). A list of email addresses was compiled of head football, girls' and boys' soccer, girls' basketball and wrestling coaches, as these sports have been reported to have the highest incidence of concussions.<sup>1</sup> All coaches had to meet the minimum requirements to coach as set forth by their respective state to be included in this study. No other restrictions were placed on participants.

### **INTERVENTION**

With permission, The *Coaches' Knowledge of Sport-Related Concussion Survey* was used for completion of this study.<sup>2</sup> This survey had previously been demonstrated as being valid and reliable. An email containing a description of the study, informed consent and a link to survey was distributed to the potential participants. A follow up reminder email was sent to those who had not completed the survey at two weeks. After four weeks, the survey was closed.

### **MAIN OUTCOME MEASURE**

The main outcome measured was the *Coaches' Knowledge of Sport Related Concussion Survey* score.<sup>2</sup> This instrument was composed of 24 total questions and a point was awarded for each correct answer for a maximum of 24 points.<sup>2</sup> A one-way ANOVA was conducted for the independent variable, having an athletic trainer at his or her high school (full time, part time, none) and the dependent variable, score. Another one-way ANOVA was conducted with age being the independent variable and score being the dependent variable. A Pearson's product moment correlation was run to determine if there is a correlation between years of coaching experience and score on the survey.

### **RESULTS**

A total of 294 responses were used in the analysis. The overall score, represented as mean  $\pm$  standard deviation, for all participants of the study was  $21.8 \pm 1.5$ . A one-way ANOVA was conducted for the independent variable, athletic trainer at high school (full time, part time, none), and the dependent variable score, but did not yield significant results ( $F_{(2,291)} = 0.08$ ,  $p = 0.92$ ). A one-way ANOVA demonstrated no statistical significance between survey score and age ( $F_{(5,287)} = 1.46$ ,  $p = 0.21$ ). The Pearson's product moment correlation, which examined years of coaching experience in relation to score, was not significant ( $\rho (292) = .085$ ,  $p < .146$ ). All alpha levels were set at  $p < .05$  for statistical analysis.

### **CONCLUSIONS**

Research from our study coincides with the original research performed by O'Donoghue et al. who had an average survey score of 20.27 compared to the average of 21.8 as found in this study.<sup>1</sup> Our study suggests that the current educational programs regarding concussions may be adequate in informing high school coaches in Appalachia about the recognition, management and prevention of concussions. However, this study does not show how a coach will react in emergency situations. Therefore, these coaching

education programs continuously need to be tailored to the needs of the coaches and modified as new information unfolds.

### **REFERENCES**

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