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PUTTING ATHLETES FIRST: AN EMPIRICAL EXAMINATION OF THE HEDONIC WELL-BEING OF COLLEGE STUDENT-ATHLETES IN RESPONSE TO NIL

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[Hyperlink to a five-minute maximum video summarizing the results of the project](#)

The present research responds to the calls for an increased need for empirical research on the well-being of student-athletes in the era of NIL. The purpose was to examine the impact of NIL policy on hedonic well-being of student-athletes. The study obtains data from Twitter profiles of 370 student-athletes from January 2021 to December 2021 to examine the elicitation of joy and anger as indicators of hedonic well-being. By leveraging a natural language processing-based decomposition sentiment analysis coupled with difference-in-differences analysis, findings indicate that student-athletes competing in women's sports experience marginally more joy and anger compared to student-athletes participating in other men's sports, men's basketball, and football after the NIL policy implementation. Findings reveal a double-edge impact associated with the NIL policy implementation, with decrease in joy indicating concerns about the policy's potential detrimental effects on student-athletes and a decrease in anger indicating optimism about opportunities presented by the policy.

Introduction

On July 1, 2021, American college athletics commenced a new era when the NCAA adopted new laws covering student-athletes' names, images, and likenesses (NIL; Hosick, 2021). This newly approved NIL policy constituted a new way for college student-athletes to profit from their name, image, and likeness, to financially gain from their athletic status. This change represents a paradigm shift for the NCAA, which has long claimed that amateurism (i.e., unpaid labor that plays "for the love of the game") is an essential feature of college athletics (Crabb, 2017). In the past, NCAA has even claimed that amateurism is a "bedrock principle" of collegiate athletics—a fundamental necessity on which the entire enterprise rests. While the NIL policy elicited numerous conversations around coaches and administrators, there has not been enough thoughtful consideration of how the said policy will affect the NCAA's full constituency, representing approximately 480,000 student-athletes.

Considering the breadth of individuals impacted by this drastic policy change, attempts were made to review the effect of NIL on the student-athletes' well-being (Uggetti, 2022). Specifically, focusing on the student-athletes' well-being is crucial because of the stark financial disparities amongst revenue-generating sports and other nonrevenue generating sports in Power Five athletic programs (Garthwaite et al., 2020). Inequalities in popularity around different college sports (Garthwaite et al., 2020), as well as intra-team competition for NIL deals lead to believe that the differential levels of NIL compensation by college sports can impact hedonic well-being of the student-athletes.

Methods

In this study, data from the Twitter accounts of 370 active student-athletes competing in Power-Five conferences were collected for the year 2021. Each student-athlete belonged to one of the four categories (M Football, M Basketball, other men's sports, women's sports) and was randomly chosen within their sport's all-conference teams. Data from 100 football players represented the first sport category while 70 male basketball players embodied the second category. 50 athletes were sampled from each of the sports including Men's baseball, Men's track and field, Women's volleyball and Women's basketball. A total of 73,964 tweets were collected using R, and were filtered to retain relevant variables, including the Twitter handle, timestamp, raw text, and the number of likes, retweets, and quotes (direct sentence).

Through Natural Language Processing (NLP), the tweets were cleaned-up prior to analysis, leveraging processes such as lemmatization and stemming. A decomposition-based machine learning technique was then used to classify the textual data and to identify the count of emotions of both joy and anger expressed in the tweets, with the goal of ultimately quantifying the student-athletes' overall sentiment. Additionally, a score of frequencies for the emotions joy and anger was provided. A difference-in-differences (DiD) analysis was then run to examine the hedonic well-being experienced by the different student-athletes' categories before and after the implementation of the new NIL policy on July 1st, 2021, which served as our intervention date corresponding to the implementation of the policy. Furthermore, social media engagement metrics such as the number of likes and retweets for each post were collected and included in the additional models as covariates in the analysis.

Results

The descriptive findings showed that revenue generating sports - men's football and men's basketball - both showed a higher number of likes on all their posts, whether they are organic or shared posts, than other men's sports and women's sport. Additionally, their organic posts were retweeted more often than those of non-revenue generating sports. Nonetheless, women's sport showed higher a number of retweets for shared posts.

The findings for the emotion "anger" showed a general downward trend throughout the year for men's basketball, other men's sport and women's sport, as well as a reversed, upward trend, for football. Fluctuations throughout the years were seen in all categories and are most likely due to the in-season/off-season rhythm. Most importantly, "anger" dropped in all sport categories in July and August after the NIL policy was set in place.

The trend for the emotion "joy" showed a peak in July for the revenue-generating sports (i.e., M Football and M Basketball), which points to the potential NIL deals and advantages that student-athletes playing in these sports might enjoy. Otherwise, trends are fluctuating due to potential in-season and off-season events throughout the year.

Results from the DiD analysis indicate that the new NIL policy influences the level of joy as well as anger experienced by student-athletes competing in all four categories of sports. While the number of likes and retweets are not associated with an effect on the level of emotions for "joy" or "anger", the results suggest that athletes in women's sports experience slightly more joy compared to student-athletes participating in the other categories. Additionally, results also show, that after the new NIL implementations, student-athletes experience less joy as compared to the period before its implementation. This finding substantiates the widespread despondence

among the various strata of student-athletes competing in different college sports surrounding the pitfalls of NIL policy implementation and the subsequent decisions to transfer to schools that offer better NIL deals (Priester, 2022; Uggetti, 2022).

Results of the DiD analysis for the emotion "anger" suggested similar results, where women's sports athletes experienced marginally more anger than athletes in men's sports. Lastly, the emotion "anger" for the sampled athletes descends after the new NIL rule was set in place, suggesting that student-athletes might be more optimistic about the changes that will transpire in the college sports ecosystem as a consequence of the adoption of the NIL policy.

Discussion

The present study investigates the impact of adopting the NIL policy on the hedonic well-being of the student-athletes participating in four distinct sports categories. The results of the study indicate that the interaction effect between the type of sport and the implementation of the NIL policy was significant for both the emotions of joy and anger expressed by the student-athletes on social media, indicating that the NIL policy implementation was followed by decreased expressions of joy and anger in the sample. Counterintuitively, the lack of statistical significance between the type of sport and the observed emotions of joy and anger does not lead to believe that the implementation of NIL was associated with differences in the student-athletes' hedonic well-being.

The findings of the present study pertaining to the student-athletes' hedonic well-being in relation to the introduction of the NIL policy can have several implications for both the intercollegiate athletics administrators and sport management practitioners. Indeed, predictions made by machine learning models could help to better understand and guide student-athletes and their journeys with NIL, as well as to assist administrators in an effort to anticipate potential negative emotions and behaviors deriving from the policy. Ongoing concerns targeting NIL deals for their potential negative effects on student-athletes (e.g., stress, financial exploitation) highlight the importance of ensuring their hedonic well-being as a primary focus for the administrators involved in intercollegiate athletics.