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The Impact Of Social Media On The Mental Health Of Student-Athletes

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75 Pages

The purpose of this study was to identify the impact of social media on the mental health of student-athletes. A survey was created that included both social media use and a variety of mental health measures. After contacting over 100 Division I, 20 Division II, and 20 Division III institutions, 5 Division I, 2 Division II and 2 Division III schools agreed to participate. This survey was then sent out to the institutions across the 3 NCAA divisions. In total, 94 student-athletes completed the survey in its entirety. The survey included quantitative and qualitative questions. Qualitative findings suggested student-athletes perceive positive impacts of social media use as communication, stress relief, and motivation. Meanwhile, they perceived negative impacts of social media use including vulnerability, procrastination, and loss of sleep. Quantitative data from a multiple regression analysis indicated there were higher levels of depression/anxiety in the Division II and graduate student populations. Additionally, a negative relationship was identified between female student-athletes, self-esteem and Facebook use. The findings of this exploratory research identify that social media does impact student-athlete mental health. Because of this finding, athletic departments should make an effort to educate themselves and student-athletes on the danger.

KEYWORDS: student-athlete well-being; intercollegiate athletics; social media; mental health

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CONTENTS

CHAPTER I: INTRODUCTION

Introduction

The evolution of social media has been rapid and transformative. While Six Degrees (est. 1997) was officially the first social media site to exist on the internet, most people regard Facebook as the first successful form of social media (Hendricks, 2013; Press, 2018). At a minimum, it could be argued that Facebook was a game changer for the evolution of social media, with numerous sites developing not long after its creation (Press, 2018). The success of social media has been largely reliant on the developments that have been made in cellular technology (Lumen, n.d.). As people now have the ability to access the internet from almost any location through cellular data, people are able to take and post photos from a single device, as well as share split second opinions globally (Morozov, 2011). Social media has evolved from a computer-oriented tool, to an easily accessible daily journal.

While the highest number of total users are present on Facebook, the highest numbers of daily activity occur on the platforms of Twitter and Instagram. Twitter was established originally as a computer-based site in early 2006. It is now more commonly used as a cell phone application and as of February 2019, has 126 million daily users - a growth of 11 million in one year (Aslam, 2019). This recent growth in users shows that Twitter is still very much an actively used site, despite its slight plateau in use during the transition from a computer-based site to phone application. Instagram was developed more recently in October 2010, and as of 2019 is used by over 500 million people daily (West, 2019).

The uses of these social media sites differ. Twitter provides a platform for people to share opinions or thoughts. Occasionally people will elaborate on their thoughts through creating threads, posting some pictures or by using GIFs (Gil, 2019). In contrast to this, Instagram is

1

known as a picture journal. It allows people to post photos that are meaningful to them and that they want to share with their community. Commonly, people will post photos of their holidays and selfies, or market a product. Instagram users have the ability to tag locations, brands, and fellow users in their photos. It is also common for users to write lengthy captions that can be used to generate emotion and vulnerability from follower (Moreau, 2019).

Social media have positively impacted millions of people, providing them with the opportunity to connect and meet with people from all over the world. Social media provides its users with several different benefits, including the opportunity to follow along with the lives of their favorite athletes and celebrities (Ma, 2018). As social media is an inexpensive means to directly link with consumers, it is an incredibly strong marketing tool that could be used by anyone (Carter, 2013).

Unfortunately, the same benefits of social media can also be negatives. Due to the accessibility of social media, people have easy access to athletes – including student-athletes. Jimmy Sanderson wrote "When I was growing up, if I got mad at an athlete, by the time I sat down and wrote a letter to the newspaper or called into a radio show, I was generally cooled down" (Christensen, 2015). However, the access that users have to social media allows them to post while still on an emotional high (Christensen, 2015). Because of the easy access that there is to student-athletes through social media, the general population has the ability to deliver direct, hateful messages. Social media's public layout also provides athletes with a simple platform to spend time comparing themselves to others (Petersen, 2017). A brief internet search found examples of these experiences, highlighted below.

In 2013, Cade Foster, a kicker from the University of Alabama, missed 3 field goals in their game against Auburn University (Conway, 2013). For the fans of the University of

Alabama this meant that the team had lost its opportunity to participate for a third consecutive national title. In 24 hours, the twitter handle (@Foster_43) belonging to Cade Foster received over 12,000 mentions (Conway, 2013). Many of these mentions directed at Foster were messages of hate including, "You're the worst kicker in Alabama history" and "Drink Bleach", while other mentions were aimed at his family. Hate mail is not always aimed at football players. Sam Dekker, a basketball player from the University of Wisconsin, was praised online by fans after his incredible performance against an undefeated Kentucky team that resulted with the Badgers making the 2015 National Championship game (Conway, 2013). However, after going 0-6 from the 3-point line in the final, Dekker was attacked through Twitter mentions stating that he should, "Go work at McDonalds" or "Use your d-league money to pay my bookie" (Christensen, 2015).

Mental health within the college population is tracked by The American College Health Association. A 2019 survey identified that in the last 12 months 66.4% of the undergraduate population felt overwhelming anxiety, 46.2% felt so depressed it was difficult to function, and 85% felt exhausted (not from physical activity). From this data 2.3% of students attempted suicide, while 14.4% seriously considered suicide (The American College Health Association, 2019). Importantly, mental health is not solely negative. Mental health can be positive. Positive mental health is defined as "A positively focused construct that captures the degree to which individuals are flourishing in life (Page et al., 2014, p. 814)." A study that was completed by Page et al. (2014) identified that positive mental health can reduce an individual's chance of suffering from work related stress. Further, Page et al. (2014) was able to identify that the higher the positive mental health, the greater the likelihood a person could bounce back from adversity. This research is supported by Keyes et. al (2011) who identified that decreasing positive mental

health and increasing negative mental health were both predictors for the incidence of mental illness.

Studies have shown that student-athletes are a vulnerable population to suffer from mental health issues (Etzel, 2010). While there are many benefits that can be associated with being a student-athlete, the reasoning behind the population being vulnerable has been linked to social isolation due to game time, perceived poor athletic performance and identity issues (Pinkerton, Hinz, Barrow, 1989).

Research has shown that social media has an impact on mental health in both college students and college student-athletes. For example, social media impact sleep leading to effects on mental health (Levenson, Shensa, Sidani, Colditz, & Primack, 2016), as well as lead to cybervictimization (McLoughlin, Spears, Taddeo, & Hermens, 2019). Student-athletes are known to run on limited sleep due to busy schedules, and their popularity within communities can make them a target of positive and negative media. Previous research identifies that there is a link between social media use and mental health, the effect of this on student-athletes is yet to be looked into. The purpose of this study is to explore how social media impacts the mental health of college student-athletes.

CHAPTER II: LITERATURE REVIEW

Literature Review

According to the American Foundation for Suicide Prevention (2017), suicide ranks as the second most common cause of death for those aged between 10 and 35 in the U.S and approximately 14 out of 100,000 people between the ages of 15-24 will commit suicide each year. Hypothetically, with the NCAA being host to approximately 460,000 student-athletes, it could be estimated that approximately 64 NCAA student-athletes would commit suicide each year (NCAA., n.d.).

Not surprisingly, the findings of an NCAA athlete study support the commonly speculated idea that sports that generate more media attention, such as football, are going to lead to higher levels of mental health issues (Rao et al., 2015). Part of the reasoning behind this is because people are more likely to spend time following sports with easier media access, creating an easier path for the public to generate a feeling of attachment to players, and a higher likelihood that the public will make negative comments when they do not perform well. While a media following can have a hugely beneficial impact on the athlete's future, it also puts them at risk of very public downfalls when they do not reach the desired standard that the public expects of them (Dickey, 2013). Although suicide is a risk in collegiate sport, there are some reasons why student-athletes might be less likely to commit suicide include easier access to medical staff, accountability to other players, and a more structured college lifestyle (Lester, n.d.).

Previous research has been completed on student-athletes and mental health. An example of this research is a study completed by Watson and Kissinger (2007), which identified that there were different levels of wellness present in the student-athlete population, against the general student population of a University in the south. Using the 5F-Wel survey, Watson and Kissinger

5

were able to determine if there were differences amongst the populations in Overall Wellness through the measures of predominately Social Self, Essential Self, Creative Self, Physical Self, and Coping Self. The results showed that for 22 out of 23 factors analyzed that nonathletes scored higher. The only factor that athletes scored higher on was a third order factor of Exercise Self. This study highlighted that both groups scored highest in the Social Self element, however the mean score for student-athletes was significantly lower than that of the non-athletes. It is believed that this is due to the strict schedules of student-athletes. Another area that student-athletes scored significantly lower on was Essential Self. The measure of Essential Self is finding how well individuals define their sense of meaning and purpose in life. The results of lower Essential Self for student-athletes support prior research completed by Brown et al. (2000) who found that increased hours of sport participation relate to lower self-efficacy for career decision-making tasks.

Research in student-athletes has shown that they are most susceptible to suffer from depression, anxiety, eating disorders, and substance abuse (Thompson & Sherman, 2007; Stock & Levine, 2016). A study completed by Yang et al. (2007) researched risk factors for depression in college student-athletes. This study surveyed 257 Division I student-athletes across 13 sports (6 male, 6 female, and the spirit squad (co-ed)). The results of this study showed that 21% of the student-athletes that participated in this survey indicated symptoms of depression. An article that was published by the NCAA authored by Maniar et al. (2005) stated that recent research suggests that a possible reason for the level of depression that is present in athletes could be stemming from the culture of athletics "which emphasizes being mentally tough, showing no sign of weakness, and fighting through the pain. (p.1)"

6

Research by Wagland et al. (2013) hypothesized that due to changes in lifestyle and loss of personal identity, former college student-athletes would be at a higher risk to suffer from depression. To complete this study, a survey was sent to 117 former student-athletes, and 163 current student-athletes. The results of this study actually showed that the levels of depression were significantly higher in current student-athletes (16.77%), in comparison to graduated student-athletes (8.03%). It is thought that the higher levels of depression that is present in student-athletes could be due to their high workload, and lack of rest. To support this, a study that was completed by Morgan et al. (1987) explained that while aerobic exercise of the vigorous nature has been linked to decreasing depression symptoms in individuals who are suffering from mild to moderate depression there is a paradox that shows that overtraining of individuals who do not previously suffer any mood disturbances can result in the development of mood disorders. This study focused on competitive swimmers and showed that mood disturbances became prevalent when the swimmers were subject to overtraining.

Research indicates that student-athletes are more likely to suffer from a couple of different types of anxiety. Todd Stull (2014) writes that when the anxiety is related to athletic performance, then performance anxiety, panic disorder and phobic disorder are more likely to be present. Generalized anxiety disorder, and obsessive-compulsive disorder are less likely to be athletically related but are still common within the student-athlete community (Stull, 2014 p.28).

Mental health issues are not limited to anxiety and depression, in the world of athletics, eating disorders are very common (Greenleaf et al., 2009). While suicides have been found to be more common in the male student-athlete population, studies have shown that eating disorders are more likely to present in the female athlete population. The prevalence of eating disorders in the general population is generally found to be no higher than 8.0% of females (Saunders &

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Eaton, 2018). In contrast to this, the rate of eating disorders amongst female athletes though is found to be significantly higher, with between 14% and 19% of female athletes presenting either clinical or subclinical symptoms (Greenleaf et al., 2009).

Another study completed by Sanford-Martens et al. (2005) surveyed 489 individuals, 325 of those individuals were current NCAA Division I student-athletes across a variety of sports. Results of this survey found that females presented with higher levels of diagnostic and symptomatic eating disorder behaviors than their male counterparts, but more importantly this survey found that nonathletes scored higher levels of eating disorder diagnostic criteria and symptoms. Despite this, 18% of student-athletes in this survey were found to be symptomatic for eating disorders. This highlights that while the rates of negative eating habits were higher in nonathletes, nearly one-fifth of student-athletes still suffer from this form of mental-health illness.

Social media and mental health

While social media platforms allow people to connect with others that they might otherwise lose contact with, research has indicated that social media can negatively impact mental health. For example, McLoughlin et al. (2018) studied the impact of social media use and cybervictimization on 229 adolescents (ages 12-17) through an online survey to measure levels of anxiety, depression, social connectedness and stress. This study showed that those who had been victims of cyberbullying have significantly higher levels of anxiety, depression, and stress. The results of this study also showed that those who had been victims of cyberbullying showed significantly lower levels of social connectedness. This information is important to acknowledge as an Indiana State University study that was completed in 2011 found that 22% of

college students reported being cyberbullied, and 38% reported that they knew of someone who had been cyberbullied (Bell & Wilfert, 2014).

Social media use may also impact sleep quality and lower self-esteem, which is linked to depression. A study that was completed by Woods and Scott (2016) measured the use of social media and its effects on sleep quality. This study found that there was a significant link specifically between night-time use of social media and lower self-esteem. While there was still data significant enough to show that there is a link between overall social media use and poorer sleep quality, the link between night-time specific use was more strongly related to poor sleep. In support of this, a study that was completed by Levenson et al. (2016) measured social media use and its impact on sleep on 1788 young U.S adults that were aged between 19 and 32. The results of this study found that higher levels of social media use significantly increased the chance of poor sleep.

The impacts of social media on sleep are important as there is strong evidence that shows poor sleep can negatively affect cognitive functioning, including increasing the likelihood of depression and anxiety (Benitez & Gunstad, 2012). Benitez and Gunstad (2012) completed a study on 67 undergraduate students from a large Midwestern University. The purpose of this study was to identify if there was a relationship between sleep quality and depression. The study identified a relationship between poor sleep quality and increased levels of depression and anxiety. Furthermore, the study identified that even in participants that did not previously exhibit symptoms (healthy young adults), poor sleep can contribute to slight decreases in attention.

Social media use also impacts anxiety, something that student-athletes feel in multiple ways. A research study conducted by Fathima et al. (2019) on social media and anxiety surveyed 100 individuals between the ages of 17-25 about their social media use. The results of this survey

showed the 57% of the users sole purpose for social media was entertainment, and 47% spent more than 8 hours per day using social media. It was reported that 40% of the users that were surveyed expressed symptoms of anxiety when they were unable to access social media, and 38% of participants felt more comfortable talking with others through social media. This study highlights the impact that social media has on anxiety and provides evidence of a correlation between the two variables.

A study that surveyed 240 young female and males by Ramzan et al. (2019) showed that many of the participants used social media, more specifically Instagram, as a platform to compare themselves to others. This same study also identified that approximately 50% of the participants agreed that there could be a social media anxiety disorder. This information expresses the idea that users could be aware of the negative impacts that social media is having on their mental health. A similar study that was completed about self-esteem and Facebook use identified that moderate users (31mins – 2 hours per day) reported that they had higher levels of self-esteem after receiving Facebook affirmation. Supporting this information, Faraon & Kaipainen (2014) completed a similar study that identified a negative relationship between self-esteem and Facebook use. This shows that as Facebook use increases, the levels of self-esteem drop. This particular study has suggested that this could be due to extended time spent comparing on the platform.

In addition to the impact of social media on anxiety, it has been found that social media also has an impact on depression. The same study that was completed by Ramzan et al. (2019) showed that using social media to compare oneself with others was a major source of depression. This research finding is supported by Brunborg and Andreas (2019) who found that there was a correlation between time spent on social media and depression.

An additional study that was done in Canada by Santarossa and Woodruff (2017) measured time spent on social networking sites with body image, eating behaviors, and self-esteem. Results were analyzed from 147 of the 160 people that completed the survey in its entirety. The results of this study replicated those of Spraggins (2009), which found that problematic social networking use is associated with decreased self-esteem, happiness, satisfaction with life, and increased depression, and loneliness. This study defined problematic use as dependency on the internet (social media) so much so that it "can interfere with professional, social, and personal functioning, as well as negatively impacting well-being" (Spraggins, 2009, p.10). The results of Santarossa and Woodruff (2017) found that overall time on social networking sites did not have a significant relationship with body image, or self-esteem, but was significantly related to eating disorder symptoms/concerns. This study also identified a significant relationship between those who spent a lot of time "lurking" and lower levels of body dissatisfaction.

Research has also shown that social media usage can have an impact on academic success. A study that was completed by Al-Menayes (2015) found that time spent on social media is a strong negative predictor of GPA. In other terms, the use of social media can reduce time spent on activities that would benefit the academics of a person. The strength associated with this linear relationship can conclude that the more time a person spends on social media, the lower their GPA will be. This information is important when studying the mental health of student-athletes as the NCAA has implemented academic requirements for athletes to remain eligible to compete. An article published by the NCAA (Davoren & Hang, 2014) stated "depression and anxiety have been found to be significant predictors of a lower grade-point

average and poor athletic performance, they're also highly correlated with other risky behaviors, including suicide. (p.38)" This shows the entanglement that is surrounded by social media.

As briefly mentioned earlier, another mental health issue that is suffered by student-athletes are eating disorders. An article by Ferguson et al. (2014) studied how peers, television, and social media impacted adolescent girls body dissatisfaction and eating disorders. This study surveyed 237 girls aging from 10-17 years old, most of whom (95%) were Hispanic, and found that social media and television did not have an impact on body dissatisfaction and eating disorder symptoms in teen girls. However, it did identify that peer competition impacted body dissatisfaction and eating disorder symptoms. Additionally, a small predictive relationship between peer competition and social media was found. The study supported an indirect relationship between social media use and body dissatisfaction. Given the environment that student-athletes are a part of it would make sense that this would have a greater negative effect on their mental-health.

As depression and social media usage have been linked, it is important to understand social media use by student-athletes. An article posted by Kevin DeShazo (2017) through Fieldhouse Media analyzes the results of the 2017 survey that they sent out to more than 2000 student-athletes across the three levels of the NCAA as well as NAIA athletes. The respondents to this survey were predominately female (71%). This survey highlighted that student-athletes favorite social media platform is Snapchat with 41% of respondents selecting this. Other options were Instagram, Twitter, and Facebook that scored 39%, 10%, and 9% respectively. These same student-athletes identified that 98% had a Facebook account with and 81% use the privacy settings that are present. In addition, 95% have a twitter account, with 64% of respondents identifying that their account is public. Also, 91% of respondents identified that they had an

Instagram account with 39% identifying that their account is public, and finally 97% have a snapchat account with 39% believing that their account is public. This survey information shares that not only are student-athletes on social media, but they are on various platforms and many of the athletes do not utilize privacy settings on their accounts.

The research above shows that there is a growing need to research the impact of social media on the mental health of student-athletes. This study explored the answers to the following research questions.

1. Is there a relationship between social media usage and anxiety/depression, self-esteem, satisfaction with life, and perceived stress?

2. Is there a difference in the relationship between social media use and anxiety/depression, self-esteem, satisfaction with life, and perceived stress health between male and female athletes?

3. Is there a difference in the relationship between social media use and anxiety/depression, self-esteem, satisfaction with life, and perceived stress between individual and team sport athletes?

4. Is there a relationship between athlete identity and resilience, vitality, self-esteem, satisfaction with life, anxiety/depression, and perceived stress?

CHAPTER III: METHOD

Method

This study used survey methodology to answer the research questions. Survey methodology was the best choice for this study as it permitted for the data collection to include both open and closed-ended questions. This allowed for more personal data to be collected (Thomas et al., 2015). Thomas et al. (2015) described that survey methodology is beneficial for receiving information over a large geographical region. This is significant in the case of this study as the schools who participated varied in geographical location, with participants from all over the country. Survey methodology also leaves less room for researcher interpretation bias. As each participant was asked the same exact set of questions, the information gained was uniform and allowed accurate statistical tests to be run, determining whether social media does have an impact on the mental health of student-athletes.

Participants

Following IRB approval, student-athletes at NCAA member institutions were invited to participate in the survey. Data were collected through the researcher approaching 179 Division I, 65 Division II, and 28 Division III programs. The researcher used email to contact staff within the student-athlete development center, or, at smaller institutions, the Senior Women's Administrator. The researcher asked these athletic staff through email for their participation and requested that they send the survey link to their student-athletes. Five Division I, two Division II, and two Division III institutions agreed to participate resulting in 94 student-athletes completing the survey in its entirety, and 104 student-athletes responding to the qualitative portion. As there were special requirements to fit the desired population of this study, purposive sampling was used. In this study, the target population had to fulfill the following criteria: be a current student-

athlete, be at least 18 years of age, and be currently enrolled as a full-time student. Descriptive information for the participants is reported in Table 1.

Instrument

This survey was distributed using Qualtrics. Demographic variables including gender, ethnicity, and age were measured, along with the previously used measures listed below. In order to answer the research questions, eight specific scales were chosen. These scales measure a mixture of social media use and mental health.

Social media use. The first scale used to measure social networking use was the Social Networking Sites Frequency Scale. This SNS frequency scale was used to identify what social networking sites are used by the student-athletes, and then the amount of time per day they estimate that they use these sites. This scale was adapted from the scale created by Matthes et al. (2020).

The Social Media Use Scale created by Jenkins-Guarnieri et al. (2013) is a 10-item scale that uses a 5-point Likert scale to determine the user's perception of social media and whether they believe that social media positively or negatively impacts their lives. This 10-item scale is made up from two subscales: Integration into Social Routine (ISR), and Social Integration and Emotional Connection (SIEC). ISR is comprised of 4 items ($M = 2.97$, $SD = 1.07$, Cronbach $\alpha = .90$). SIEC is made up of 6 items (M = 2.22, SD = 0.86, Cronbach $\alpha = .91$)

In order to identify if students have been victimized online, the Online Harassment Scale was used. This scale, used by Kelly et al. (2019), was modified slightly for use in this study. This scale is a three-item scale that has six options to select from ranging from about once a week to never, measuring whether the student-athletes in the study have been victim to online harassment.

Athletic identity. In order to gauge how important their athletics is to the identity of these student-athletes, Athletic Identity Measure Scale *(AIMS)* was used. This scale is a 7-item scale. Responses to these items were completed through a 7-point Likert scale ranging from "strongly disagree" to "strongly agree". It was developed by Brewer and Cornelius in 2001 and then validated by Visek et al. (2008). The internal reliability coefficient was measured as .81.

Mental health. The Resilience Scale used in this study was the Connor-Davidson Resilience Scale *(CD-RISC)* (Connor & Davidson, 2003). This scale is made up of 25 items that are measured on a 5-point Likert scale. Cronbach's alpha for this scale was 0.89, indicating it is a reliable scale. The Satisfaction with Life Scale (SWLS*)* was also used (Diener et al., 1985). This scale is made up of 10 items that include positively and negatively worded statements. These statements are measured through a 7-point Likert scale. The validity of this scale is measured through the correlations scored on each of the items: .81, .63, .61, .75, and .66. This study also used a vitality scale. This Vitality Scale will be measuring a positive feeling of aliveness and energy through the analysis of 7 subjective vitality items (Ryan & Frederick, 1997). The Cronbach's alpha for this scale measured .92. Self-esteem was measured using the Rosenberg Self-Esteem Scale which consists of 10 items measured through a 4-point Likert scale (Rosenberg, 1989). The Rosenberg Self-esteem scale is made up of five positively worded sentences and five negatively worded sentences. The Cronbach's alpha score was calculated to equal .91. The Athlete Burnout Scale that consists of 13 items measured with a 5- point Likert scale was used. Reliability of this scale was shown through its model fit, x^2 (87) – 198.7, $p < .01$, GFI = .90, NNFI =.93, CFI = .94, RMSEA = .073. The Perceived Stress Scale (short form) consists of four items and is measured through a 4-item Likert scale (Cohen et al., 1983). Cronbach's alpha for this scale was .77. Another scale used in this survey was the Patient Health

Questionnaire-4 (Kroenke et al., 2009). This scale was used to screen for anxiety and depression. This scale is the combination of two, two-item scales that measure anxiety and depression. The Cronbach's alpha was reported as greater than .8.

Qualitative question. Student-athletes were asked one open-ended question to respond to. This question was, How do you feel your use of social media effects your life as a student-athlete?

Procedure

The survey was administered online through Qualtrics and was completed by participants at their leisure. The survey link was emailed directly to contacts, who then passed it on to the students. The researcher followed up with each agreeing institution twice, a week apart.

Analysis

Data from this study were analyzed using SPSS version 25. The data were assessed using regression and multiple regression to determine if there was a significant relationship between social media use variables, demographic variables and mental health measures. Correlations were also run. The level of significance used was p = .05. Thematic analysis for the qualitative data was used (Braun & Clarke, 2006). Braun and Clarke (2006) outline the steps to thematic analysis as beginning with familiarizing yourself with data. This includes writing down any patterns you may see emerging but encourages the idea of keeping an open mind. Next, Braun and Clarke (2006) suggest generating initial codes, followed by searching for themes. After themes have been identified, the researcher is encouraged to review the themes. Reviewing the themes allows the researcher to decide whether the themes accurately fit the project. The final steps are to define and name the themes, and produce the report. For this project, I followed the

outlined steps by Braun and Clarke (2006) by separating the data into positive and negative

impacts, and then identifying common trends within each of those groups.

CHAPTER IV: RESULTS

Results

Descriptive statistics for the mental health scales in the sample are reported in Table 2. A Pearson correlation coefficient was calculated for the relationship between the use of specific social media applications and mental health measures. Table 3 reports the correlations. A significant negative correlation was found between YouTube and PHQ (r (92) = -.25, $p < .05$), indicating a significant linear relationship between the two variables. Those who use YouTube score lower on the PHQ scale.

Regression analyses were conducted on each mental health variable to determine the effects of social media use and demographic variables. Table 4 lists regression results for each mental health measure. Significant multiple linear regression results were identified within the PHQ ($R^2 = .31$, F (9, 84) = 4.09, $p < .001$), PSS ($R^2 = .28$, F (9, 84) = 3.60, $p < .005$), Self-Esteem ($R^2 = .24$, F (9,84) = 2.30 $p =.005$), and Vitality ($R^2 = .28$, F (9,84) = 3.57, $p <.005$) scales. A multiple linear regression was also calculated predicting participants satisfaction with life based on a number of demographic variables. The regression equation was not significant ($R^2 =.13$, F (9 ,84) = 1.39, $p >.05$).

Each of the four significant mental health measures noted significant differences in response scores across gender. However, the PHQ scale also noted a significant effect of being both Division I, and a graduate student. On the PSS scale, males scored 3.52 points less than females, meaning that their perceived stress was lower. On the self-esteem measure, males scored on average 4.51 points higher than their female counterparts meaning that they had higher self-esteem levels, and finally on the Vitality scale males scored on average 8.54 points higher than females.

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A multiple regression analysis was also conducted on athlete identity to determine the effect of demographic variables (Table 5). A multiple linear regression was calculated to predict athlete identity based on a number of variables. A significant regression equation was found (R^2 = .19, F (8,85) = 2.49, p <.05), between athlete identity and Division II.

Further, a Pearson correlation coefficient was calculated for the relationship between athlete identity and both vitality and resilience (Table 6). A positive correlation was noted for both. Vitality = (r (92) = .21, p < .05), indicating that those with higher vitality levels, identified more strongly as an athlete. Resilience = (r (92) = .24, p < .05), indicating that those with higher levels of resilience, identified more strongly as an athlete.

Table 7 shows an analysis of quantitative data was completed through correlations of mental health data reported. Burnout was significantly correlated with every mental health variable. When lower levels of athlete identity (r (92) = -.40, p < .01), satisfaction with life (r (92) = -.57, p < .01), self-esteem (r (92) = -.61 p < .01), vitality (r (92) = -.64, p < .01), and resilience (r (92) = -.53, p < .01), increase, burnout would decrease. While scoring higher on PHQ (r (92) = .59, p < .01), online harassment (r (92) = .25, p < .05), and PSS (r (92) = .55, p < .01) correlated to increased burnout. Additionally, those student-athletes who scored higher on vitality (r (92) = .21, p < .05), and resilience (r (92) = .24, p < .05) identified more strongly on the athlete identity scale.

A regression analysis was run to identify any significant differences in social media use between males and females. Results are reported in Table 8. A significant regression equation was found (R^2 = .10, F (1,92) = 10.61, p <.05). Because there were significant differences in how males and females used social media, the file was split by gender and analyses were conducted on the split data. There were no significant correlations noted between mental health and social

media use, reported in Table 9, however, this analysis did highlight strong significances between burnout and other mental health measures in both genders. Further correlation analysis was run analyzing relationships between specific social media networks and mental health variables, which are reported in Table 10. Females showed negative relationships between AIMS and LinkedIn (-.29*) and Self-Esteem and Facebook (-.26**), while having a positive relationship between Self-Esteem and TikTok (.32**). Males showed positive relationships between Self-Esteem and both Instagram (.46*) and Snapchat (.44*). While showing negative relationships between PHQ and Instagram (-.58**) and Snapchat (-.48**), as well as AIMS and YouTube (-.40*).

In terms of social media consumption, 45.7% of users identified that they are most likely to use social media right before bed, with 23.4% stating that they are most likely to use it in the evening. Table 11 identifies the frequency of social media use throughout the day for the participants. Around half of the respondents use social media when they first wake up and in the morning. The most common times for social media to be used is in the evening and right before bed. While on social media, users are consuming general sport related posts (38.3%), and life updates from friends and family (30.9%) most frequently, and are less likely to use social media to stay up to date on the news (11.7%), politics (11.7), or social justice (10.6%) (Table 12).

An analysis on how these participants were using their time during both the week and weekend took place (Table 13). Consumption of social media did not drastically change between the week (M= 4.33, SD = 3.96) and weekend (M= 4.67, S.D = 4.11). However, it was noted that student-athletes spent more time socializing on the weekend (M=5.46, S.D. = 4.23) than during the week (M=3.62, S.D. =3.60).

Qualitative Results

Respondents were asked how they feel their use of social media effects their lives as student-athletes. The results of this qualitative section were broken into two major categories: it does effect me, and it does not effect me. From here, the data collected within the "does effect me" category was able to be placed into themes, organized under positive and negative effects.

Positive

Communication

Users who identified that social media had a positive effect on them, often paired this with providing them a platform to have open communication with people who they may otherwise lose touch with. One participant stated, "I feel like it keeps me connected with old friends, teammates, and other teams across the world. It keeps me up to date on a lot of things." It also provided a platform for users to be recruited by allowing them easier access to communicate with coaches. Other participants said, "It's helps me stay in contact with my coaches and teammates," and, "It helped me get recruited."

Relieve Stress

Some users identified that social media was something that they were able to use to escape their stresses. One participant stated, "It is used as a stress relief method. When I am stressed I check social media to avoid responsibilities for a couple of minutes." Another participant said, "Helps me get my mind off of things."

Motivation

Users noted that social media gave them access to the population of their peers and competition. This allowed them to keep an eye on what they were doing for training, which could be used as motivation for their own training and success. One participant stated,

"Personally, I feel like it helps me. I use social media to look at ways to better myself as an athlete. I will follow sports pages and motivational pages that help me better myself." Another participant stated, "I find videos of different plays and skills for my sport, as well as see what other teams in my division are doing."

Negative

Procrastination

The most common negative effect of social media that users noted was procrastination. Users stated they would go to social media to get away from their responsibilities or avoid interaction. One participant stated, "It's a major distraction from doing my homework and studying" while another said, "My phone becomes a security blanket for me whenever im put in a uncomfortable situation. this interferes with my bond with my team sometimes. I procrastinate by going on my phone as well."

Loss of Sleep

Users felt that social media made them more tired. This was because they would stay up late on social media, or they would have interrupted sleep because of it. One participant stated, "Sometimes I overuse social media and it affects my time management, hours of sleep and other things." Another participant stated, "I think sometimes I spend too much time on social media, and I could use that time better. I could spend more time studying, working out, practicing, or even sleeping."

Vulnerable

Some users felt that social media provided a platform for them to be judged by fellow student-athletes. One user stated, "I hate using it. Instagram is a platform that basically just causes individuals, specifically young women, to compare themselves to others whether it is

body image or how one presents their life. It is draining and very pessimistic most of the time."

Another user stated, "I feel the pressure to perform more successfully knowing that it will be

posted on social media. Even if someone does not comment on it, there are often silent judgers."

CHAPTER V: DISCUSSION

Discussion

While previous studies have been completed on social media and mental health, and student-athletes and mental health, few studies have been completed on social media's impact on the mental health of student-athletes, thus, the goal of this study was to explore this specific connection in more depth. The results of the current study differed from some previous research. For example, Faraon and Kaipainen (2014) identified a significant negative relationship between Facebook use and self-esteem, which was not identified in this study. A possible reason for this could be less emphasis placed on Facebook use amongst this particular age group. Chen (2020) shares that the most frequent users of Facebook are users between 25-30 years old with 84% sharing that they use Facebook. Facebook was established in 2006 (Boyd, 2019), while Instagram (2010) (Evans, 2018), Snapchat (2011) (O'Connell, 2020), and TikTok (2016) (Mohsin, 2020) are all much more recent and aimed at a different demographic of users.

Interestingly, the only significant relationship identified in the current study between different social media platforms, and the mental health measures used in this study, was a significant negative relationship between YouTube and anxiety/depression. While there is a lack of information identifying any relationship between YouTube consumption and anxiety/depression, Chen (2020) shares that YouTube is the social media platform with the highest U.S consumption. Chen (2020) further explains that 78% of men and 68% of women use YouTube with 90% of 18-24 years olds using it. Possible reasons for this could be its simple sharing capabilities, and access to a large audience (Rahebi, 2016). As well as this, it has leisure capabilities. Allowing viewers to watch whatever genre they desire on smart devices (Rahebi, 2016). A possible explanation for the relationship found in this study could be that the students-

25

athletes are watching videos that make them feel good – this could range from funny videos, to videos of other interests that they have.

McLoughlin et al. (2019) identified that cyber victimization had a significant impact on anxiety, depression, and stress in adolescents. However, the results of this study did not identify any significances with online harrassment. As the size of this study was only 94 student-athletes, it is possible that not enough of the respondents experienced online harassment, thus making the relationship unlikely to exist in this sample. Also, since the sample included many Division III athletes, the liklihood of experiencing online harssmant in this sample may have been lower.

Qualitative findings of this study support those of Ramzan et al. (2019) who identified that participants use social media to compare themselves to others. Within the qualitative findings of this study, users could percieve this as positive or negative, suggesting a reason for no conclusive significant correlation in the quantitative data. This is further supported through the research identifying that participants most commonly used social media to look at sport related posts.

Analysis of qualitative results in this study showed similarities to the findings of Spraggins (2009) who noted that problematic social networking use is associated with decreased self-esteem, happiness, satisfaction with life, and increased depression, and loneliness. While respondents did not explicitly state increased depression as a result of social media use, there were links to decreased self-esteem and loneliness. Quantitative data of this thesis did not measure Spraggins (2009) defined theory of problematic use, which can account for the lack of statistically significant correlations. It is also possible that due to their heavy time demands, and the emphasis on participation in other activities that social media use is less important to student-athletes and therefore has less of an impact. In the future, when identifying problematic social

media use, student-athletes should rank the importance of social media to them. In a study completed by Woods and Scott (2016), they identified that social media could have an impact on sleep. The qualitative data from this research project supports this finding. Further research should be completed on student-athletes sleeping habits as Benitez and Gunstad (2012) completed a study on undergraduate students' sleep and noted poor sleep impacted depression and anxiety.

Importantly, qualitative research identified that while social media could have a negative impact on mental health, it also could have a positive impact. Positive findings of the qualitative research include the use of social media for communication, stress relief and motivation. This finding is important as it allows further research to dive into these positives and outline a way to educate athletic departments and student-athletes on ways that they can use it to better their mental health as opposed to just telling student-athletes what they should not do. If social media is causing stress and procrastination, then it is clear that the student-athlete should step back on their use. However, if it is providing a place to communicate with coaches, friends, family, and others and relieve stress, then it may be fine to encourage its use, as long as student-athletes understand how to do so in a positive way. The communication that is occurring should have a positive impact on well-being. Student-athletes should be advised on methods to handle confrontation and identify when engaging with someone online is no longer benefitting them.

Findings of this research project identified a strong correlation between anxiety/depression and burnout. It could be that some of this is related to the similarities in presentation of symptoms (Freudenberger, 1974). Further, a study completed by Kaschka et al. (2011) noted that the significance in overlap between burnout and depression is so prevalent, that burnout could be a risk factor for depression. College sport employees should attempt to reduce

27

burnout by providing the student-athletes with opportunities to identify outside being a student-athlete. Examples could be movie nights or quiz nights.

Further, regression analyses for the effects of social media on individual mental health variables noted that there were significant differences in the mental health scores between males and females in response. Males scored lower in anxiety/depression and perceived stress, while scoring higher on self-esteem and vitality. It is possible that this is due to the smaller amount of time that males spend on social media in relation to their female counterparts as found in this study. It could be argued, due to the increased time on social media, that social media is more important to females. In support of this, when data for males and females is analyzed separately, there is a relationship between Facebook usage has and female users' self-esteem, which could be explained through the findings of Faraon and Kaipainen (2014). Interestingly, it was found that LinkedIn had a significant negative relationship with athlete identity of females in this study. This could be due to the platform of LinkedIn being centered around career networks. LinkedIn allows the student-athletes a place to market themselves as young professionals in a career field, as opposed to the sport field.

In males, it was identified that Instagram and Snapchat usage had a positive relationship with mental health and use may decrease anxiety and depression and increase satisfaction with life in this group. YouTube was found to have a significant negative correlation with male user's athletic identity. A possible explanation for this could be the content that is being consumed on this platform by the user. YouTube provides easy access to watch a variety of on different content. Users could be consuming anything from music videos, to gaming live streams. This would allow for the student-athlete to identify more strongly with another hobby outside of their own sport.

As Woods and Scott (2016) have indicated, social media use immediately before bed can lead to lower levels of self-esteem. The results of this study highlighted that student-athletes are most commonly using social media at night, right before bed it could be assumed that there would be a correlation between this and self-esteem. However, a relationship was not found within this study. This could be due to the small sample size. Future research should directly measure the impact of social media use at different points throughout the day and its impact on various mental health measures. If, with a larger student-athlete population, a relationship is identified, then this information could drastically help student-athletes create healthy routine to maximize performance and health.

While the purpose of this study was to identify the impact of social media on the mental health of student-athletes, there were additional findings that related solely to the mental health of student-athletes that were of interest. The regression analysis of anxiety and depression noted that there are higher levels of anxiety and depression in Division III and graduate student-athletes. It is possible, that this is be due to there being fewer resources at this level to help this group of student-athletes. Further research should be completed on Division III student-athletes to identify trends surrounding their anxiety and depression as this could change approaches within the coaching and guiding of these student-athletes. Additionally, these student-athletes may suffer from insecurities surrounding their athletic talent, and their use of social media could be problematic in providing them a platform to compare themselves to other athletes. When it comes to graduate student-athletes, it seems understandable that they would express higher levels of anxiety and depression as they are likely transitioning out of life as a student-athlete sooner and may feel overwhelmed with their responsibilities. Their coursework may also be more intensive. While this study did not identify that graduate students have higher levels of perceived

29

stress, future research should look specifically into perceived stress, anxiety, and depression of graduate student-athletes. Potentially, this research could identify trends relating to social media use in graduate student-athletes whose peers have graduated and gone on to be successful in their career professions, or in those whose peers have been unsuccessful in their transition. Additionally, identifying if transition is something that is more worrisome to graduate students would help student-athlete development programs within athletic departments prepare their students better.

Results indicated that being a Division II athlete has a significant positive effect on athlete identity. This could be because student-athletes at the Division II level are trying to compete with student-athletes at the Division I level and are putting in more effort to get to that level. A similar explanation was discussed by Huml (2018) who researched athletic identity across divisions and found similar athletic identity between Division I and Division II.

Analyses indicated that vitality and resilience positively relate to athlete identity, however. This finding likely shows that those in a more positive headspace feel more positive about their sport. While those who are struggling mentally more likely view their sport negatively, or as a burden, which is supported by burnout having a significant negative relationship with athlete identity. The significance of burnout negatively impacting athlete identity is important. If student-athletes who are suffering from burnout are less likely to identify with their sport or as an athlete, then the effort that they put into being successful has a chance to take away from the program and other athletes. However, with the right psychological counselling and treatment, it is possible for student-athletes suffering from burnout to come back. Appleton et al., (2009) identified higher levels of avoidant coping (defined as coping which disengages from the stressor) related to higher levels of burnout.

Based on the results of this study, it is suggested that athletic departments educate student-athletes on healthy social media use and provide instruction on coping strategies that center the student-athlete on their development. It would be expected that this would de-emphasize the importance of social media and student-athletes would be able to treat it with less value. Athletic staff should be aware that mental health issues are prevalent within this population, and help-seeking behavior should be encouraged. The findings of this study would support the idea that females are more susceptible to mental health issues from social media use, and in future there should be training created that is directed toward this. To identify this, future research should be conducted on student-athletes help-seeking behavior. This can be analyzed against the general college student population in order to see whether the stigma around mental health is still as strong as it has been in the past. Additionally, analysis could be done on the reasoning behind these attitudes toward seeking help. It is possible that student-athletes have learned to handle their mental health in alternative ways and further identifying as well as assisting these methods would be beneficial.

Finally, more needs to be done to reduce the stigma of mental health. While there has been emphasis on mental health in recent years with the emphasis of sayings such as "Its okay to not be okay", the stigma still exists according to the results of this study. It is important to consider that student-athletes have trained and pushed through barriers that many will never face. It should be strongly considered that student-athletes feel required to show mental toughness, and mental health issues are viewed as weakness. Educating both student-athletes and coaches on the limitations that can come as a result of refusing to treat mental illness should be completed at every sport level. These habits are likely engrained in student-athletes from a young age.

31

CHAPTER VI: LIMITATIONS

Limitations

One limitation of this research was the sample size. While over 100 Division I, II, and III schools were contacted to participate in this survey, only a small number agreed to distribute to their student-athletes. Then, the number of student-athletes that chose to respond was less than desirable and skewed toward Division III. In the future, research should attempt to partner with a conference at the Division I level. This is a topic that is growing in importance and will likely evolve with the new NIL rules. Partnering with a conference would assure distribution to the desired population of student-athletes.

Additionally, it is possible that the measurement of social media use used in this research could have impacted possible results. In future research, measuring the hours of consumption across different platforms, or purpose for social media use could show different mental health impacts. Future research should continue to explore how social media use is measured in psychological studies to include the most useful and valid measures.

Further, this study was very broad and exploratory. It would be advised the survey is cut down, and only the most important/desired information is sought after. This will increase completion rates of the survey. Future research should be completed on social media use's impact on sleep as well as users' perceived stress around social media use. This could look at student-athletes stress around posting, as well as dependency on social media.

The final limitation that must be addressed is the Coronavirus Pandemic (COVID-19). This pandemic had huge impacts on college sport as well as everyday life. It is likely that students' mental health was already being impacted due to the transition of classes online, and additional protocols being added to ensure that sport could continue. Additionally, a large

number of the students who participated in this study were freshman. Due to the cancellation of sport in the fall semester these student-athletes would not have had a traditional student-athlete experience before participating in the survey.

CHAPTER VII: CONCLUSION

Conclusion

This research study provided a broad look into the possible impacts that social media can have on the mental health of student-athletes. The findings in this study support previous research and provide new information in the research area of social media and mental health, however, much work is needed in this area with larger sample sizes as qualitative data identified relationships that were not prevalent in quantitative results. Moving forward, studies should focus on specific mental health variables and define problematic social media use to better understand the impacts of social media on mental health. If student-athletes' social media use is found to be problematic enough to impact sleep, social media use training could be developed to educate student-athletes of the dangers and prevent burnout long-term. Additionally, qualitative work should be completed to provide more insight into how social media impacts student-athletes and what athletic departments can do to reduce negative effects.

REFERENCES

Al-Menayes, J. (2015). Social media use, engagement and addiction as predictors of academic

performance. *International Journal of Psychological Studies*, 86-94.

American College Health Association. (2019). *American College Health Association National*

College Health Assessment II. Retrieved from American College Health Association:

https://www.acha.org/documents/ncha/NCHA-

II_SPRING_2019_US_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf

American Foundation for Suicide Prevention. (2017). *Suicide statistics*. Retrieved from

American Foundation for Suicide Prevention: https://afsp.org/about-suicide/suicide-

statistics/

Appleton, P. R., Hall, H. K., & Hill, A. P. (2009). Relations between multidimensional

perfectionism and burnout in junior-elite male athletes. *Psychology of Sport and Exercise, 10*(4),

457–465. https://doi.org/10.1016/j.psychsport.2008.12.006

Aslam, S. (2019, September 5). *Twitter by the numbers: Stats, demographics & fun facts*.

Retrieved from Omnicore: https://www.omnicoreagency.com/twitter-statistics/

Bell, L., & Wilfert, M. (2014). *Mind, Body and Sport: Interpersonal violence and the student-*

athlete population. Retrieved from NCAA: http://www.ncaa.org/sport-science-

institute/mind-body-and-sport-interpersonal-violence-and-student-athlete-population

Benitez, A., & Gunstad, J. (2012). Poor sleep quality diminishes cognitive functioning

independent of depression and anxiety in healthy young adults. *Clin Neuropsychol*, 214-

223.

Boyd, J. (2019, January 25). *The history of Facebook: From basic to global giant.* Retrieved

from Brandwatch: https://www.brandwatch.com/blog/history-of-facebook/

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 77-101.

Brown, C., Glastetter-Fender, C., & Shelton, M. (2000-02). Psychosocial identity and career control in college student-athletes. *Journal of Vocational Behavior*, 53-62.

Brunborg, G. S., & Andreas, J. B. (2019). Increase in time spent on social media is associated with modest increase in depression, conduct problems, and episodic heavy drinking. *Journal of Adolescence*, 201-209.

Carter, T. (2013, February 14). *5 reasons why social media is a powerful marketing tool*. Retrieved from Business 2 Community: https://www.business2community.com/social-media/5-reasons-why-social-media-is-a-powerful-marketing-tool-0408216

Chen, J. (2020, August 4). *Social media demographics to inform your brand's strategy in 2020*. Retrieved from sproutsocial: https://sproutsocial.com/insights/new-social-media-demographics/

Christensen, J. (2015, May 28). *College athletes feeling the love/hate on Twitter*. Retrieved from Star Tribune: http://www.startribune.com/college-athletes-feeling-the-love-and-hate-on-twitter/304836191/

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 385-396.

Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 76-82.

Conway, T. (2013, November 30). *Alabama kicker Cade Foster sent death threats and hateful tweets after loss*. Retrieved from Bleacher Report: https://bleacherreport.com/articles/1871080-alabama-kicker-cade-foster-sent-death-threats-and-hateful-tweets-after-loss

Davoren, A. K., & Hang, S. (2014). Depression and anxiety prevalence in student-athletes. *Mind, Body and Sport: Understanding and Supporting Student Athlete Mental Wellness*, 38.

DeShazo, K. (2017, May 8). *2017 survey results: Social media use of student athletes*. Retrieved from Fieldhouse Media: http://www.fieldhousemedia.net/2017-survey-results-social-media-use-of-student-athletes/

Dickey, J. (2013, December 06). *When trolls attack: Frue stories of athletes and their online antagonists*. Retrieved from Sports Illustrated: https://www.si.com/extra-mustard/2013/12/06/athletes-twitter-trolls

Diener, e., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 71-75.

Etzel, E. F. (2010, 08 01). Counseling and psychological services for college student-athletes. *Reference & Research Book News, 2010-08-01*, p. 3.

Evans, G. (2018, September 25). *Instagram: The dog that launched a social media giant.* Retrieved from BBC News: https://www.bbc.com/news/technology-45640386

Faraon, M., & Kaipainen, M. (2014). Much more to it: The relation between Facebook usage and self-esteem. *Proceedings of the 2014 IEEE 15th International Conference on Information Reuse and Integration (IEEE IRI 2014)*, 87-92.

Fathima, F., Vishnu Priya, V., & Gayathri, R. (2019). Social media and anxiety – A survey. *Drug Intervention Today*, 1841-1844.

Ferguson, C. J., Muñoz, M. E., Garza, A., & Galindo, M. (2014). Concurrent and prospective analyses of peer, television and social media influences on body dissatisfaction, eating disorder symptoms and life satisfaction in adolescent girls. *Journal of Youth and Adolescence*, 1-14.

Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues*, 159-165.

Gil, P. (2019, August 9). *What is Twitter & how does it work?* Retrieved from Lifewire: https://www.lifewire.com/what-exactly-is-twitter-2483331

Greenleaf, C., Petrie, T. A., Carter, J., & Reel, J. J. (2009, March 1). Female collegiate athletes: Prevalence of eating disorders and disordered eating behaviors . *Journal of American College Health*, 489-497.

Hendricks, D. (2013, May 8). *Complete history of social media: Then and now*. Retrieved from Small Business Trends: https://smallbiztrends.com/2013/05/the-complete-history-of-social-media-infographic.html

Huml, M. R. (2018). A factor structure examination of athletic identity related to NCAA divisional differences. *Journal of College Student Development*, 376-381.

Jenkins-Guarnieri, M. A., Wright, S. L., & Johnson, B. (2013). Development and validation of a social media use integration scale. *Psychology of Popular Media Culture, 2*(1), 38–50. https://doi.org/10.1037/a0030277

Kaschka, W. P., Korczak, D., & Broich, K. (2011). Burnout- A fashionable diagnosis. *Dtsch Arztebl Int*, 781-787.

Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2019). Social media use and adolescent mental health: Findings from the UK millennium cohort study. *EClinicalMedicine*, 59-68.

Keyes, C. L., Dhingra, S. S., & Simoes, E. J. (2010). Change in level of positive mental health as a predictor of future risk of mental illness. *American journal of public health*, *100*(12), 2366–2371. https://doi.org/10.2105/AJPH.2010.192245

Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: the PHQ–4. *Psychosomatics*, 613-621.

Lester, D. (n.d.). *Mind, body and sport: Suicidal tendencies*. Retrieved from NCAA: http://www.ncaa.org/sport-science-institute/mind-body-and-sport-suicidal-tendencies

Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2016). The association between social media use and sleep disturbance among young adults. *Preventative Medicine 85*, 36-41.

Lumen. (n.d.). *Social media and technology trends*. Retrieved from Lumen: https://courses.lumenlearning.com/boundless-marketing/chapter/social-media-and-technology-trends/

Ma, C. (2018, November 21). *The impact of social media in sports*. Retrieved from The Sport Digest: http://thesportdigest.com/2018/11/the-impact-of-social-media-in-sports/

Maniar, S., Chamberlain, R., & Moore, N. (2005, November 7). *Suicide risk is real for student-athletes*. Retrieved from NCAA: https://www.ncaa.org/sites/default/files/suicide.pdf

Matthes, J., Karsay, K., Schmuck, D., & Stevic, A. (2019). "Too much to handle": Impact of mobile social networking sites on information overload, depressive symptoms, and well-being. *Computers in Human Behvaior*, 1-11.

McLoughlin, L. T., Spears, B. A., Taddeo, C. M., & Hermens, D. F. (2019). Remaining connected in the face of cyberbullying: Why social connectedness is important for mental health. *Psychology in the schools*, 945-958.

Mohsin, M. (2020, September 3). *10 TikTok statistics that you need to know in 2021 [infographic].* Retrieved from Oberlo: https://www.oberlo.com/blog/tiktok-statistics

Moreau, E. (2019, June 25). *What is Instagram, anyway?* . Retrieved from Lifewire: https://www.lifewire.com/what-is-instagram-3486316

Morgan, W. P., Brown, D. R., Raglin, J. S., O'Connor, P. J., & Ellickson, K. A. (1987). Psychological monitoring of overtraining and staleness. *British Journal of Sports Medicine*, 107-114.

Morozov, E. (2011). *The Net Delusion.* PublicAffairs.

NCAA. (n.d.). *Student-athletes*. Retrieved from NCAA: http://www.ncaa.org/student-athletes

O'Connell, B. (2020, February 28). *History of Snapchat: Timeline and facts.* Retrieved from The Street: https://www.thestreet.com/technology/history-of-snapchat

Page, K. M. , Milner, A. J. , Martin, A. , Turrell, G. , Giles-Corti, B. & LaMontagne, A. D. (2014). Workplace Stress. *Journal of Occupational and Environmental Medicine, 56*(8), 814–819. doi: 10.1097/JOM.0000000000000230.

Petersen, N. (2017, March 8). *The Dangers of comparing yourself to others on social media*. Retrieved from AllPsych: https://blog.allpsych.com/the-dangers-of-comparing-yourself-to-others-on-social-media/

Pinkerton, R. S., Hinz, L. D., & Barrow, J. C. (1989). The college student-athlete: Psychological considerations and interventions. *Journal of American College Health*, 218-226.

Press, G. (2018, April 8). *Why Facebook triumphed over all other social networks*. Retrieved from Forbes: https://www.forbes.com/sites/gilpress/2018/04/08/why-facebook-triumphed-over-all-other-social-networks/#1e906ea06e91

Rahebi, A. (2016, June 3). *Why YouTube is so successful.* Retrieved from odyssey: https://www.theodysseyonline.com/youtube-successful

Ramzan, M., Arshad, J., Adeeb, H., & Asif, M. (2019). Excessive use of Instagram causing anxiety and depression among young adults. *Pakistan Library & Information Science Journal*, 45-48.

Rao, A., Asif, I., Drezner, J., Toresdahl, B., & Harmon, K. (2015, May 20). Suicide in National Collegiate Athletic Association (NCAA) athletes: A 9-year analysis of the NCAA resolutions database. *SAGE Journals*, 452-457.

Rosenberg, M. (1989). Society and the Adolescent Self-Image. *Wesleyan University Press*.

Ryan, R. M., & Frederick, C. (1997). On energy, personality, and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 529-565.

Sanford-Martens, T. C., Davidson, M., Yakushko, O., Martens, M., Hinton, P., & Beck, N. (2005). Clinical and subclinical eating disorders: An examination of collegiate athletes. *Journal of Applied Psychology*, 79-86.

Santarossa, S., & Woodruff, S. J. (2017). #SocialMedia: Exploring the relationship of social networking sites on body image, self-esteem, and eating disorders. *Social Media + Society*, 1-10.

Saunders, J. F., & Eaton, A. A. (2018, November 6). Snaps, selfies, and shares: How three popular social media platforms contribute to the sociocultural model of disordered eating among young women. *Cyberpsychology, Behavior, and Social Networking*, 343-354.

Spraggins, A. (2009). Problematic use of online social networking sites for college students: Prevalence, predictors, and association with well-being. *(Unpublished Doctoral Dissertation)*.

Stock, S. R., & Levine, H. (2016). Common mental health issues. *New Directions for Student Services*, 9-18.

Stull, T. (2014, October). *Mind, body and sport understanding and supporting student-athlete mental wellness.* Retrieved from NCAA:

http://www.ncaapublications.com/productdownloads/MindBodySport.pdf

Thomas, J. R., Nelson, J. K., & Silverman, S. J. (2015). *Research Methods in Physical Activity.* Champaign, IL: Human Kinetics.

Thompson, R. A., & Sherman, R. T. (2007). *Managing student-athletes' mental health issues.* Retrieved from NCAA:

https://www.ncaa.org/sites/default/files/2007_managing_mental_health_0.pdf

Visek, A. J., Hurst, J. R., Maxwell, J. P., & Watson II, J. C. (2008). A cross-cultural psychometric evaluation of the athletic identity measurement scale. *Journal of Sport Psychology*, 473-480.

Wagland, S., Cohen, J., & Merenstein, D. (2013). Susceptibility for depression in current and retired student athletes. *Sports Health*, 263-266.

Watson, J. C., & Kissinger, D. B. (2007). Athletic participation and wellness: Implications for counseling college student-athletes. *Journal of College Counseling*, 153-162.

West, C. (2019, April 22). *17 Instagram stats marketers need to know for 2019*. Retrieved from Sprout Social: https://sproutsocial.com/insights/instagram-stats/

Woods, H. C., & Scott, H. (2016). #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 41-49.

Yang, J., Peek-Asa, C., Corlette, J., Cheng, G., Foster, D., & Albright, J. (2007). Prevalence of and risk factors associated with symptoms of depression in competitive collegiate student-athletes. *Clinical Journal of Sport Medicine*, 481-487.

APPENDIX A: TABLES

Table 1

Demographic Characteristics of the Sample

Demographic Variable	Percentage	Count
Female	69.1%	65
Transfer Students	9.6%	5
International Students	12.8%	12
Ethnicity		
White	89.4%	84
Black	3.2%	3
Hispanic/Latino	4.3%	4
Multi-racial	1.1%	1
Other	1.1%	1
Year in School		
Freshman	42.6%	40
Sophomore	20.2%	19
Junior	20.2%	19
Senior	14.8%	14
Graduate	2.2%	2
Status on Team		
First team	53.2%	50
Second team	23.4%	22
Third team	11.7%	11
Practice/training/not competing	11.7%	11
Division		
I	27.7%	26
II	11.7%	11
III	60.6%	57

Table 2

Sample Mental Health Descriptive Statistics

Variable	Total *M(SD)*	Male *M(SD)*	Female *M(SD)*
AIMS	36.40(6.86)	37.07(6.76)	36.11(6.94)
PHQ	4.40(3.74)	1.97(2.31)	5.49(3.75)
PSS	6.60(3.49)	4.21(2.69)	7.66(3.29)

44

SatWLife	24.33(6.27)	24.97(5.28)	24.05(6.68)
Self-Esteem	19.46(5.46)	22.55(4.67)	18.08(5.24)
Vitality	32.36(8.78)	37.86(6.71)	29.91(8.51)
Resilience	39.61(6.74)	42.28(5.30)	38.42(7.00)
SMUse	41.53(10.53)	36.62(9.65)	43.72(9.82)
OnlineHara	3.72(1.49)	4.00(2.00)	3.60(1.20)
Burnout	33.05(11.76)	29.07(9.51)	34.83(12.29)

Table 3

Individual Network and Mental Health Correlations

Variable	1	2	3	4	5	6	7	8	9	10
1. Facebook										
2. Twitter	.27**									
3. Instagram	.26*	.26*								
4. LinkedIn	.25*	.23*	.01							
5. Snapchat	.22*	.18	.63**	-.11						
6. TikTok	-.06	.12	.22*	-.04	.27**					
7. Youtube	-.01	.09	-.07	-.05	-.19	.05				
8. Self-Esteem	-.19	.14	.04	.07	.11	.19	.04			
9. SatWLife	-.04	.09	.11	-.06	.07	.15	.11	.59**		
10. PHQ	.13	-.13	-.03	-.001	-.002	-.003	-.25*	-.65**	-.56**	
11. PSS	.15	.001	.10	-.01	.07	.11	-.17	-.61**	-.56**	.74**

Note: $p < .05$* and $p < .01$**

Table 4

Regression Results for the Effects of Social Media Use on Mental Health

	B	β	S.E.	t-value	*p*-value
PHQ (R^2 = .31, Adjusted R^2 = .23, *SE* = 3.28, *F* = 4.09, *df* = 9, *p* < .001)					
Constant	6.35		1.73	3.67	.000
SMUseTotal	-.02	-.06	.04	-.56	.58
D1	-1.85	-.22	.80	-2.31	.02
D2	.77	.07	1.15	.67	.51
GenderSimple	-3.66	-.46	.81	-4.54	.000
TeamSport	-.16	-.02	.75	-.21	.83
Sophomore	.14	.02	.92	.16	.88
Junior	1.18	.13	.94	1.25	.22
Senior	1.19	.11	1.03	1.16	.25
Graduate	5.38	.21	2.39	2.25	.03
PSS (R^2 = .28, Adjusted R^2 = .20, *SE* = 3.12, F = 3.60, *df* = 9, *p* < .005)					
Constant	7.37		1.65	4.48	.000
SMUseTotal	.01	.03	.03	-.56	.78
D1	-1.27	-.16	.77	-2.31	.10
D2	-.87	-.080	1.09	.67	.43
GenderSimple	-3.52	-.47	.77	-4.54	.000
TeamSport	.28	.04	.72	-.21	.70
Sophomore	-.38	-.04	.88	.16	.67

Junior	1.01	.12	.90	1.25	.26
Senior	-.02	-.002	.98	1.16	.98
Graduate	2.07	.12	2.28	2.25	.20

Self-Esteem (R^2 = .24, Adjusted R^2 = .16, *SE* = 5.01, F = 2.93, *df* = 9, *p* = .005)

Constant	16.94		2.64	6.42	.000
SMUseTotal	.02	.03	.06	.27	.79
D1	2.38	.20	1.23	1.94	.06
D2	.71	.04	1.75	.41	.69
GenderSimple	4.51	.38	1.23	3.66	.000
TeamSport	.41	.04	1.15	.36	.72
Sophomore	.50	.04	1.41	.36	.72
Junior	-2.34	-.17	1.44	-1.63	.11
Senior	-.23	-.02	1.57	-.15	.88
Graduate	-5.26	-.14	3.66	-1.44	.15

Vitality (R^2 = .28, Adjusted R^2 = .20, *SE* = 7.86, F = 3.57, *df* = 9, *p* < .005)

Constant	27.52		4.14	6.65	.000
SMUseTotal	.07	.08	.09	.79	.43
D1	3.28	.17	1.92	1.71	.09
D2	-1.16	-.04	2.75	-.42	.67
GenderSimple	8.54	.45	1.93	4.42	.000
TeamSport	-1.22	-.07	1.80	-.68	.50
Sophomore	2.33	.11	2.21	1.05	.30
Junior	-2.58	-.12	2.26	-1.14	.26

	B	β	S.E.	t-value	p-value
Senior	-2.28	-.093	2.46	-.93	.36
Graduate	-7.80	-.13	5.74	-1.36	.18

Table 5

Regression Results for Athlete Identity

	B	β	S.E.	t-value	p-value
AIMS (R^2 = .19, Adjusted R^2 = .11, *SE* = 6.46, F = 2.49, *df* = 8, *p* < .05)					
Constant	33.95		1.59	21.32	.000
D1	1.81	.12	1.57	1.16	.25
D2	7.06	.33	2.22	3.18	.002
GenderSimple	1.12	.08	1.51	.74	.46
TeamSport	2.84	.20	1.48	1.92	.06
Sophomore	-2.64	-.16	1.81	-1.46	.15
Junior	-.26	-.02	1.84	-.14	.89
Senior	-2.61	-.14	2.02	-1.30	.20
Graduate	2.84	-.16	4.71	-1.56	.12

Table 6

AIMS Pearson Correlation with Various Mental Health Measures

Variable	1	2	3	4	5	6	7
1. AIMS							
2. PHQ	-.15						
3. PSS	-.14	.74**					

48

Variable						
4. SatWLife	.16	-.56**	-.56**			
5. Self-Esteem	.14	-.65**	-.61**	.59**		
6. Vitality	.21*	-.70**	-.65**	.63**	.66**	
7. Resilience	.24*	-.54**	.50**	.37**	.53**	.59**
8. SMUse	.05	.08	.15	.07	-.07	-.06	-.22*

Note: $p < .05$* and $p < .01$**

Table 7

Mental Health Correlations

Variable	1	2	3	4	5	6	7	8
1. PHQ								
2. OnlineHar	-.02							
3. Burnout	.59**	.25*						
4. AIMS	-.15	.02	-.40**					
5. PSS	.74**	.04	.55**	-.14				
6. SatWLife	-.56**	-.15	-.57**	.16	-.56**			
7. Self-Esteem	-.65**	-.06	-.61**	.14	-.61**	.59**		
8. Vitality	-.70**	-.06	-.64**	.21*	-.65**	.63**	.66**	
9. Resilience	-.54**	-.15	-.53**	.24*	-.50**	.37**	.53**	.50**

Note: $p < .05$* and $p < .01$**

Table 8

Regression Analysis of Social Media Use and Gender

	B	β	S.E.	t-value	*p*-value
Social Media Use ($R^2 = .10$, Adjusted $R^2 = .09$ *SE* = 9.77, F = 10.61, *df* = 91, $p < .01$)					

Constant	43.72		1.21	36.09	.000
GenderSimple	-7.10	-.32	2.18	-3.26	.002

Table 9

Regression Analysis of Social Media Use and Mental Health by Gender

Variable	1	2	3	4	5	6	7	8	9
				Female					
1. PHQ									
2. OnlineHar	.03								
3. Burnout	.56**	.32*							
4. AIMS	-.18	-.012	-.45**						
5. PSS	.70**	.04	.52**	-.13					
6. SatWLife	-.60**	-.09	-.59**	.17	-.61**				
7. Self-Esteem	-.59**	-.08	-.59**	.19	-.52**	.62**			
8. Vitality	-.63**	-.13	-.60**	.21	-.52**	.64**	.57**		
9. Resilience	-.47**	-.27*	-.49**	.27*	-.40**	.30*	.45**	.37**	
10. SMUse	-.03	.16	-.09	.15	.04	.06	.15	.14	-.16
				Male					
1. PHQ									
2. OnlineHar	.08								
3. Burnout	.56**	.31							
4. AIMS	.04	.07	-.25						
5. PSS	.57**	.26	.51**	-.12					

Variable									
6. SatWLife	-.59**	-.31	-.48**	.11	-.55**				
7. Self-Esteem	-.58**	-.20	-.56**	-.05	-.58**	.62**			
8. Vitality	-.69**	-.14	-.64**	.15	-.54**	.73**	.69**		
9. Resilience	-.60**	-.10	-.55**	.12	-.58**	.59**	.59**	.71**	
10. SMUse	-.22	.01	.01	-.11	-.09	.18	-.18	-.06	-.13

Note: *p* < .05* and *p* <.01**

Table 10

Regression Analysis of Social Media Use and Individual Networks by Gender

Variable	1	2	3	4	5	6	7	8	9	10	11
Female											
1. PHQ											
2. AIMS	-.18										
3. PSS	.70**	-.13									
4. SatWLife	-.60**	.17	-.61**								
5. Self-Esteem	-.59**	.19	-.52**	.62**							
6. Facebook	.15	-.03	.13	-.13	-.26**						
7. Twitter	-.08	.20	.13	.01	.07	.37**					
8. Instagram	-.04	.23	.03	-.01	.08	.21	.31*				
9. LinkedIn	.04	-.29*	-.03	-.07	.03	.30*	.21	.05			
10. Snapchat	.05	.18	.11	-.08	.18	.10	.22	.71**	-.01		
11. TikTok	-.08	-.01	.06	.10	.32**	-.14	.21	.09	-.001	.21	
12. YouTube	-.10	-.11	-.02	.17	-.15	.13	-.05	.04	-.10	-.23	.18
Male											

	1	2	3	4	5	6	7	8	9	10	11
1. PHQ											
2. AIMS	.04										
3. PSS	.57**	-.12									
4. SatWLife	-.59**	.11	-.55**								
5. Self-Esteem	-.58**	-.05	-.58**	.62**							
6. Facebook	-.17	.12	.02	.24	.12						
7. Twitter	-.11	-.13	-.06	.27	.15	.14					
8. Instagram	-.58**	-.13	-.18	.46*	.33	.27	.32				
9. LinkedIn	.07	.12	.23	-.02	.08	.20	.24	.00			
10. Snapchat	-.48**	-.20	-.27	.44*	.24	.34	.21	.50**	-.28		
11. TikTok	-.08	-.25	-.003	.36	.12	.03	.01	.37*	-.11	.33	
12. YouTube	.01	-.40*	.21	-.19	-.14	-.14	.23	.08	-.10	.06	-.04

Note: $p < .05$* and $p < .01$**

Table 11

Frequency of Social Media Use

	Never	*Sometimes*	*About half the time*	*Often*	*Frequently*
First thing when I wake up	12.8%	27.7%	17.0%	25.5%	17.0%
In the morning	4.3%	28.7%	18.1%	24.5%	24.5%
In the afternoon	3.2%	24.5%	28.7%	21.3%	22.3%
In the evening	3.2%	14.9%	10.6%	43.6%	27.7%
Right before I go to bed	5.3%	12.8%	6.4%	27.7%	47.9%

Table 12

Content Consumed on Social Media

	Never	*Sometimes*	*About half the time*	*Often*	*Frequently*
Political	22.3%	16.0%	27.7%	22.3%	11.7%
Life updates from friends and family	3.2%	4.3%	23.4%	37.2%	30.9%
Sport related posts about my performance	14.9%	24.5%	33.0%	13.8%	12.8%
Sport related posts about my team	6.4%	8.5%	35.1%	27.7%	22.3%
General sport related posts	2.1%	11.7%	20.2%	27.7%	38.3%
Posts related to social justice	9.6%	18.1%	35.1%	26.6%	10.6%
News updates	4.3%	20.2%	37.2%	23.4%	11.7%

Table 13

Average Time Spent on Activities

	Weekday		*Weekend Day*	
	Mean	*S.D.*	*Mean*	*S.D.*
Attending class/lab etc.	5.37	3.82	1.11	2.91
Studying/academic work outside class	5.71	4.44	4.74	3.69
Sports commitment (practice, training, competing)	4.66	4.25	2.73	2.68
Sports commitment (meetings, film study, team function)	1.63	2.44	1.03	1.46
Extra-curricular	1.64	2.40	2.01	2.69
Working a job	1.53	2.94	1.01	2.23

Socializing	3.62	3.60	5.46	4.23
Social Media	4.33	3.96	4.67	4.11
Sleeping	8.12	3.91	8.70	3.26

*Note: The COVID-19 Pandemic may impact these numbers

APPENDIX B: SURVEY

SMDescriptive Part I - Your Social Media Use: The first group of questions will ask you about your use of social media.

SNS Frequency How often do you use the following social networking sites?

	I do not have an account on this network (0)	Never (1)	Rarely (2)	About once a week (3)	Several times a week (4)	Daily (5)	Several times during the day (6)
Facebook (1)	○	○	○	○	○	○	○
Twitter (2)	○	○	○	○	○	○	○
Instagram (7)	○	○	○	○	○	○	○
LinkedIn (3)	○	○	○	○	○	○	○
Snapchat (4)	○	○	○	○	○	○	○
TikTok (5)	○	○	○	○	○	○	○
YouTube (9)	○	○	○	○	○	○	○
Other (please specify) (8)	○	○	○	○	○	○	○

SMUse Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor	Somewhat agree (5)	Agree (6)	Strongly agree (7)

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				disagree (4)			
I enjoy checking my social media accounts (1)	○	○	○	○	○	○	○
I don't like to use social media (2)	○	○	○	○	○	○	○
Using social media is part of my every day routine (3)	○	○	○	○	○	○	○
I respond to content that others share using social media (4)	○	○	○	○	○	○	○
I feel disconnected from friends when I have not logged into social media (5)	○	○	○	○	○	○	○
I would like it if everyone used social media to communicate (6)	○	○	○	○	○	○	○
I would be disappointed if I could not use social media at all (7)	○	○	○	○	○	○	○
I get upset when I can't log on to social media (8)	○	○	○	○	○	○	○

I prefer to communicate with others mainly through social media (9)	○	○	○	○	○	○	○
Social media play an important role in my social relationships (10)	○	○	○	○	○	○	○

SMTime How often do you use social media at the following times of day?

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)
First thing when I wake up (3)	○	○	○	○	○
In the morning (4)	○	○	○	○	○
In the afternoon (6)	○	○	○	○	○
In the evening (7)	○	○	○	○	○
Right before I go to bed (8)	○	○	○	○	○

TimeMost What time of day are you MOST likely to use social media?

○ First thing when I wake up (1)

○ In the morning (2)

○ In the afternoon (3)

○ In the evening (4)

○ Right before I go to bed (5)

ContentType How often do you consume the following type of content on social media

networks?

	Never (1)	Almost Never (2)	Sometimes (3)	Often (4)	Frequently (5)
Political Posts (1)	○	○	○	○	○
Life updates from friends and family (2)	○	○	○	○	○
Sport related posts about my performance (3)	○	○	○	○	○
Sport related posts about my team (6)	○	○	○	○	○
General sports related posts (4)	○	○	○	○	○
Posts related to social justice (5)	○	○	○	○	○
News Updates (8)	○	○	○	○	○
Other (9)	○	○	○	○	○

58

| | Other (10) | ○ | ○ | ○ | ○ | ○ |
| | Other (11) | ○ | ○ | ○ | ○ | ○ |

OnlineHarrassment How often have others...

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)	Always (5)
sent you a nasty message related to your sport performance on social media. (1)	○	○	○	○	○
posted a nasty message related to your sport performance on social media. (2)	○	○	○	○	○
posted a nasty comment related to your sport performance on social media posts. (3)	○	○	○	○	○

SocialMediaonLife How do you feel your use of social media effects your life as a student-athlete?

_____

_____

_____

_____

Part2 Part II - Your mental health: The following questions will ask you to assess many aspects of your individual mental health and well-being.

Resilience Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I am able to adapt to change. (1)	○	○	○	○	○
I can deal with whatever comes. (2)	○	○	○	○	○
I see the humorous side of things. (3)	○	○	○	○	○
Coping with stress strengthens me. (11)	○	○	○	○	○
I tend to bounce back after illness or hardship. (18)	○	○	○	○	○
I can achieve my goals despite obstacles. (12)	○	○	○	○	○
Please select somewhat agree for quality control purposes. (19)	○	○	○	○	○
Under pressure, I can focus and think clearly. (13)	○	○	○	○	○

	Not true at all (1) (1)	(2) (2)	(3) (3)	Somewhat true (4) (4)	(5) (5)	(6) (6)	Very true (7) (7)
I am not easily discouraged by failure. (14)	○	○	○	○	○		
I think of myself as a strong person. (16)	○	○	○	○	○		
I can handle unpleasant feelings. (17)	○	○	○	○	○		

Vitality To what extent do you believe each of the following statements to be true?

	Not true at all (1) (1)	(2) (2)	(3) (3)	Somewhat true (4) (4)	(5) (5)	(6) (6)	Very true (7) (7)
I feel alive and vital (1)	○	○	○	○	○	○	○
I don't feel very energetic (2)	○	○	○	○	○	○	○
Sometimes I feel so alive I just want to burst (3)	○	○	○	○	○	○	○
I have energy and spirit (4)	○	○	○	○	○	○	○
I look forward to each new day (5)	○	○	○	○	○	○	○
I nearly always feel alert and awake (6)	○	○	○	○	○	○	○
I feel energized (7)	○	○	○	○	○	○	○

61

SelfEsteem Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (0)	Disagree (1)	Agree (2)	Strongly agree (3)
I feel that I am a person of worth, at least on an equal plane with others. (1)	○	○	○	○
I feel that I have a number of good qualities. (2)	○	○	○	○
All in all, I am inclined to feel that I am a failure. (3)	○	○	○	○
I am able to do things as well as most other people. (11)	○	○	○	○
I feel I do not have much to be proud of. (18)	○	○	○	○
I take a positive attitude toward myself. (12)	○	○	○	○
On the whole, I am satisfied with myself. (13)	○	○	○	○
I wish I could have more respect for myself. (14)	○	○	○	○
I certainly feel useless at times. (16)	○	○	○	○
At times I think I am no good at all. (17)	○	○	○	○

SatWLife Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
In most ways my life is close to my ideal. (1)	○	○	○	○	○	○	○
The conditions of my life are excellent. (2)	○	○	○	○	○	○	○
I am satisfied with my life. (3)	○	○	○	○	○	○	○
So far I have gotten the important things I want in life. (4)	○	○	○	○	○	○	○
If I could live my life over, I would change almost nothing. (5)	○	○	○	○	○	○	○

PHQ-4 Over the last two weeks, how often have you been bothered by the following problems?

	Not at all (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
Feeling nervous, anxious or on edge (1)	○	○	○	○
Not being able to stop or control worrying (2)	○	○	○	○
Feeling down, depressed or helpless (3)	○	○	○	○
Little interest or pleasure in doing things (4)	○	○	○	○

PSS-4 In the last month, how often have you felt...

	Never (0)	Almost never (1)	Sometimes (2)	Fairly often (3)	Very often (4)
that you were unable to control the important things in your life? (1)	○	○	○	○	○
confident about your ability to handle your personal problems? (2)	○	○	○	○	○
that things were going your way? (3)	○	○	○	○	○
difficulties were piling up so high that you could not overcome them? (4)	○	○	○	○	○

64

Part3 Part III - Your Athletic Experience: The next set of questions asks you about your experiences and schedule as an athlete.

AIMS Scale Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
I have many goals related to sport (1)	○	○	○	○	○	○	○
Most of my friends are athletes (2)	○	○	○	○	○	○	○
Sport is the most important part of my life (3)	○	○	○	○	○	○	○
I spend more time thinking about sport than anything else (11)	○	○	○	○	○	○	○
I consider myself an athlete (12)	○	○	○	○	○	○	○
I feel bad about myself when I do poorly in sport (13)	○	○	○	○	○	○	○

65

I would be very depressed if I were injured and could not compete in sport (14)	○	○	○	○	○	○	○

NCAAMentalWellBeing Please read each item, then select the circle that best represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I would feel inadequate if I went to a therapist for psychological help. (1)	○	○	○	○	○
Seeking psychological help would make me feel less intelligent. (2)	○	○	○	○	○
My self-esteem would increase if I talked to a therapist. (3)	○	○	○	○	○
Please choose strongly agree for quality control purposes. (10)	○	○	○	○	○
I feel that student-athletes' mental health is a priority to	○	○	○	○	○

66

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
our athletics department. (4)					
My coaches take mental health concerns of student-athletes seriously. (5)	○	○	○	○	○
Student-athletes take mental health concerns of their teammates seriously. (6)	○	○	○	○	○
I know how to help a teammate who is experiencing a mental health issue. (7)	○	○	○	○	○
I would feel comfortable talking to someone on this campus about my mental health. (8)	○	○	○	○	○

AthleteBurnout Please read each item, then choose the answer that represents how much you agree or disagree with that statement.

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I'm accomplishing many worthwhile things in sport (1)	○	○	○	○	○

I feel so tired from my training that I have trouble finding energy to do other things. (10)	○	○	○	○	○
The effort I spend in my sport would be better spent doing other things. (2)	○	○	○	○	○
I feel overly tired from my sport participation. (3)	○	○	○	○	○
I am not achieving much in my sport. (4)	○	○	○	○	○
I don't care as much about my sport performance as I used to. (5)	○	○	○	○	○
I am not performing up to my ability in my sport. (6)	○	○	○	○	○
I feel "wiped out" from my sport. (7)	○	○	○	○	○
I feel less concerned about being successful in my sport than I used to. (8)	○	○	○	○	○
I am exhausted by the mental and physical demands of my sport. (11)	○	○	○	○	○

68

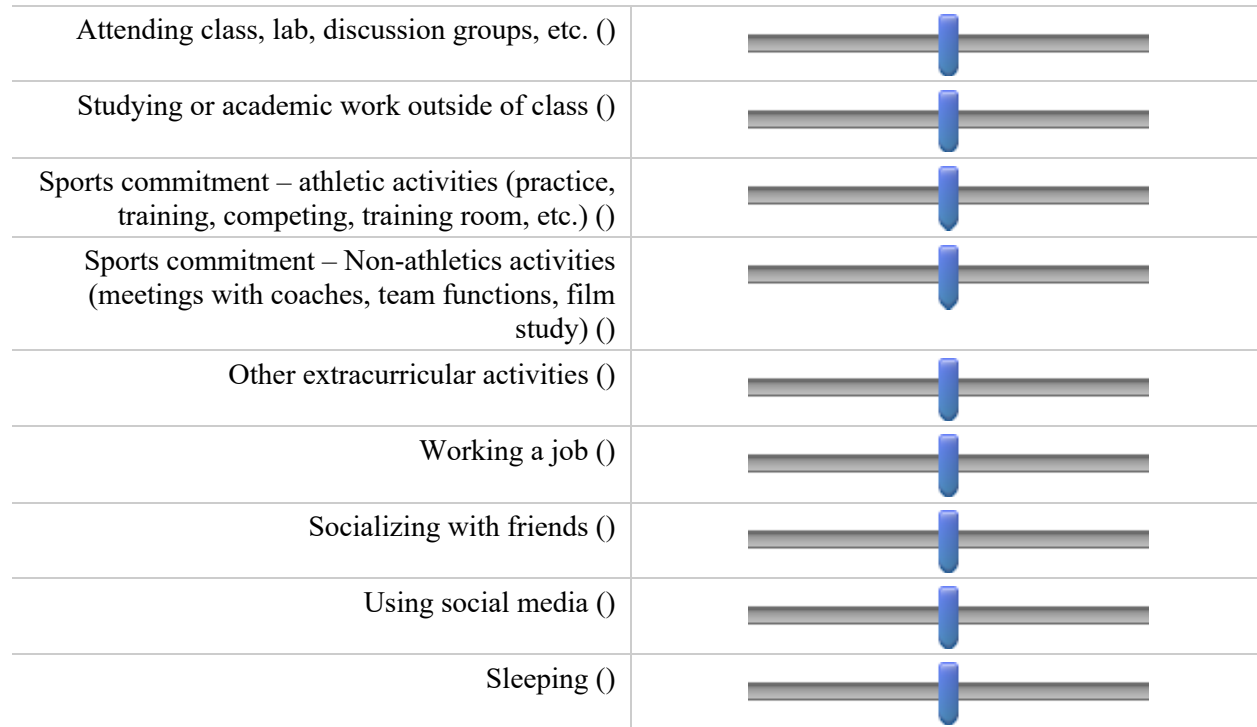|					
It seems that no matter what I do, I don't perform as well as I should. (12)	○	○	○	○	○
I feel successful at my sport. (13)	○	○	○	○	○
I have negative feelings toward my sport. (14)	○	○	○	○	○

TimeWeek Right now, what does your typical WEEK DAY look like? Indicate how many hours do you spend on each of the following activities.

0 2 4 6 8 10 12 14 16 18 20 22 24

Attending class, lab, discussion groups, etc. ()	▭
Studying or academic work outside of class ()	▭
Sports commitment – athletic activities (practice, training, competing, training room, etc.) ()	▭
Sports commitment – Non-athletics activities (meetings with coaches, team functions, film study) ()	▭
Other extracurricular activities ()	▭
Working a job ()	▭
Socializing with friends ()	▭
Using social media ()	▭
Sleeping ()	▭

69

TimeWeekend Right now, what does your typical WEEKEND DAY look like? Indicate how many hours do you spend on each of the following activities.

	0 2 4 6 8 10 12 14 16 18 20 22 24
Attending class, lab, discussion groups, etc. ()	
Studying or academic work outside of class ()	
Sports commitment – athletic activities (practice, training, competing, training room, etc.) ()	
Sports commitment – Non-athletics activities (meetings with coaches, team functions, film study) ()	
Other extracurricular activities ()	
Working a job ()	
Socializing with friends ()	
Using social media ()	
Sleeping ()	

PartIV Part IV - Descriptive Questions: The final section asks you to describe your university, sport and self.

Sport In which sport do you participate?

▼ Baseball (1) ... Wrestling (29)

Season Is your sport currently...

○ In season (1)

○ Out of season (0)

Status What is your status while answering this survey?

○ In quarantine (1)

○ In isolation (2)

○ Limited team practice (team broken into small groups) (3)

○ Full practice (team practicing as usual) (4)

○ Strength/workouts but no team practice (6)

○ Other (7) _____

International Are you an international student-athlete?

○ Yes (1)

○ No (0)

○

Transfer Are you a transfer student-athlete?

○ Yes (1)

○ No (0)

CurrentStatus Based on your roster spot or frequency of competition, how would you classify your current status in your main sport for this year: First team (for example you start in a team sport or compete in your preferred events in individual sport); Second team (e.g. regular substitute in a team sport, often compete in some events in individual sport); Third team (e.g. participate in practice but compete infrequently); Practice or train but not competing

○ First team (1)

○ Second team (2)

○ Third team (3)

○ Practice or training, but not competing (4)

Injury Please indicate the item below that bests describes your experience related to INJURIES.

○ I've never been injured. (1)

○ I've been injured but never missed any playing time (2)

○ I've missed multiple competitions related to injuries (3)

○ I've missed an entire season (4)

○ I suffered a career-ending injury (5)

Division Which NCAA Division does your sport compete in?

○ Division I - FBS (1)

○ Division I - FCS (2)

○ Division II (3)

○ Division III (4)

○ Other (5) _____

Institution Is your school a...

○ Public Institution (1)

○ Private Institution (2)

○ Other (3) _____

Gender Please indicate your gender.

○ Female (1)

○ Male (2)

○ Non-binary (3)

○ Prefer not to answer (4)

Race Please identify your race/ethnicity.

○ White or Caucasian (1)

○ Black or African American (2)

○ Hispanic, Latino/a, or Chicano/a (3)

○ Multi-racial/ethnic (4)

○ American Indian or Alaska Native (5)

○ Asian or Asian American (6)

○ Native Hawaiian or Pacific Islander (7)

○ Other (8)

○ Prefer not to answer (9)

ClassRank What is your class rank?

○ Freshman (1)

○ Sophomore (2)

○ Junior (3)

○ Senior (4)

○ 5th year (5)

○ Graduate student (6)

GPA What is your current overall GPA?

	0	1	2	3	4
Current GPA ()					