INTRODUCTION

• Sport specialization has been defined as “intense year-round training in a single sport at the exclusion of other sports” and has been established as a risk factor for developing an overuse injury in young athletes.1,2
• Previous research has identified factors that may lead to higher levels of specialization including high school size, location and family socioeconomic status.3-5
• Post et al.6 found that just 30.7% of NCAA Division I collegiate athletes were considered highly specialized.
• In a similar study, the inclusion of NCAA Division III athletes nearly doubled the percentage of highly specialized athletes.7
• No studies have compared specialization patterns between all three NCAA Divisions

PURPOSE

The purpose of this study is to further examine sport specialization patterns at the NCAA Division I, II and III levels

HYPOTHESES

• Division III athletes will have a higher distribution of highly specialized athletes than athletes at the Division I and II levels.
• Athletes who attended larger or private high schools and reported a higher estimated total household income will have a higher distribution of highly specialized athletes than athletes who attended smaller or public high schools and reported a lower estimated total household income.
• There will be a statistically significant difference in the amount of Division III athletes who are highly specialized as compared to Division I athletes.

MATERIALS AND METHODS

Instrumentation:
• Adapted version of specialization survey created by Bell et al.8
• Altered to ask athletes to recall their sport participation habits specifically throughout their high school careers.
• Questions regarding demographic information, a sport specialization scale and sport participation information included.
• Identification of a hometown region, classification of hometown as rural, suburban, or urban, and estimated family income at the time of high school career also included.
• Specialization status classified along a three-point scale (high, moderate, low) based on answers to questions regarding the ability to pick a main sport, sport participation for >8 months and exclusive participation in one’s sport at the neglect of others.
• Administered via SurveyMonkey.com.

Participants:
• Male and female athletes recruited from four Western New York Division I, II and III universities and colleges.
• Current athletes participating in football, men’s ice hockey, men’s and women’s soccer, men’s and women’s basketball, track and field, swimming and diving, baseball, softball, volleyball, wrestling, men and women’s lacrosse.
• A request for research participation and survey distribution was emailed to athletic trainers at four participating schools
• Athletic trainers forwarded the email containing a link to the survey with a notice of informed consent to their athlete distribution list at their respective schools

Statistical analysis:
• Chi-square analysis used to analyze the frequency of high, moderate and low sport specialization amongst Division I, II and III collegiate levels, high school size, high school type and estimated household income.
• Kruskal-Wallis ANOVA used to determine the difference in sport specialization between Divisions.

RESULTS

No significance was found in the distribution of specialization levels across NCAA Division I, II and III athletes

• Chi Square analysis of specialization distributed across NCAA Division I, II and III levels was insignificant: $X^2 = 4.951, P = 0.292$ (Table 1).
• Chi Square analysis of specialization distributed across high school size ($X^2 = 19.971, P = 0.068$) high school type ($X^2 = 8.191, P = 0.224$) and estimated income ($X^2 = 5.899, P = 0.659$) was insignificant (Table 2).
• Kruskal Wallis ANOVA to determine statistical difference in distribution across divisions was insignificant ($X^2 = 4.951, I = 1.749, df = 2, P = 0.417$)

CONCLUSIONS

• No significance was found in the distribution of specialization levels across NCAA Division I, II and III athletes.
• No significance was found in the distribution of specialization between groups of high school size, high school type and estimated total household income
• The distribution of specialization level between high school class size groups trended toward significance and may have been reached with a higher sample size
• There was no statistical significance in the difference of highly specialized athletes at the Division III and Division I levels
• This study is limited in the amount of Division I responses received
• Future significance may be found with increased participants

STUDY DESIGN

• Cross-sectional study
• Current athletes from Division I, II and III universities and colleges in Western New York were surveyed regarding their sport specialization and participation habits throughout their high school careers
• Independent variables: collegiate division classification (I, II, III), high school size, high school type (public vs. private), hometown classification (rural, suburban, urban), high school geographic location, estimated family income
• Dependent variable: level of specialization based on a sport specialization scale

REFERENCES