

Student Athletes and Mental Health: An Exploration of Potential Hurdles to Student Success

by

Amber Lorean Daniel

Honors Thesis

Appalachian State University

Submitted to The Honors College

in partial fulfilment of the requirements for the degree of

Bachelor of Science

May, 2018

Alex F. Howard, DrPH, Public Health, Thesis Director

Ben Asma, MA, LPCS, LCAS , Second Reader

Jefford Vahlbusch, Ph.D., Dean, The Honors College

Abstract

Purpose: The purpose of this study was to determine the prevalence of mental illness in student athletes and their help seeking behaviors. This study served to expand upon the current research on student athletes and mental illness in order to improve the support provided to this special student population.

Methodology: In the fall semester of 2017, a campus-wide health assessment was administered via email at a mid-size university in the South-East region of the U.S. The survey included 63 items, capturing demographics and history of mental health challenges. Students were asked about the occurrence of: overwhelming anxiety; depression; and suicidality, within the last 12 months. Students that provided a positive response to either of these items was then asked about their mental health help seeking behavior. Analyses include simple descriptive statistics as well as rate ratios.

Results: More than 1,800 students participated in the assessment, of which 118 were student athletes. Among student athletes that participated, 78 identified as women, 31 identified as non-white, and 93 were age 17-20. Student athletes were found to have significantly lower rates of depression, yet slightly higher rates of suicidality. Mental health help seeking was also 38% lower among student athletes when compared to non-student athletes.

Conclusions: This study supports previous findings that student athletes have comparable rates of mental illness and seek help less than non-athlete peers.

Table of Contents

Introduction.....	3
Mental Health on University Campuses.....	4
A Review of Mental Health and Risk Factors.....	5
Methodology.....	12
Results.....	13
Discussion.....	15
Conclusion.....	18
References Cited.....	23

Introduction

Mental health is a prevalent concern on college campuses across America. The Centers for Disease Control and Prevention (CDC) reported that more than 1 out of 20 Americans 12 years or older reported current depression, and among persons aged 15 to 24 years of age suicide was the second leading cause of death. (CDC 2013) The National Institute of Mental Health (NIMH) reports that 8.8% of people aged 18 to 25 had thoughts of suicide. (NIMH n.d.) For this age group, the importance of mental health can be emphasized by major changes such as beginning college. For many students they are entering a time where they are given much more responsibility, autonomy and having to adjust to a new environment. Mental health can especially be difficult to navigate for persons that are a part of special populations. Intercollegiate student athletes are one of these special populations that has unique contributing factors that come with this lifestyle. Student athletes have to balance the responsibilities that come with being a college student while also attending practices, competitions, and team responsibilities. For student athletes, busy competition schedules can mean missing irreplaceable class time and compromising sleep in order to complete makeup work and compensate for missed class time. The ill effects of lack of sleep and poor classroom performance can influence the mental health of student athletes. These negative factors can increase the risk of depression, anxiety and suicidal ideation which are the focuses of this research.

In conducting this research the goal is to give recommendations, so that the university can improve the practices, resources, and procedures as it relates to student athletes and mental health. If research were to show that athletes are a population that is at a greater risk

for mental illness, universities can take steps to encourage athletes to seek help and build strong support systems. There are also benefits to this research if it shows that athletes and non-athletes have a similar prevalence of mental illness, then universities can take a broader approach to improving the mental wellness of their campus. With evidence to show that college aged students are at a risk of mental illness and suicide, college campuses should make an effort to implement practices that will encourage students to seek help and to reduce the stigma surrounding mental illness.

Researching college athletes can be difficult due to the many different levels of competition that are created by the National Collegiate Athletic Association (NCAA). The variance in the competition schedule for each sport can also make athletes a difficult population to research. Previous research has a main focus on mental health and stress as it relates to athletes recovering from injury and on the the general support systems that are available to student athletes. There is also research on athletes attitudes towards seeking help, but few papers offer an approach that focuses on specific mental illnesses as well as the help seeking behaviors associated with them. This paper serves to evaluate the extent to which student athletes encounter overwhelming anxiety and depression and their mental health help seeking behaviors.

Literature Review

Mental illness in student athletes is thought to be more prevalent than it is in the average college student due to the added stress that comes with being an athlete. There has

been research that shows that student athletes experience a higher rate of depression and suicidal ideation in comparison to non-athletes. (Born 2017)

When understanding mental health and student athletes help seeking behaviors the other identities of an athlete can also have an influence on their mental health and help seeking behaviors. This can include, but is not limited to gender, race, international status, and transfer status. Marginalized identities in each of these respective groups can face greater challenges throughout their college experience.

Mental Health on the University's Campus

The campus that the research was conducted on has conducted previous unpublished research on some of the behaviors and obstacles of the students. The study conducted in 2015 asked students what they felt were obstacles to their academic performance and the top three answers were stress, anxiety, and sleep difficulties. These percentages were all higher than the national percentages found by the American College Health Association. This same study also found that 49% of students surveyed had anxiety and or depression in the past 12 months and 7% had experienced suicidal ideation. Of these students 41% had sought help from a mental health professional. This university has also seen a steady increase in the number of initial consultations and the number of individual therapy sessions at the on campus counseling center since 2009.

Mental Health and Race

The experience of college student athletes and students in general can be vastly different for students that attend a predominantly white institution (PWI) in comparison to

those that attend a historically black college or university (HBCU). For minority students finding and building a community can be difficult at a PWI whereas this atmosphere is more readily available at an HBCU.

Black student athletes were found to have a higher levels of stress if they attended a PWI. (Sadberry, S., & Mobley, M. 2013) This added level of stress can mean that black student athletes need an extra level of support when they are PWIs and that athletic departments may need to tailor their efforts towards mental health differently for these athletes. There has been subjective evidence that mentorship programs being put in place at PWIs for black student athletes can be an effective way to provide support to these students and to empower them. (Bimper, 2015) In contrast black student athletes, specifically males, at historically black colleges and universities (HBCUs) felt positive affirmation in their identity, valued by faculty and staff, and thought that their athletic experience improved their social status. (Cooper, J. N., & Hawkins, B. 2012)

Mental Health and International Status

International student athletes also have an added layer to their identity that can make adjusting to college life more stressful and thus can make anxiety and depression more prevalent in this population. International student athletes highly value the relationship that they have with their advisors because this is one of the first relationships that they form at their respective university. (Newell, 2015) Many international student athletes also felt that it would be useful for their universities to provide English as a Second Language (ESL) classes. (Newell, 2015) The international student athletes felt that ESL courses were pivotal

in assisting with the cultural transition. (Newell, 2015) Having extra staff on hand to be mentors to international students also helped to alleviate some of the stress associated with being an international student athlete. These mentors were able to help the students with homesickness, language concerns, and cultural concerns. (Newell, 2015) There is also research that shows that international students at PWIs feel isolated and segregated whereas at HBCUs they felt that their peers were friendly and welcoming. (XIX) At PWIs they have to make an intentional effort to ensure that international student athletes feel welcome and appreciated at their universities. One way of doing this is by having an increased number of international students which creates a sense of community and a positive social experience for these students. (XIX)

Mental Health and Transfer Status

Students that transfer to a new university for athletic purposes are going to have to adjust to a new environment both academically and athletically. This can cause added stress to an athlete as they are trying to ensure that they are still meeting academic requirements and are making strides in moving towards graduating. Transfer student athletes and those that were considering transferring had similar perceived levels of stress which could be a result of the process that an athlete must go through in order to transfer to another institution. (Richards et. al., 2016) Athletes that were not considering transferring had lower levels of stress which could mean they are happy with their decision and less likely to pursue transferring in the future. (Richards et. al., 2016) After completing the transfer process student athletes still had high levels of stress which could indicate that the decision to

transfer did not improve their athletic situation in the way that they had hoped. (Richards et. al., 2016)

Mental Health, Gender, and Sexual Identity

Females have a higher prevalence of depression and anxiety regardless of their athlete status, but have stronger social relationships than their male counterparts. The strong social relationships that females have are important in the way that they cope with stress and crisis situations. (Hagiwara et. al. 2017) There was statistically higher levels of depression in female students in a survey conducted in a small liberal arts college. (Armstrong, S., & Oomen-Early, J. 2009) This statistic holds true when comparing female and male college student athletes, with female student athletes having a higher rate of clinically depressive symptoms (Wolanin, et. al. 2016) One survey found that female track and field athletes had the highest prevalence of depressive symptoms and found that there were significant differences in depressive symptoms between sports. (Wolanin, et. al. 2016) Female student athletes also have higher levels social anxiety than male athletes and male and female non-athletes. (Storch, et. al. 2006)

Sexual identity minorities are usually described as those that do not identify as heterosexual or straight. In a study attempting to understand mental health and substance in sexual minority college athletes it found that students identifying as gay/lesbian, bisexual or unsure, regardless of athlete status, fared worse in terms of mental health outcomes in comparison to heterosexual students. (Kroshus, E., & Davoren, A. K. 2016)

Mental Health and Meditation

The National Center for Complementary and Integrative Health (NCCIH) defined meditation as a mind and body practice that is used for increasing calmness and physical relaxation, improving psychological balance, coping with illness, and enhancing overall health and well-being. (NCCIH 2017) A meta-analysis on meditative therapies used for reducing anxiety found that meditation had some efficacy in improving the symptoms of anxiety. (Chen et. al., 2012) When students were enrolled in a 15 week meditation course that was based on Buddhist and mindfulness traditions, participants became more mindful, compassionate, and had a heightened sense of psychological well-being. (Crowley, C., & Munk, D. 2017) In that same study researchers found that practicing meditation could improve overall college student well-being through the exploration of emotional states and a process of self-actualization. (Crowley, C., & Munk, D. 2017)

Specifically, regarding athletes when mindfulness-acceptance-commitment (MAC), a modified MAC and or mindfulness meditation for sport training were used all three were viable strategies to navigate emotional stress and or physical injury. (Petterson, H., & Olson, B. L. 2017) Studies also show that mindfulness-based interventions are effective for increasing mindfulness and positive thinking which improves mental flexibility. (Petterson, H., & Olson, B. L. 2017)

Mental Health and Sleep

Sleep can be compromised for many students in order to meet all of their commitments. This can include academic commitments and extracurricular activities such as clubs and service opportunities. For student athletes they have even more commitments and

responsibilities due to their athletic practices, competitions, and team obligations. It is also found that athletes have a poorer understanding of sleep knowledge and sleep hygiene and a higher level of daytime sleepiness. (Kaier et. al., 2015) Lack of sleep and sleep-related problems can cause an increase in physical and mental distress, depressive symptoms, and anxiety. (Kaier et. al., 2015) Although this can be a major concern for athletes it has been shown that with proper teaching through workshops athletes can make lifestyle changes that positively influence their sleep health. (Kaier et. al., 2015) These workshops were so effective that athletes were able to maintain the progress they had made regarding their daytime sleepiness and sleep hygiene three months after the initial workshop. (Kaier et. al., 2015)

Mental Health and Suicide

In a nine year study conducted by the NCAA from 2003 to 2012 there were 35 total cases of suicide from a total of 477 deaths (7%). (Rao et. al., 2015) This rate is lower than that of college students and college aged individuals which could mean that athletic participation is a protective factor. (Rao et. al., 2015) A possible cause for this could be the extended support system that comes with being a college athlete. The broader the span of a college students support system the higher the likelihood that warning signs can be seen and referrals for counseling can be made. This lower rate of suicide could also correlate with athletes having a higher perceived self esteem and social connectedness than non-athletes. (Armstrong, S., & Oomen-Early, J. 2009)

Help Seeking Behaviors

In the past it has been shown that non-athletes were more likely to seek help (Watson, 2005) but recent research has shown that athletes are becoming more open to the idea of seeking help for their mental health. (Barnard, 2016) Many of the barriers for seeking help were related to public and self stigma although these two barriers are not mutually exclusive. Student athletes in general have a higher perceived public stigma than non-athletes when it comes to seeking help for their mental health. (Eisenberg et. al., 2009) Self stigma is rooted in public stigma and therefore when considering reasons why athletes would not seek help the public stigma of the university should be evaluated. (Wahto et. al., 2016)

Athletes need to feel comfortable with seeking help and subsequently their support system needs to be involved in the conversation regarding their mental health. Strong support systems from coaches and other athletic personnel are helpful in reducing stigma, but familial support concerning mental health help seeking has been noted as having a more significant impact. (Wahto et. al., 2016) An athletes support system can include coaches, family, teammates, academic professors, and academic advisors. Students can receive referrals from a number of people, but there is research to show that students value referrals from family members the most. (Wahto et. al., 2016)

Another barrier to seeking help is the expectations that individuals have for counseling services. (Watson, 2005) Their expectations can influence the attitudes that they have towards counseling services. Student athletes have been shown to have higher expectations for their counselors and expect them to be well versed in their field. (Watson, 2005) In general student athletes were found to have less positive attitudes towards help seeking behavior than non-athletes and were more receptive to a team approach when

seeking help. (Watson, 2005) Student athletes seem to be more accepting of seeking help when there is a group dynamic and specifically when their team is there as a support system. (Watson, 2005) Athletes also have busy schedules which can make seeking help from professionals to fit in between class and practices. In order to accommodate athletes sports resources should be as accessible as possible which could mean having after hours counseling services available. (Gabana et. al., 2017) When deciding to seek counseling services time is a more commonly the reason than the stigma that can be associated with seeking counseling support. (Watson, 2007)

Help Seeking Behaviors and Special Populations

Seeking help can have a higher personal stigma for some populations and thus can make them less likely to seek help than others. These students tend to be males, younger, Asian, more religious, and or from poor families. (Eisenberg et. al., 2009) For these groups many of them feel a stronger sense of personal and public stigma associated with seeking help from counseling services.

Methodology

The survey used was a voluntary survey that was sent out to students via their school email. The survey was sent out to students at a PWI in the southeastern United States. The university has a total undergraduate population of 18,811 and more than 450 student athletes. Of these 18,811 students 90.5% (n=17,017) are undergraduate students and 9.5% (n=1,794) are graduate students. A majority of these students are in-state (91%) and a majority are

full-time students (90.5%). The student body is roughly 57% female, and the university has a student minority percentage of 16.0%.

The university is a Division I Football Bowl Subdivision University with 20 sports offered. These sports include baseball, softball, wrestling, women's field hockey, women's volleyball, football, and basketball, cross country, track and field, soccer, and golf are offered for both men and women. Once students received the email and completed the survey they were eligible to receive a prize. The survey asked basic demographic and general wellness questions in order to determine some of the health behaviors that the participants utilized. Depending upon the student's response to certain questions regarding mental health they were then prompted with more questions related to their help seeking behaviors. Students were asked specifically about depression, anxiety, and suicide in regards to mental health. Special populations on campus were targeted by speaking to clubs and organizations specifically for these populations.

The survey that students were asked to complete asked if they had felt feelings of recurring depression in the last 12 months, recurring overwhelming anxiety in the past 12 months, and if they had considered, planned or attempted suicide in the past 12 months. These were three separate questions that when answered "Yes" by the student prompted them to be asked if they had sought help from a mental health professional in the last 12 months. In order to determine the trends present based on other demographics students were asked: if they were a student athlete, their gender, biological sex, transfer status, if they were greek

affiliated, sexual identity, international status, military status, employment status, and if they were a first generation college student.

Once all of the data from the survey was compiled rate ratios and corresponding 95% confidence intervals were calculated for sleep patterns, meditation, depression, anxiety, suicidality, and mental health help seeking. The rate ratios were used to compare athletes and non-athletes and to determine if there was a statistically significant difference between the rate of event occurrence.

Results

Descriptive analyses that resulted in values less than 5 were suppressed in order to limit the likelihood of identifying participants. In Table 1 the demographics of athletes and non-athletes are included regarding age, gender, race, sexual identity, year in school, and parental status. The predominant identities among both athletes and non-athletes were: 17-20 years of age, woman identifying, white, heterosexual, 1st year undergraduate, and non-parent. Furthermore, these demographics align with those of the broader university student body.

Mental Health Challenges

Both athletes and non-athletes experienced higher rates of depression than reported by the CDC for persons 12 years of age or older. About 20% of athletes and 30% of non-athletes reported having feelings perceived as recurring depression in the last 12 months. the rate of depression was significantly lower when comparing athletes to non-athletes. More than half of all non-athletes that completed the survey responded as having experienced

feelings that they perceived as recurring overwhelming anxiety. In comparison 42.5% of athletes reported feelings of recurring, overwhelming anxiety in the past 12 months. The rates of suicidality between athletes and non-athletes were almost the same with both being around 7%. This number has not increased or decreased since the survey was completed two years ago. This percentage is also lower than the average across United States colleges and universities.

Risk Factors Associated with Mental Well Being

Rates for sleep patterns were similar between both athletes and non-athletes. The majority of students recorded having had 2-3 nights of 7-9 hours of sleep over the last seven days. More than 50% of athletes and non-athletes recorded having 3 or less nights of 7-9 hours of sleep over the last 7 days. Less than 20% of athletes and less than 30% of non-athletes reported having used meditation in the last month as a stress management technique. Regular meditation has been shown to ease the symptoms of anxiety and depression and it has been linked with better functionality of the brain. Of the students that answered yes to having feelings of recurring depression, recurring overwhelming anxiety, and or suicidality 25% of athletes and 39% of non-athletes had sought professional help either on or off campus.

Discussion

When comparing athletes and non-athletes there were not significant differences in the majority of the mental illnesses. The only mental illness that was significantly different was depression and for athletes it was statistically lower than non-athletes. This counters the

original hypothesis of this study that speculated that athletes would have a significantly greater amount of anxiety, depression, and suicidality than non-athletes. This could imply that being a college athlete inherently presents protective factors against mental illness.

Athletes have access to many resources on campus and are tasked with extra requirements in regards to seeing advisors and meeting with coaching staff. All of these support staff for athletes could act as pseudo-counselors for them because they are people that the athletes already trust and they are frequently around the athletes. These support staff could also be more privy to changes in an athletes mood and behavior which could allow them to offer help to an athlete sooner than a non-athlete student would receive. In a study comparing social connectedness, self esteem, and depression in college athletes and non-athletes found that college athletes had significantly lower levels of depression than non-athletes. (Armstrong, S., & Oomen-Early, J. 2009) This study also found that athletes had a higher levels of perceived self esteem and social connectedness than non-athletes. (Armstrong, S., & Oomen-Early, J. 2009)

Mindfulness practices have also been shown to help students to cope with the stress of being an athlete and to maintain their social connectedness. Meditation and mindfulness practices tailored for athletes have been shown to increase positive thinking, increase goal directed energy, and increase athletes tolerance for negative experiences. (Petterson, H., & Olson, B. L. 2017) These mindful practices are not only beneficial for an athletes sports performance, but also for their performance in the classroom. If regular mindfulness and

meditation practices were offered to students both athletes and non-athletes students would have the opportunity to see improvements in many aspects of their lives.

Nearly 50% of all athletes that participated in the study were getting at least 7 hours of sleep the majority of the week. The CDC recommends adults 18-60 years of age should be getting 7 or more hours of sleep per night. (CDC 2017). This counters the hypothesis that athletes may have to compromise sleep in order to make up for missed assignments and class time. This could be the willingness of professors to adapt to an athletes schedule and a product of the supplemental academic resources that are available to them.

Athletes also have a built in support system in their teammates because these are the people that they are going to see almost everyday of the week and teammates must build relationships with each other in order to succeed in competition. The close relationship that athletes form with their teammates also increases the chance for early intervention because teammates are able to see changes in behavior especially when they are impacting athletic performance.

Limitations

This study was able to capture 26% of the student athlete population within the participating university. The student athlete sample size is relatively small, overall, when compared to the non-athlete population. The small sample size means that there were fewer responses to analyze and thus, results may not represent the true presence of mental health concerns among athletes at the university. In studies that produced similar results they also had smaller populations and this could be a contributing factor to finding less cases of mental

illness in student athletes. When analyzing the data many of the confidence intervals were close to being statistically significant. A larger sample size of student athletes would provide better insights of the assessed risk factors and prevalence of mental health concerns. This would allow further conclusions to be made about the effect of being a college student athlete on a person's mental health.

This study did not utilize other demographic information to offer a comparison of how much being an athlete can affect mental health or is a confounding factor. although being an athlete did not have a significant negative impact on mental illness, if other demographic information had been used a stronger prevalence may have occurred. For instance, no differentiation was made between the type of varsity sport that a student engaged, which impacts travel schedule, expectations regarding performance, etc., all of which may contribute to real or perceived stress managed by the student athlete.

Another area where research could be extended is incorporating a broader definition for help seeking. For this study only mental health professionals were included although help seeking may not be limited to these individuals. When considering student athletes many feel a connection to coaches and other athletic personnel. These individuals may serve as the source of support for mental health related matters, and should be considered when assessing the help seeking behaviors of student athletes. For other students they may also be seeking help from faculty and staff that they may have a close connection with and therefore refrain from seeking help from a mental health professional. If the question regarding help seeking is

broader in future research there could be evidence to support more extensive mental health training for staff and faculty at colleges and universities.

Conclusion

Mental health on college campuses has become an ever present concern. This is reflected in the responses from the student's involving depression, anxiety, and suicidality. Although this study did not find statistically significant differences between athletes and non-athletes, it did show a prevalence of mental illness. There should also be concern because the amount of students that expressed having feelings of mental illness in the last year did not equal the amount of students that sought professional help. For universities this is an area where they could look to improve upon so that students reporting mental illness feel confident in seeking help. This could also mean that students are reaching out to other staff members that are not mental health professionals. If research shows that this is the case then colleges and universities could benefit from funding mental health training for all faculty and staff.

Research could also seek to find potential risk factors for mental illness so that early preventive measures can be taken to help students. Although this research did not show a higher prevalence for athletes as a special population, there could still be other subsets of students that need additional support in this area. As more research emerges regarding mental health colleges and universities will be able to tailor their efforts more specifically around what the research supports as effective.

Although there can be additional stressors that come along with being an athlete, the supplemental resources that are afforded to them help college athletes to maintain lower levels of mental health. Universities should take note of the effectiveness of advisors and athletic personnel on the mental health of student athletes. For non-athletes taking time to build relationships with advisors and building a strong identity on campus could help to foster better mental well being and an openness to seek help.

Table 1: Demographics of the Students Surveyed

	<u>Athletes, N= 118 (%)</u>	<u>Non-athletes, N= 1,745 (%)</u>
Age		
17-20	93 (79)	1286 (74)
Gender		
Woman	78 (67)	1214 (71)
Race		
White	85 (73)	1356 (78)
Black or African American	19 (16)	134 (8)
Hispanic or Latino/a/x	*	108 (6)
Biracial or Multiracial	5 (0.27)	80 (5)
Asian or Pacific Islander	*	51 (3)
Other	*	9 (0.52)
Sexual Identity		
Heterosexual	98 (85)	1390 (82)
Gay/Lesbian	*	70 (4)
Bisexual	7 (6)	160 (9)
Queer	*	37(2)
Other	7 (6)	45 (3)
Year in School		
1st Year Undergraduate	47 (40)	560 (33)
2nd Year Undergraduate	23 (20)	454 (27)
3rd Year Undergraduate	27 (23)	352 (21)
4th Year Undergraduate	20 (17)	259 (15)

5th Year Undergraduate	*	55 (3.0)
Other	*	17 (1.0)

Table 2: Mental Health Status of Student Athletes vs. Non-Athletes

	<u>Athletes (%)</u>	<u>Non-athletes (%)</u>
Sleep		
0-1 Days	18 (16)	260 (15)
2-3 Days	46 (41)	637 (37)
4-5 Days	35 (31)	548 (32)
6-7 Days	14 (12)	267 (16)
Meditation		
Yes	20 (18)	471 (28)
Depression		
Yes	31 (27)	692 (40)
Anxiety		
Yes	48 (43)	913 (53)
Suicidality		
Yes	8 (7.0)	116 (7.0)
Mental Health Help Seeking		
Yes	14 (25)	397 (39)

Table 3. Comparison of Rates of Mental Health Challenges: Student Athletes vs Non-Student Athletes

	<u>Athletes</u>	<u>Non-athletes</u>	<u>Rate Ratio</u> <u>(95%, CI)</u>
Sleep			
0-3 Days	5.66 per 10	5.24 per 10	1.08 (0.84, 1.39)
4-7 Days	4.34 per 10	4.76 per 10	0.911 (0.68, 1.22)
Meditation			
Yes	1.77 per 10	2.75 per 10	0.643 (0.41, 1.01)
Depression			
Yes	2.74 per 10	4.04 per 10	0.679 (0.47, 0.97)
Anxiety			
Yes	4.25 per 10	5.34 per 10	0.796 (0.596, 1.06)
Suicidality			
Yes	7.08 per 100	6.78 per 100	1.045 (0.510, 2.14)
Mental Health Help Seeking			
Yes	2.46 per 10	3.94 per 10	0.624 (0.366, 1.06)

References Cited

- Armstrong, S., & Oomen-Early, J. (2009). Social Connectedness, Self-Esteem, and Depression Symptomatology Among Collegiate Athletes Versus Nonathletes. *Journal of American College Health*, 57(5), 521-526. doi:10.3200/jach.57.5.521-526
- Barnard, J. D. (2016). Student-Athletes' Perceptions of Mental Illness and Attitudes Toward Help-Seeking. *Journal of College Student Psychotherapy*, 30(3), 161-175. doi:10.1080/87568225.2016.1177421
- Bimper, A. Y. (2015). Mentorship of Black student-athletes at a predominately White American university: Critical race theory perspective on student-athlete development. *Sport, Education and Society*, 22(2), 175-193. doi:10.1080/13573322.2015.1022524
- Born, J. (2017). National Protection of Student-Athlete Mental Health: The Case for Federal Regulation over the National Collegiate Athletic Association. *Indiana Law Journal*.
- Chen, K. W., Berger, C. C., Manheimer, E., Forde, D., Magidson, J., Dachman, L., & Lejuez, C. W. (2012). Meditative Therapies For Reducing Anxiety: A Systematic Review And Meta-Analysis Of Randomized Controlled Trials. *Depression and Anxiety*, 29(7), 545-562. doi:10.1002/da.21964

- Cooper, J. N., & Hawkins, B. (2012). A Place of Opportunity: Black Male Student Athletes' Experiences at a Historically Black University. *Journal of Intercollegiate Sport*, 5(2), 170-188. doi:10.1123/jis.5.2.170
- Crowley, C., & Munk, D. (2017). An Examination of the Impact of a College Level Meditation Course on College Student Well Being. *College Student Journal*.
- Depression. (2013, October 04). Retrieved from https://www.cdc.gov/mentalhealth/data_stats/depression.htm
- Dorsch, T. E., Lowe, K., Dotterer, A. M., & Lyons, L. (2016). Parent Involvement in Young Adults' Intercollegiate Athletic Careers: Developmental Considerations and Applied Recommendations. *Journal of Intercollegiate Sport*, 9(1), 1-26. doi:10.1123/jis.2015-0013
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and Help Seeking for Mental Health Among College Students. *Medical Care Research and Review*.
- Gabana, N. T., Steinfeldt, J. A., Wong, Y. J., & Chung, Y. B. (2017). Gratitude, Burnout, and Sport Satisfaction Among College Student-Athletes: The Mediating Role of Perceived Social Support. *Journal of Clinical Sport Psychology*, 11(1), 14-33. doi:10.1123/jcsp.2016-0011

- Gross, M. B., Wolanin, A. T., Pess, R. A., & Hong, E. S. (2017). Socially Desirable Responding by Student-Athletes in the Context of Depressive Symptom Evaluation. *Journal of Clinical Sport Psychology, 11*(2), 148-157. doi:10.1123/jcsp.2017-0020
- Hagiwara, G., Iwatsuki, T., Isogai, H., Van Raalte, J. L., & Brewer, B. W. (2017). Relationships among sports helplessness, depression, and social support in American college student-athletes. *Journal of Physical Education and Sport.*
- How Much Sleep Do I Need? (2017, March 02). Retrieved from https://www.cdc.gov/sleep/about_sleep/how_much_sleep.html
- Kaier, E., Cromer, L. D., Johnson, M. D., Strunk, K., & Davis, J. L. (2015). Perceptions of Mental Illness Stigma: Comparisons of Athletes to Nonathlete Peers. *Journal of College Student Development, 56*(7), 735-739. doi:10.1353/csd.2015.0079
- Kaier, E., Zanotti, D., Davis, J. L., Strunk, K., & Cromer, L. D. (2016). Addressing the Problem of Student- Athlete Sleepiness: Feasibility of Implementing an Interactive Sleep Workshop at a Division I School. *Journal of Clinical Sport Psychology, 10*(3), 237-247. doi:10.1123/jcsp.2015-0023
- Kroshus, E., & Davoren, A. K. (2016). Mental health and substance use of sexual minority college athletes. *Journal of American College Health, 64*(5), 371-379. doi:10.1080/07448481.2016.1158179

- Meditation: In Depth. (2017, September 07). Retrieved from
<https://nccih.nih.gov/health/meditation/overview.htm#hed3>
- Newell, E. M. (2015). International Student–Athlete Adjustment Issues: Advising Recommendations for Effective Transitions. *NACADA Journal*, 35(2), 36-47.
doi:10.12930/nacada-14-015
- Petterson, H., & Olson, B. L. (2017). Effects of Mindfulness-Based Interventions in High School and College Athletes for Reducing Stress and Injury, and Improving Quality of Life. *Journal of Sport Rehabilitation*, 26(6), 578-587. doi:10.1123/jsr.2016-0047
- Rankin, S., Merson, D., Garvey, J. C., Sorgen, C. H., Menon, I., Loya, K., & Oseguera, L. (2016). The Influence of Climate on the Academic and Athletic Success of Student-Athletes: Results from a Multi-Institutional National Study. *The Journal of Higher Education*, 87(5), 701-730. doi:10.1080/00221546.2016.11777419
- Rao, A. L., Asif, I. M., Drezner, J. A., Toresdahl, B. G., & Harmon, K. G. (2015). Suicide in National Collegiate Athletic Association (NCAA) Athletes. *Sports Health: A Multidisciplinary Approach*, 7(5), 452-457. doi:10.1177/1941738115587675
- Richards, J. K., Holden, S. L., Ed.D., & Pugh, S. F., Ph.D. (2016). Published by the United States Factors That Influence Collegiate Student-Athletes to Transfer, Consider Transferring, Sports Academy or Not Transfer. *Sport Journal*.

- Sadberry, S., & Mobley, M. (2013). Sociocultural and Mental Health Adjustment of Black Student-Athletes: Within-Group Differences and Institutional Setting. *Journal of Clinical Sport Psychology*, 7(1), 1-21. doi:10.1123/jcsp.7.1.1
- Sato, T., Ph.D., & Burge-Hall, V., M.A. (2008). International Student Athletes' Experiences at a Historically Black College and University. *Virginia Journal*.
- Storch, E. A., Storch, J. B., Killiany, E. M., & Roberti, J. W. (2006). Self-Reported Psychopathology in Athletes: A Comparison of Intercollegiate Student-Athletes and Non-Athletes. *Journal of Sport Behavior*.
- Suicide. (n.d.). Retrieved from <https://www.nimh.nih.gov/health/statistics/suicide.shtml>
- Wahto, R. S., Swift, J. K., & Whipple, J. L. (2016). The Role of Stigma and Referral Source in Predicting College Student-Athletes' Attitudes Toward Psychological Help-Seeking. *Journal of Clinical Sport Psychology*, 10(2), 85-98.
doi:10.1123/jcsp.2015-0025
- Watson, J. C. (2005). College Student-Athletes Attitudes Toward Help-Seeking Behavior and Expectations of Counseling Services. *Journal of College Student Development*, 46(4), 442-449. doi:10.1353/csd.2005.0044
- Watson, J. C., & Kissinger, D. B. (2007). Athletic Participation and Wellness: Implications for Counseling College Student-Athletes. *Journal of College Counseling*, 10(2), 153-162. doi:10.1002/j.2161-1882.2007.tb00015.x

Watson, J. C. (2007). Student-athletes and Counseling: Factors Influencing the Decision to Seek Counseling Services. *College Student Journal*.

Weigand, S., Cohen, J., & Merenstein, D. (2013). Susceptibility for Depression in Current and Retired Student Athletes. *Sports Health: A Multidisciplinary Approach*,5(3), 263-266. doi:10.1177/1941738113480464

Wolanin, A., Hong, E., Marks, D., Panchoo, K., & Gross, M. (2016). Prevalence of clinically elevated depressive symptoms in college athletes and differences by gender and sport. *British Journal of Sports Medicine*,50(3), 167-171.
doi:10.1136/bjsports-2015-095756