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Incidence of Injuries in Collegiate Cross Country
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ABSTRACT

Running is becoming increasingly popular not only recreationally, but also competitively. With the increase in the number of participants comes an increase in the number of people who are injured. The purpose of this study was to determine if increasing mileage would result in a greater prevalence in injuries among collegiate cross country runners. Participants for this study included cross-country runners in the NCAA Division II Great Midwest Athletic Conference. The hypothesis for this study was that as mileage increased, the risk for injury would also increase.

METHODS

Subjects
Participants for this study included cross-country runners from colleges and universities in the NCAA Division II Great Midwest Athletic Conference (GMAC). This study received approval from the researcher’s University’s institutional review board. The survey was distributed to all 118 cross country runners in the GMAC; however, there were only 27 total responses (12.5%). The ratio of male to female participants can be viewed in figure 2 below. The survey was directly emailed to all cross country coaches in the GMAC who were instructed to forward the survey to their runners. A reminder email was sent out 2 weeks after the initial survey was distributed. No vulnerable populations were included in this study. Participation was voluntary and anonymous and all results remained confidential.

Data Collection
All participants who consented to this study completed an online survey through Qualtrics. A link to the survey was sent to the cross country coaches of GMAC schools who then distributed the survey to their athletes via email. Participants did not agree to the informed consent, they were not given the option to complete the survey. The survey consisted of questions regarding previous running experience, average weekly mileage during college and high school, and information about any previous and current running related injuries as well as demographic information. The survey was approximately 20 questions.

RESULTS

A one-way ANOVA test revealed statistically significant differences between the number of years running and whether or not they participated in weight training during high school (p < .003). The ANOVA also demonstrated a statistically significant difference between the number of years of running experience was compared to pertinent medical history that affects running (p < .003). No other statistical significant results were demonstrated during the data analysis.

DISCUSSION

The purpose of this study was to determine if an increase in mileage was associated with a greater prevalence of running related injuries in collegiate cross country runners. It was hypothesized that there would be a greater increase in injuries, especially in the freshmen year of college. No increase in injuries was seen at any particular level in this study. It is interesting to note that Reinking et al reported shin splints as a common injury among distance runners, and this study found that shin splints was the most commonly reported injury followed by shin splints and plantar fasciitis (Figure 3). The average weekly mileage reported for the senior year of high schoool was 40 mile/week (SD=13.44) compared to the average weekly mileage of freshmen year which was reported as 47 miles per week (SD=17.27). Although a slight increase in mileage was reported, there was no associated increase in injury prevalence. Many studies have reported gender as a risk factor for injuries, but gender was not found to be a risk factor in this study. Running surface and shoe type were also not found to be risk factors for this study.

LIMITATIONS

For this study included the fact that it was a self-reported study. Although the information received in this manner was beneficial because it was fast and easy for both the participant and the researcher, it would have been ideal if more information had been gathered through individual study including measurements of gait, shoe type, etc. Another limitation to this study was the sample size. Since there was a positive response rate, the sample may not be representative of the population as a whole. Relying on the coaches to distribute the surveys instead of contacting each runner individually was an additional limiting factor because it is not known whether or not every athlete received the survey.

CONCLUSION

Although there are many known risk factors for running related injuries, there have been no known studies published on the effects of increasing mileage as it relates to running injuries in the collegiate population. The goal of this study was to add to the pool of research on this topic and to provide applicable and relevant results. Because of the popularity of both competitive and recreational distance running it is important to stay up to date with research that identifies risk factors for running related injuries as well as preventative strategies.