

Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association

Volume 1
Issue 1 *Ohio Athletic Trainers' Association
Annual Symposium Accepted Abstracts*

Article 16

May 2015

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Bradley Hamilton
bhamilton@wilmington.edu

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Recommended Citation

Hamilton, Bradley (2015) "Collegiate Runners' Perceptions on Pronation Control Shoes and Their Ability to Prevent Injury," *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*: Vol. 1 : Iss. 1 , Article 16.

DOI: <https://doi.org/10.25035/jsmahs.01.01.16>

Available at: <https://scholarworks.bgsu.edu/jsmahs/vol1/iss1/16>

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Collegiate Runners' Perception on Pronation Control Shoes and Their Ability to Prevent Injury

Bradley Hamilton, Linda Tecklenburg, M.Ed., AT, ATC, and Erika Smith-Goodwin, PhD., AT, ATC

Wilmington College, Department of Sport Science

Objective: The purpose of this study was to investigate DIII collegiate runners' perceptions of whether shoes that have pronation control help to prevent or reduce injury.

Design & Setting: This study utilizes survey research was used with a convenience sample of N=13 from one DIII college. The independent variables in this study are the types of runners such as male and female, and year in school. The dependent variables are the questions asked in the instrument on subjects' perceptions of shoes and injury rate.

Participants: There was a 100% return rate with a total of N=13 surveys. 54% (n=7) were females and 46% (n=6) were males. 31% (n=4) Freshman, 31% (n=4) Sophomore, 8% (n=1) Junior, and 31% (n=4) Senior.

Intervention: This research was approved by the IRB. The instrument involves questions on pronation control shoes and their ability to prevent injury. Descriptive statistics "frequency counts and percentages" were used for all applicable items. A Kruskal Wallis test was used between years in school as a grouping variable. The alpha level was set at .05 *a priori*. A panel of experts determined the face validity of the instrument. The content validity was established by the table of specifications.

Main Outcome Measurement: Questions 1-6 used a 4-point Likert Scale of Strongly Agree = 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1. Questions 6 and 7 included a selected choice of 4 possible responses. Question 9 had a selection choice of 6 possible responses. Questions 10 and 11 are demographic questions.

Results: 85% (n=11) either agree or strongly agree that it makes a difference in injury rate depending on the type of shoe they run in. 85% (n=11) of participants either agree or strongly agree that shoes with pronation control prevent/reduce injury for overpronators.

Opinions were asked of runners if choosing the wrong type of shoes can result in injury for a runner with 62% (n=8) Agree and 39% (n=5) Strongly Agree.

Interestingly when runners were asked of their perceived gait, 46% (n=6) of runners were not sure of their running gait. 39% (n=5) of those surveyed that were women either agreed or strongly agreed that the type of shoe makes a difference in injury rate. All of the males surveyed either agreed or strongly agreed 46% (n=6). There was statistical significance ($H = 9.439$, $df = 3$, $p = .024$) comparing the runners on their belief in shoes preventing/reducing injury by year in school. For the runners who believe shoes prevent/reduce injury, 15% (n=2) who are seniors disagreed and 15% (n=2) who are seniors agreed. Eight percent (n=1) who is a junior agreed. Thirty-one percent (n=4) who are sophomores strongly agreed. Eight percent (n=1) who is a Freshman agreed. Twenty-three percent (n=3) who are Freshman strongly agreed. When runners were asked if they believe pronation control shoes prevent/reduce injury for all runners 62% (n=8) Agree, 8% (n=1) Strongly Agree, and 31% (n=4) Disagree. Injury rate for the runners reported an injury for 4+ weeks at 46% (n=6).

Conclusions: College runners were aware that shoes are important for preventing injury; however their knowledge was not great enough to pick the correct shoe for themselves. For the underclassmen that completed the survey, having a stronger agreement that shoes effects injury shows a change in younger generations learning about types of shoes and how they influence injury. This is a positive trend that should be encouraged by athletic trainers. Close to a majority of those who completed the survey were not aware of their running gait. Athletic Trainers can assist their athletes and better educate them on their running gait for which different shoes would be better suited for them.

Key Words: Pronation, Runner, and College