SOCIAL MEDIA LITERACY FOR STUDENT-ATHLETES

PROBLEM

Social media has become pervasive in American society over the past decade. There are examples of both heavily recruited high school athletes and current collegiate athletes suffering serious consequences from posting unsuitable content, including loss of reputation, eligibility, scholarships, and future career prospects (Browning & Sanderson, 2018; Toler, 2017). Furthermore, college athletes are frequently victims of cyberbullying (DeShazo, 2016). 40% of student-athletes report having received no social media training (Thomas & Schwartz, 2014), while many of those who have received training report it was prohibitive and fear-based (Sanderson, 2011; Sanderson et al., 2015). Our goal was to develop a social media literacy training program that would be applicable to all NCAA student-athletes.

PILOT SOLUTION

Four online modules, each approximately 8-12 minutes long

1) Showcase your strengths and character

2) Using social media with a critical mind

3) Enrich sport performance

4) Manage personal attacks and cyberbullying

QUANTITATIVE FINDINGS

- From pre-test to post-test, Showcase Your Strengths score improved 10.3%, Critical Mind score improved 12.5%, Enrich Sport Performance score improved 22.6%, and Manage Cyberbullying improved 8.2%
- Three modules saw retention scores significantly decrease from post-test, but were all still significantly greater than pre-test
- Retention scores were significantly greater than pre-test scores on 11 of 16 individual assessment items

QUALITATIVE FEEDBACK

- Program users praised the inclusion of professional athlete social media examples to complement key concepts
- Users believed the modules could be shortened by increasing pace and eliminating some examples
- Users learned a significant amount about identifying “fake news”, as well as how social media use may affect sport performance

IMPLICATIONS FOR CAMPUS PROGRAMMING

- Findings indicated student-athletes have room for growth regarding their social media literacy
- Institutional approach to social approach does not need to be prohibitive; the alternative positive approach has merit
- Developing athletes’ ability to critically analyze, evaluate and create social media content should be the objective of institutional responses to social media. Results indicated the current program would effectively support efforts to do so.

RESEARCH TEAM

Brian Foster, Ph.D. & Patricia Lally, Ph.D.

Social Media Literacy for Student-Athletes

Final Report

NCAA Innovations and Research in Practice Grant

Brian Foster, Ph.D., and Patricia Lally, Ph.D.
Lock Haven University

January 13, 2020

Social Media Literacy for Student-Athletes

Problem Statement

Social media has become pervasive in American society over the past decade. It is particularly prevalent among youth and young adult populations. Use of social network sites including Facebook, Twitter and Instagram, has become a staple among collegiate student-athletes (David et al., 2018).

Research indicates both professional and collegiate athletes use social media for numerous purposes. Hambrick, Simmons, Greenhalgh and Greenwell (2010), for example, categorized professional athletes' Twitter posts into one of four uses: interactivity (31%; direct communication with athletes and fans), information sharing/content (30%; pictures, photos, or links that are sport related), diversion (28%, non-sport related communication), and promotion (5%; upcoming activities and events). Similarly, Browning and Sanderson (2012) reported collegiate student-athletes use Twitter to keep in contact, communicate with followers, and access information. Social media use for college athletics has been demonstrated to enhance group identity and collective self-esteem for those involved in campus life (Kim & Kim, 2019).

While these results suggest social media can be a beneficial tool, there is also evidence that social media can produce negative outcomes. In these cases, student-athletes have been both targets and offenders. DeShazo (2016) found that 17% of student-athletes have received hateful messages from fans on Twitter. Researchers have equated the critical and sometimes violent tweets targeted towards student-athletes following poor performances or decisions that negatively impact their teams as cyberbullying (Sanderson & Truax, 2014). At the same time, inappropriate social media posts by collegiate student-athletes have caused a great deal of concern and fallout. There are examples of both heavily recruited high school athletes and current collegiate athletes suffering serious consequences from posting unsuitable content, including loss of reputation, eligibility, scholarships, and future career prospects (Browning & Sanderson, 2018; Toler, 2017).

Literature Review

Social media literacy is defined as "the competencies of individuals to appropriately use social media applications and to critically analyze, evaluate, share and create social media" (Vanwynsberghe, Boudry, & Verdegem, 2012, p. 9). To date, responses to safeguarding student-athletes has varied greatly. Individual coaches have independently tried to educate athletes about appropriate social media use and/or identified a staff member to monitor student-athletes' social media activity. In other cases, athletic departments have introduced social media policies in order to protect staff and students, as well as their institutional brand. Some departments have contracted with external companies such as Varsity Monitor, Centrix Social, UDiligence, 5.0 Communications, and Fieldhouse Media to monitor student-athletes' social media use. Contracting with outside vendors to monitor athletes' social media use has sparked controversy over their cost, invasion of privacy, and liability in the event of errors and/or omissions. Some institutions have since discontinued contracts with external monitoring agencies. Browning and Sanderson (2012) have argued educating student-athletes about the

risks and rewards of social media applications may be more effective than overly invasive and burdensome monitoring.

While numerous approaches have been taken to educate student-athletes about social media practices, 40% of student-athletes have received no social media training at all (Thomas & Schwartz, 2014). Division II and Division III schools with smaller athletics budgets may be at a particular disadvantage. For those schools who do educate their athletes about social media literacy, their approach is often prohibitive (Sanderson, 2011) or perceived to be more concerned about compliance and punishment (Sanderson et al., 2015). Smith and Watkins (2018) advocated that athletic departments cultivate responsible attitudes towards social media literacy through positive education rather than punitive and prohibitive instruction.

Conceptual Framework and Program Development

Guided by previous research, the research team developed an online social media literacy training program. The program includes four online self-paced educational modules each 8-12 minutes in duration. Each module is in YouTube format and includes visuals and narration. Each module concludes with a 5-question multiple choice quiz whereby the participant must answer four questions correctly in order to successfully complete the module. The ultimate goal of developing the program was to produce a standardized positive social media literacy program consistent that is applicable to student-athletes across all three NCAA competition divisions. The following is a breakdown of each module.

Showcase Your Strengths; Showcase Your Character

The focus of this module is educating student-athletes to creatively promote their unique skills and attributes. Suggestions are offered about how to productively promote one's self-image. Specific recommendations include avoiding profanity, offensive content, and negative opinions of others. General recommendations include 1) checking posts multiple times before posting, 2) allowing friends to check potential posts, 3) staying off social media before, during, and after competition, 4) avoiding mindless reading comments about one's self on social media (Cooley & Zagoria, 2016). Social media histories of professional athletes such as football player Russell Wilson, tennis player Naomi Osaka, and basketball player Stephen Curry are shown as examples of the way an athlete can use their social media presence to highlight their positive qualities. The module also includes a section helping participants in the process of identifying their most prominent values.

Using Social Media With a Critical Mind

The focus of this module is educating student-athletes to be active consumers of information by increasing awareness of source reputation and validity. Suggestions are offered to ensure accurate and effective transmission of information. A recent study indicated that college students are poor at analyzing the validity of social media news content (Wineberg, McGrew, Breakstone, & Ortega, 2016). With our society in the midst of a "fake news" crisis, this module develops media awareness and critical evaluation of information. Numerous examples

of authentic and inauthentic social media posts are shown throughout the module. One such example in the module features a photo showing the Seattle Seahawks football team in their locker room appearing to burn an American flag in celebration; however, it is then revealed that the burning flag was in fact photoshopped into the picture, and the reality is that the team is simply celebrating one of their victories. In real life the burning flag photo went viral prior to the realization that it was inauthentic. This module encourages participants to consider the following three questions when examining any social media: 1) who is the source?, 2) what is the message?, and 3) why was it created? (Enoch Pratt Free Library, 2019)

Enrich Sport Performance

The focus of this module is to educate student-athletes about relationships social media use may have with critical sport performance factors, such as concentration, pre-performance routines, and energy management. Social media use has been shown to have a direct negative effect on sport performance. Encel, Masagno, and Brown (2017) found that Facebook use prior to a competition had a significant correlation with concentration disruption. They also found that "push notifications" (i.e. any Facebook happenings are highlighted on a device immediately) predicted 4.4% of variability in sport anxiety. Social media, and the devices it is accessed with, draw attention away from relevant performance cues, both prior to and during an event. This module provides recommendations such as expressing support for teammates through social media posts, ensuring feedback sources on social media are credible, and avoiding social media prior to competition.

Manage Personal Attacks and Cyberbullying

The focus of this module is raising awareness of the mental health issues related with social media. A focus on how to achieve positive mental health effects (Sanderson, 2011) is emphasized, such as mindfulness and cognitive restructuring. Sherlock and Wagstaff (2018) identified that the frequency of Instagram posting for women is correlated with depression, as well as significant anxiety associated with perceptions of one's body. Those correlations become stronger as one's degree of social comparison increases, which is a key effect of extended engagement on social media. Mishna et al. (2018) found that 28% of university students have experienced some form cyberbullying in the form of angry or vulgar messages, and 25% of students had experienced a video of them being posted for which they never gave consent.

This module features the stories of two athletes who have reported negative effects of social media use, Canadian tennis player Rebecca Marino and American golfer Lexi Thompson. It includes three strategies for limiting cyberbullying: 1) limiting private information, 2) controlling privacy settings, and 3) taking a social media break. In the event that an athlete is a victim of cyberbullying, the module explains three options: 1) ignore, 2) report, or 3) discuss with a friend or authority figure.

Methodology and Data Collection

Participants

Participants were 114 current NCAA Division I and II athletes from a Mid-Atlantic regional public university. Almost all, 92.1%, of the sixty-five female and 49 male participants from seven different sports were between 18-21 with the remaining participants between 22-25. The majority, 87.7%, identified as Caucasian. Participants were secured via encouragement from the institution's athletic director and head coaches. Seventy of the original 114 participants completed all three assessments in their entirety. Eighteen $25 gift cards were randomly assigned to participants who completed all three assessments including a minimum of one participant from each team that participated.

Procedure

The research team provided head coaches with a list of available times in a university library computer lab to share with their student-athletes and participants selected individual slots. A research team member was present in the library computer lab throughout each time block. Upon arriving, participants signed into the university online course delivery platform to access the program to which they had already been enrolled by the research team.

The participants began by reviewing an informed consent form approved by the host institution's Institutional Review Board and then completed a basic demographics questionnaire. Next, the participants completed the 16-item social media literacy assessment. They then watched the four program modules progressing from one to the next only after correctly answering a minimum of four out of five post-module multiple choice quiz questions. If participants did not correctly answer a minimum of four out of five quiz questions, they were returned to the start of the relevant module to review the module a second time and attempt the quiz a second time, and so on until meeting the standard and progressing to the next module.

Upon successful completion of the quiz for the last module, the participants completed the social media literacy assessment a second time and were invited to provide qualitative feedback about the program.

Six weeks later the participants were emailed an invitation to complete the social media literacy assessment a third time.

Assessment

No satisfactory quantitative assessment of social media literacy existed prior to the commencement of the study. The research team devised an assessment instrument containing sixteen items, four items for each of the four modules that were used to calculate subscale scores. Participants are asked to indicate their degree of understanding regarding each item on a Likert scale from 1 (low) to 10 (high). Example items include "I understand how to reflect my core values on social media", "I understand how to identify bias in a social media account", and

"I understand how to use social media to reduce pre-competition anxiety". The assessment is included in Appendix A.

Data Analysis

Quantitative data collection was completed via SurveyMonkey and then manually transferred to Statistical Package for the Social Sciences (SPSS) 16.0 software. It was analyzed via one-way repeated measures Analysis of Variance (ANOVA) and paired t-tests to indicate differences in mean scores on assessment items before the program, after the program, and six weeks after the program. Participants were invited via an open-ended question to share their thoughts about the modules in general and more specifically their impact on participants' social media understanding and future use. This qualitative data was analyzed inductively for common themes (Jones, Brown, & Holloway, 2013).

Findings

Quantitative Analysis

A one-way repeated measures ANOVA was conducted to compare the effect of the online training program on participants' social media literacy before (pre-test), after (post-test), and six-weeks after (retention test) the program. First, data was analyzed regarding the four assessment subscales. There was a significant effect of the program modules Showcasing Strengths and Character (Wilks' Lambda = .635, $F(2, 67) = 19.24$, $p < .001$), Assessing Message Credibility (Wilks' Lambda = .687, $F(2, 63) = 14.33$, $p < .001$), Enriching Sport Performance (Wilks' Lambda = .547, $F(2, 55) = 22.80$, $p < .001$) and Managing Cyberbullying (Wilks' Lambda = .558, $F(2, 61) = 24.14$, $p < .001$). Next, paired samples t-tests were conducted on social media literacy assessment subscale scores to compare pre-test and post-test scores, post-test and retention test scores, and pre-test and retention test scores. For Showcasing Strengths and Character, there was a significant improvement from pre-test to post-test (32.29±6.03 to 36.00±5.14, $t(111) = 6.82$, $p < .001$. This difference was not maintained from post-test to retention test (36.04±4.65 to 34.12±5.55, $t(68) = 3.35$, $p = .001$), however retention test score remained significantly improved from pre-test score (32.10±5.88 to 34.20±5.55, $t(69) = 2.46$, $p = 0.16$). For Using Social Media With a Critical Mind, there was a significant improvement from pre-test to post-test (30.94±7.70 to 35.36±6.44, $t(105) = 6.16$, $p <.001$). This difference was not maintained from post-test to retention test (35.78±5.23 to 34.47±6.22, $t(67) = 2.23$, $p = .027$), however retention test score remained significantly improved from pre-test score (30.61±7.47 to 34.58±6.30, $t(65) = 3.79$, $p < .001$). For Enriching Sport Performance, there was a significant difference from pre-test score to post-test score (26.09±9.11 to 33.62±7.53, $t(95) = 8.84$, $p < .001$). Post-test score was maintained to retention test score (32.89±7.06 to 30.97±8.96, $t(63) = 1.79$, $p = .078$). For Managing Cyberbullying, there was a significant improvement from pre-test score to post-test score (34.45±6.39 to 37.53±5.14, $t(103) = 7.05$, $p < .001$). This difference was not maintained from post-test to retention test (37.67±4.73 to 36.63±5.33, $t(66) = 2.03$, $p = 0.47$), however retention test score remained significantly improved from pre-test score

(34.47±5.74 to 36.56±5.33, $t(65) = 3.98$, $p < .001$). Ultimately, the program resulted in sustained improvement in social media literacy across all four social media literacy categories.

Finally, paired samples t-tests were conducted on all 16 independent items from the social media literacy assessment. Significant improvements from pre-test to retention test were witnessed for 11 items, including "I understand how to assess the authenticity of a social media account" ($p = .003$), "I understand how to use social media to help cope with sport-related injuries" ($p < .001$), and "I understand how to identify examples of cyberbullying on social media" ($p = .002$).

Qualitative Analysis

Participants were asked to provide qualitative feedback immediately upon the conclusion of the four modules and social media literacy assessment post-test. Specifically, they were encouraged to indicate any aspects of the program they liked or information they learned, as well as any ideas for the how the program could be enhanced for future users. Several higher order themes emerged from the data including overall program quality, program length, impact on social media literacy and impact on sport performance.

Feedback regarding overall program quality was very consistent. The participants indicated they liked the program and felt it included both important and relevant components. They appreciated the inclusion of well-known athletes and other individuals with whom they could relate, as well as familiar news stories. They noted the ease with which they could navigate from the initial consent form through to the social media literacy assessment post-test. They also liked the interactive nature of the modules that included video, audio, text and pictures.

While the participants commended the quality of the program content, the data regarding program length was mixed with some participants indicating the length was fine and others asserting it was too long. Several participants suggested the program could be shortened without effecting program quality by reducing the number of examples, particularly where more than one was used to illustrate a concept, decreasing the gap between concepts, and increasing the speed of the audio narration.

Although prompted to address the program as a whole, participants did comment positively on specific components, notably the modules focusing on being critical social media consumers and using social media to impact athletic performance. Participants indicated the content helped them better understand how to assess the accuracy and credibility of social media posts. Several acknowledged they were not as shrewd as they had believed they were and described acquiring valuable tips as a result of the program content.

Participants were familiar with using social media to share information about themselves, although not necessarily with the objective of showcasing their strengths as described in the first module. Qualitative data indicated many had not considered using social media to increase their athletic performance or that of their teammates. Reviewing encouraging posts from family, friends and supporters prior to games/events, sending positive messages to teammates at purposeful times prior to games/events, and using social media to increase concentration and decrease pre-competitive anxiety were described as novel ideas. In

their written feedback, several participants indicated an intent to adopt these strategies and to share them with coaches and teammates.

Implications for Campus Level Programming

The institutional response to social media use among student-athletes has varied. Some institutions have provided education about the dangers of social media geared towards discouraging its use among student-athletes. Some institutions have implemented restrictive social media use policies while others have adopted the invasive approach of monitoring student-athletes' accounts or having outside agencies do so.

The results of the current study suggest that despite the widespread use of various social media platforms among student-athletes, there is still much for them to learn about social media literacy. The results also indicate that there is an alternative approach to increasing social media literacy among collegiate student-athletes than the cautionary one we have seen to date.

The featured program sought to educate student-athletes in proactive and positive ways and results indicated significant gains in social media literacy. Providing student-athletes with key strategies to assess the credibility of social media posts increased their ability to distinguish authentic from false information. Education focused on identifying how to accurately evaluate social media posts with relevant examples from popular culture will positively impact student-athletes' social media literacy.

Similarly, strategies focused on increasing student-athletes' intentional use of social media to either showcase their personal strengths or impact their own or their teammates' performance were positively received. Rather than discourage social media use, coaches, athletic departments and campus communities may see significant benefits from teaching student-athletes to use social media as branding and performance enhancement tools.

Developing athletes' ability to critically analyze, evaluate and create social media content should be the objective of institutional responses to social media. Results indicated the current program would effectively support efforts to do so.

References

Browning, B., & Sanderson, J. (2012). The positives and negatives of Twitter: Exploring how student-athletes use Twitter and respond to critical tweets. *International Journal of Sport Communication, 5,* 503-521.

Cooley, M., & Zagoria, J. (2016). Social media: The wild, wild west of sports & how athletes can avoid its pitfalls. *Journal of NCAA Compliance, Nov/Dec*, 13-14.

David, J. L., Powless, M. D., Hyman, J. E., Purnell, D. M., Steinfeldt, J. A., & Fisher, S. (2018). College student athletes and social media: The psychological impacts of Twitter use. *International Journal of Sport Communication, 11*, 163-186.

DeShazo, K. (2016, April 13). Social media use of student athletes: 2016 survey results. Retrieved from http://www.fieldhousemedia.net/social-media-use-of-student-athletes-2016-survey-results/.

Encel, K., Mesagno, C., & Brown, H. (2017). Facebook use and its relationship with sport anxiety. *Journal of Sports Sciences, 35*(8), 756-761.

Enoch Pratt Free Library (2019). Retrieved from https://www.prattlibrary.org/research/tools/index.aspx?cat=90&id=4735.

Hambrick, M. E., Simmons, J. M., Greenhalgh, G. P., & Greenwell, T. C. (2010). Understanding professional athletes' use of Twitter: A content analysis of athlete tweets. *International Journal of Sport Communication, 3*, 454-471.

Kim, B., & Kim, Y. (2019). Growing as social beings: How social media use for college sports is associated with college students' group identity and collective self-esteem. *Computers in Human Behavior, 97*, 241-289.

Jones, I., Brown, L., & Holloway, I. (2013). Qualitative research in sport and physical activity. Sage, New York.

Mishna, F., Regehr, C., Lacombe-Duncan, A., Daciuk, J., Fearing, G., & Van Wert, M. (2018). Social media, cyberaggression, and student mental health on a university campus. *Journal of Mental Health, 27*(3), 222-229.

Sanderson, J. (2011). To tweet or not to tweet…: Exploring Division I athletic departments social media policies. *International Journal of Sport Communication, 4*, 492-513.

Sanderson, J. (2018). Thinking twice before you post: Issues student-athletes face on social media. *New Directions for Student Services, 163*, doi: 10.1002/ss.20272.

Sanderson, J., & Truax, C. (2014). "I hate you man!": Exploring maladaptive parasocial interaction expressions to college athletes via Twitter. *Journal of Issues in Intercollegiate Athletics, 7*, 333-351.

Sanderson, J., Browning, B., & Schmittel, A. (2015). Education on the digital terrain: A case study exploring college athletes' perceptions of social media education. *International Journal of Sport Communication, 8*, 103-124.

Seo, W.J., & Green, B.C. (2008). Development of the Motivation Scale for Sport Online Consumption. *Journal of Sport Management, 22*, 82-109.

Sherlock, M., & Wagstaff, D. L. (2018, April 12). Exploring the relationship between frequency of Instagram use, exposure to idealized images, and psychological well-being in women. *Psychology of Popular Media Culture*. Advance online publication. http://dx.doi.org/10.1037/ppm0000182.

Smith, S. A., & Watkins, B. A. (2018). Score! How collegiate athletic departments are training student-athletes about effective social media use. *Journal of Public Relations Education, 4*(1), 49-79.

Thomas, D., & Schwartz, J. (2014). Social media – Strategies, trends, and stats. Retrieved from http://www.ncaa.org/sites/default/files/Social%20Media%20–%20NCAA%20Strategies%20and%20Regulations.pdf.

Toler, A. (2017, July 12). Social media cost this star athlete his Division I scholarship – now he's trying to educate others. Retrieved from https://blogs.usafootball.com/blog/3962/social-media-cost-this-star-athlete-his-division-i-scholarship-now-he-s-trying-to-educate-others.

Vanwynsberghe, H., Boudry, E., & Verdegem, P. (2012). The development of a conceptual framework of social media literacy. Etmaal van de communicatiewetenschappen, Proceedings. Presented at the Etmaal van de communicatiewetenschappen 2012, Ghent, Belgium: Ghent University, Department of Communication studies.

Wineberg, S., McGrew, S., Breakstone, J., & Ortega, T. (2016). Evaluating information: The cornerstone of civic online reasoning. Stanford Digital Repository. Available at http://purl.stanford.edu/fv751yt5934.

Appendices

Appendix A

Social Media Literacy Assessment

INSTRUCTIONS: Beginning with the phrase," I understand how to….." indicate your degree of understanding from 1 (low) to 10 (high) for each of the items below. There are no incorrect answers – answer as honestly as possible.

"I understand how to…."

1. Identify my core values

   1 2 3 4 5 6 7 8 9 10

2. reflect my core values on social media

   1 2 3 4 5 6 7 8 9 10

3. use social media to display my character strengths

   1 2 3 4 5 6 7 8 9 10

4. identify the core values of others through social media

   1 2 3 4 5 6 7 8 9 10

5. assess the authenticity of a social media account

   1 2 3 4 5 6 7 8 9 10

6. assess the authenticity of a social media post

   1 2 3 4 5 6 7 8 9 10

7. identify bias in a social media post

   1 2 3 4 5 6 7 8 9 10

8. determine the objectivity of a social media post

1 2 3 4 5 6 7 8 9 10

9. use social media to increase my self-confidence

1 2 3 4 5 6 7 8 9 10

10. use social media to increase my teammates' confidence

1 2 3 4 5 6 7 8 9 10

11. use social media to reduce pre-competition anxiety

1 2 3 4 5 6 7 8 9 10

12. use social media to help cope with sport-related injuries

1 2 3 4 5 6 7 8 9 10

13. identify examples of cyberbullying on social media

1 2 3 4 5 6 7 8 9 10

14. limit private information on social media

1 2 3 4 5 6 7 8 9 10

15. control privacy settings on social media

1 2 3 4 5 6 7 8 9 10

16. report social media accounts that are threatening or harmful

1 2 3 4 5 6 7 8 9 10