

ATHLETES and DEPRESSION

A Historical Review and the COVID-19 Impact

Professor Neil Malvone

Assistant Professor of Sport Management
Caldwell University
USA

Abstract

The global pandemic resulting from the COVID-19 outbreak affords researchers an opportunity to study depression as an increase of depressive episodes has been found across the globe. Multiple studies have focused on the impact these episodes have on society, collectively and individually. For many, depression as a disease is still an unknown quantity. Most people are less aware of the causes, symptoms, and treatments of depression. Social stigma surrounding depression combined with this lack of knowledge creates an issue for depression sufferers who either spend their time trying to explain what depression is and how it impacts their daily life, or they simply decide not to discuss it all. With depression, silence can exacerbate the condition leading to less productivity and eventually a worsening of the condition. One area worthy of study will be how COVID-19 impacted the mental health of athletes. For athletes at any level from youth to professional, depression has always been the topic nobody wanted to talk about. Many athletes determined that silence about their condition was preferred to ostracization, whispers about their issues, and concerns about their performance. This paper provides relevant cases of athletes suffering from depression with a renewed focus on the pandemic on athletes' mental health.

During the COVID-19 pandemic, concerns about mental health and substance use have grown, including concerns about suicidal ideation. In January 2021, 41% of adults reported symptoms of anxiety and/or depressive disorder, a share that has been largely stable since spring 2020. (Nirmita).

The 2017 National Survey on Drug Use and Health (NSDUH) offers startling details and statistics on the impact depression has in the United States. The NSDUH study definition of major depressive episode is based mainly on the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) which offers *A period of at least two weeks when a person experienced a depressed mood or loss of interest or pleasure in daily activities, and had a majority of specified symptoms, such as problems with sleep, eating, energy, concentration, or self-worth.* (NIMH).

The study revealed the following:

- An estimated 17.3 million adults in the United States had at least one major depressive episode. This number represented 7.1% of all U.S. adults.
- The prevalence of major depressive episode was higher among adult females (8.7%) compared to males (5.3%).
- The prevalence of adults with a major depressive episode was highest among individuals aged 18-25 (13.1%).
- The prevalence of major depressive episode was highest among adults reporting two or races (11.3%).

Other statistics about involving depression continue to tell the impact depression has on society. Depression accounts for countless sick days and costs U.S. industry significant money annually in medical expenses and lost productivity. (Brody). From 2013 to 2016, an estimated 8.1% of US adults 20 years and older experienced depression in any given 2-week period. (Brody). Depression is the second-leading cause of years lived with disability worldwide, increasing more than 50% since 1990. (Egede). Depression is also associated with substantial economic burden. (Egede). Between 2005 and 2010, the incremental economic burden of major depressive disorders (MDDs) in the United States increased by 21.5% (from \$173.2 billion to \$210.5 billion, inflation-related dollars). (Greenberg). Despite these staggering statistics, many people are still ill-informed about the serious nature of depression.

Depression is an illness in which factors such as genetics, chemical changes in the body and external events may play an important role. Furthermore, the disease changes how you think and feel, and also affects your social behavior and sense of physical well-being. The causes of depression are varied. Early life experience, genetic predisposition, lifestyle factors, and certain personality traits all play a part in causing depression. Something that causes depression in one person may have no effect on another. Mental stress, a loss of self-esteem, or similar events can trigger a depressive episode. The disruption in the levels of serotonin, a neurotransmitter, or conduit of signals in the brain, is a physiological contributor to this illness. (SportsScience).

Although depression is often classified as 'mental illness', clinical depression manifests as many physical symptoms as mental. The physical symptoms raise concerns for athletes and organizations. The mental depression symptoms actually begin to cause the physical effects. Some of the physical manifestations of depression include headaches, back pain, muscle aches and joint pain, chest pain, digestive problems, exhaustion, and fatigue; sleeping problems, change in appetite or weight and dizziness. Most symptoms of depression are difficult to identify because they are found in many other conditions. As a result, many depressed people never get help, because they do not know that their physical symptoms might be caused by depression. (WebMD).

Depression does not discriminate, and it is not selective. Depression strikes all of society, rich and poor, African-American and Caucasian, young and old, athlete and non-athlete. The remainder of this paper will focus particularly on athletes and depression. Research suggests that the prevalence of mental health symptoms and disorders ranged from 19% for alcohol misuse to 34% for anxiety/depression for current elite athletes, and from 16% for distress to 26% for anxiety/depression for former elite athletes. (Gouttebarger).

The following story shows in a significant way how depression, its symptoms and its effects can be found even in happy, well-adjusted, and successful athletes. Arguably, the greatest swimmer of all-time, Michael Phelps, dealt with depression, due to the pressure of being perfect. After his success at the 2012 Olympic Games, the depression from which he was suffering almost took his life. He has acknowledged that after the 2012 games, his longtime depression was so overwhelming he thought about killing himself. (CBSNEWS). "There was one point I didn't want to be alive". "I think it's something that nobody's really talked about in the past because we're supposed to be this big, macho, strong person that has no weaknesses. You know, we're supposed to be perfect." (CBSNEWS).

Phelps' story is not unique in athletes. The pressure to be perfect. The pressure to play through debilitating injuries, The pressure to show no pain. These pressures often times lead to depression in athletes. Former U.S. Olympic diver and bronze-medal winner in the 1988 Games, Wendy Williams, was at her peak athletically when she was injured prior to the 1992 Olympics. She moved to Hawaii after being forced to retire and began working as a physical. One innocuous decision about what to feed her cat was all it took for Wendy to fall into a depressive episode. For Wendy, she did not know she was suffering from depression and worse when she found out she would not accept it nor obtain the treatment necessary to fight it. "I had all the signs of depression," she said. "I was sad, couldn't sleep, and I thought of killing myself. I was so tired, so wiped out; I did not want to do anything. It got to the point where I would look at young children and think, 'Why would anybody have children and bring them into this world?'" (Saunders).

Wendy felt like she could beat the depression alone without the help of doctors and medication. She recalls, "I was this big, strong athlete. I used to work out six hours a day. I thought that if I admitted to the disease, it would make me a complete failure." (Saunders).

Only after accepting the disease and understanding that she was not alone, she was not weak and she was not at fault, did Wendy finally obtain the help necessary for her recovery.

Statistically, logic dictates that thousands of athletes are suffering from depression today. Many fight the fatigue, lack of vigor, lack of desire, and lack of energy (which results in lower performance) with excuses such as the schedule, the opponent, the media, the organization, and the fans. More and more athletes are unable to accept or to understand that their symptoms are a sign of depression. Many more are unwilling to seek assistance for their condition and still further will never tell anybody about the way they are feeling. Educational and sport psychologists have now taken the lead in the area of depression in athletes by offering more information, providing treatment, and getting the players to understand that depression no longer represents a weakness. Professional athletes now utilize the direction of sports psychologists in helping them cope with the pressures of injury rehabilitation, game situations, the long season, burnout, performance failure and performance anxiety. Also of great importance, sports psychologists and educational psychologists have started to teach coaches and parents to be aware of the signs of depression in young athletes as well. Better understanding of the disease of depression will lead to fewer misconceptions and stigmas, less misdiagnoses, and a healthier athlete.

As these stories indicate, athletes are not immune to the effects of depression. In fact, many observers believe that athletes are more susceptible to bouts of depression because of their continued strive for perfection and their focus on goal attainment. The abiding irony is that athletes--our indestructible gladiators, our iron-clad warriors--might be more prone to mental illness than the population at large. "Athletes are so paradoxical because physically they are so much healthier than the average person but from the clinical side of things, they are very much an at-risk population", according to John Murray, a Miami-based clinical psychologist who treats athletes. (Wertheim).

Recent psychological studies have found that athletes will experience a loss of interest or pleasure, feelings of guilt or low self-worth, low energy, poor concentration, and irritability. (Suicide) The flip side to the warrior mentality of athletes is that like Williams and Johnson many athletes who experience symptoms of depression are reluctant to seek help, due to the perception that depression carries a cloak of shame. Athletes are taught to be tough and by admitting to a psychological or emotional problem, an individual's confidence is threatened. Athletes are trained by their coaches to 'play through the pain' and struggle through adverse problems on their own without letting anyone see them cry. (Psychologyofsports).

Many psychologists have also turned their attention to studying the signs, symptoms and causes of depression in youth athletes. Collegiate athletes deal with the same type of pressures which their professional counterparts face. Along with maintaining their grades for scholarship retention and living a normal college lifestyle, they are expected to perform on the field in front of fans, alumni, and scouts. Failure at the collegiate level is not an option for those athletes hoping to make it to the next level. For many suffering from depression, the symptoms first appear before or during college. (Psychologyofsports).

Specifically in athletes, sports psychologists have found the more common causes include injury, burnout/overtraining, anxiety, and stress. (Wann) For the athlete that spends his entire life training and exercising to give himself a physical advantage over his opponent and an air of invincibility, an injury can very easily develop into a mood changing event and can lead directly to depression. An athlete's response to the injury will give a clue as to whether the injury will lead the athlete down the path to depression. "Factors such as the magnitude of the injury, the success of the rehabilitation program, the athlete's personality, and level of competition have an impact on the athlete's responses, rendering the responses somewhat idiosyncratic". (Wann). Positive reactions will likely steer the athlete away from a depressive mood. Conversely, negative reactions to injury lead to depression. Some of the negative thoughts the injured player needs to avoid include early retirement; failure to qualify for an event such as the Olympics, fear of the unknown, feeling less invincible, and the realization that the athlete is no longer perfect. These typical psychological responses when experiencing an injury all make depression fairly common among injured athletes.

Other factors such as the success of the athlete, the seriousness of the injury, and the difficulty and length of the rehabilitation also contribute to the athlete suffering from depression. Because most athletes identify themselves with their athletic abilities, they are more likely to experience depression. Athletes will likely feel isolated, will experience a huge loss of identity, and will feel that they have limited options if their ability to continue with their chosen sport is jeopardized. When an injury occurs, whether it is severe or not, an athlete is unable to train to his or her potential. In some cases, an athlete may never fully recover from his/her injury, eventually ending their career. The inability to return to pre-injury performance levels and the thought of being replaced by a teammate can only lead one further into depression. (Wann).

The story of Picabo Street, Olympic skier, details an example. Shortly after breaking her left leg and seriously injuring her right knee in a skiing crash in Switzerland, Picabo Street, who rose to fame following the 1998 Nagano Olympics, found herself locked in her bedroom completely in the dark, avoiding her family and her friends. She ceased all communication with the outside world, focusing only on negative thoughts. Street commented on this period of her life, "I went through a huge depression. I went all the way to rock bottom. I never thought that I ever would experience anything like that in my life. I think it was a combination of the atrophying of my legs, the new scars, and feeling like a caged animal. I went from being a very physical person, a very powerful athlete, to barely having any strength to get from my room to the kitchen. You're stuck and you can't do what you normally do, and it makes you crazy." (Tarkan). Her injury along with the prospects that her career was over combined with the long and arduous course of rehabilitation all factored into Street's bout with depression. She spent most of her twenty months of recovery in a depressive state. Returning to competition helped Street overcome her depression but the fear of a career-ending injury and the uncertainty of the rehabilitation affect even world-class athletes.

Another factor which contributes to depression among athletes is overtraining which leads directly to burnout. Highly motivated athletes, driven with the desire to perform well and win, become frustrated by poor performance and losing. As a result, they increase their practice time and training intensity, causing increased fatigue, ultimately worsening performance, which in turn may eventually lead to depression. Burnout or overtraining syndrome can be defined as a "series of psychological, physiologic, and hormonal changes that result in decreased sports performance." (Brenner). Many athletes become so driven to be the best and get back on the field that they forget that if the body is not given sufficient time to regenerate and refresh, the athlete may be at risk of burnout. An athlete suffering from burnout will exhibit both physical and psychological symptoms including headaches, GI disturbances, sleeplessness, chronic fatigue and feeling of depersonalization, increased emotional exhaustion, reduced sense of accomplishment, cynicism, and depressed mood. (Brenner).

The issue of overtraining and burnout is not only a problem on the professional level. Many of today's youth athletes are also exposed to issues of overtraining. The result is that many children get burned out or injured at a young age. Parents and coaches can help with the prevention of burnout in our youth by encouraging the athlete to become well rounded and well versed in a variety of sports activities rather than one (1) particular sport. (Hyman). Many sports psychologists have now taken the time to educate coaches and parents about the risks of overtraining and one sport specialization. The risk to children goes beyond the physical injury. Educational psychologists are now warning parents and coaches that the overburdened youth athlete will begin to suffer the effects of depression due to their injuries and their burnout. (Hyman).

High levels of anxiety represent an additional leading factor contributing to depression among athletes. Anxiety is a sense of fear, upset, and dread, and is a condition that is often closely related to depression. (Athleticinsight). The continuous stress and pressure on athletes to perform well by fans, coaches and oneself causes them to experience high levels of anxiety, which in turn negatively affects their performance. Additionally, an athlete can feel pressure of failing, fear of injury, fear of re-injury, or anxiety about overcoming an injury. "Literature shows athletes with lower state anxiety and less depressed mood are more likely to perform better than their more anxious and depressed counterparts" (Athleticinsight). Symptoms of general anxiety include muscle soreness, trembling restlessness, fatigue, shortness of breath, tachycardia, sweating, dizziness, nausea, vomiting, being on edge, startled response, loss of concentration, poor sleeping patterns, and irritability. (Sportdigest).

Closely related to anxiety is stress. Athletes feel the effects of stress which can also lead directly to depression if not handled properly. In fact, stress is the biggest risk factor for depression after heredity. There is a difference between stress and anxiety. Stress exists when a perceived situation and abilities to handle the perceived situation are not equal "It is a response that we can learn to change and to regulate unstressed people are more effective, healthier, and happier". (Sportdigest) Stress comes from social evaluation and the feeling of threat to one's ego that evaluation brings". Signs of negative stress include the following: having low self-confidence, making negative comments about yourself, being more self-critical, consistently performing under your ability (particularly in pressure situations), having trouble sleeping the night before an event, experiencing difficulty getting loose before a competition, and feeling ill or upset before an event. (Sportdigest).

For the athlete, stress surrounds them on a daily basis. Critical fans, coaches and media scrutinize their every move. Success and failure are clearly defined with rarely a gray area to be found. Fear of career injury and the short-term window of opportunity to earn a living in sports all have a psychological impact on the athlete. (Wertheim). Handling anxiety and stress will allow for an increase in performance and also prevent the athlete from falling victim to depressive mood.

After analyzing the causes of depression in athletes, the next issue is detecting and treating the depression. Roadblocks exist on both fronts. As stated earlier, the characteristics of a depressed person are not readily observed. Athletes will experience a loss of interest or pleasure, feelings of guilt or low self-worth, low energy, poor concentration, and irritability. (Suicide). When these symptoms are observed, athletes should be directed either by the organization, teammates, and family to seek professional help. Depression is a disease that needs medical care in order to be controlled allowing for the athlete to return to a normal productive lifestyle. Athletes are trained by their coaches to 'play through the pain' and struggle through adverse problems on their own without letting anyone see them cry. (Suicide) By failing to deal with their depression through medical assistance and their fear of embarrassment and loss of status amongst fans and teammates, the athlete is only compounding his situation and making the recovery from depression much more difficult. In fact, many psychologists believe this failure to address depression may be the most troublesome foe athletes will ever face. (Saunders).

According to Dr. April Stein, elite athletes have an especially difficult time coming to grips with mental illness. "Athletes are always supposed to be strong and above reproach," she said. "Depression and other mental disorders impact their view of themselves. It is not something they want to face or accept." (Saunders). Richard Lustberg, a Ph.D., and sports psychologist said athletes can understand a blown-out knee but dealing with mental and emotional injury is more difficult. In addition, the public's lack of knowledge about depression and their inability to accept the serious nature of the disease makes many athletes fearful of public disclosure of their condition. Societal projections and expectations make it challenging for athletes to seek mental health help. According to Russ Johnson, former major league baseball player, physical ailments are tolerated in professional sports, while athletes with depression face stigmatization. (Bruen).

Another reason many athletes avoid treatment for their depression is their concern with the use of medication and the effects the medication will have on their bodies. Athletes rely upon their physical abilities to excel in their respective sports. Many are reluctant to change their body chemistry with prescription drugs for fear that their physical talents will be affected in some capacity. For many athletes, even with a doctor recommending the medication and the proof that the medication works, they will try to heal themselves without drugs. As Dr. Lustberg said, "There is still a fear level out there about this." Coaches and organizations need to educate their players on the importance and necessity of receiving treatment for any depressive symptoms they may have. Only when the athlete can deal with this insidious disease through accepted professional treatment will the athlete be able to return to expected level of performance. (Saunders).

Early identification and intervention (referral/treatment) for depression or other mental illness is extremely important yet may be inhibited within the athletics culture for many of the reasons stated above. Additionally, many organizations, colleges and youth sports programs will ignore the signs of depression if they fear negative impacts in public relations, marketing, and the success of their teams. Many wish to disassociate the organization from players with "mental illness". However, today, with salaries and television appearances being so important to the financial health of a sports organization, the teams' success is predicated on their players performing at their best. More teams need to become aware that athletes must be treated for their depression no matter what the cause so they can continue to be an asset to themselves and their teammates. Athletes fall short when attempting to continue with training when struggling with depression. When an athlete makes his/her well-being and personal happiness conditional upon goal attainment, they put themselves at risk for depression due to possible failure. (Wann).

Early detection and intervention can allow athletes to recover from their illness or injury so the athlete can resume their 'normal' life and continue training if they wish to do so. Only recently have organizations realized the importance of recognizing the signs of depression and in providing treatment to those athletes that require care. Unfortunately, their concern for the athlete is more so based on their performance and goal attainment than on their mental well-being. As a result, many of the treatment techniques are primarily focused on improving performance by helping the athlete overcome his depressive mood.

Recently, coaches and athletes from a wide variety of sports have begun to realize the importance of the mental side of athletic performance. More specifically, individuals involved with organized sport now understand that for athletes to perform at their peak level of efficiency, they must possess and use a number of psychological skills. Although mental training for athletes has been used for a number of years, it is only within the last decade that comprehensive mental training programs have become popular. These programs are commonly referred to as psychological skills training (or PST) programs. PST programs are comprehensive intervention packages designed to educate and train athletes in mental preparation. (Wann). Because PST programs involve assisting athletes in the improvement of multiple psychological skills, these programs have a distinct advantage over programs designed only to improve an athlete's ability in one area. PST programs for the athlete should aim to improve their mental skills, such as self-confidence, motivation, the ability to relax under great pressure, and the ability to concentrate.

Generally, PST programs have three phases:

1. Education phase, during which athletes learn about the importance of psychological skills and how they affect performance,
2. Acquisition phase, during which athletes learn about the strategies and techniques to improve the specific psychological skills that they require, and
3. Practice phase, during which athletes develop their psychological skills through repeated practice, simulations, and actual competition. (Brianmac).

The most prevalent cause of depression in athletes is due to injury. For athletes that suffer injury whether long-term, short term or career threatening, sport psychologists have come to understand that treatment of these athletes is imperative as the injured athlete is more susceptible to severe depression. Many sport psychologists have devoted their attention to the benefits of providing psychological intervention strategies to injured athletes. (Wann). Injury interventions involve two distinct steps. First and foremost, the psychologist must assess the psychological ramifications of the injury. Second, based on the assessment, psychologists must begin to implement a program which best fits the athlete and their needs. (Wann). Because research has indicated that there is a strong correlation between injury and mental illnesses such as depression, it is imperative that athletes seek psychological interventions to assist them with their recovery.

Sports psychologists have also begun to focus on treatment so athletes can manage their stress and anxiety allowing them to handle pressure. "To change an individual's reaction to pressure requires making changes in two main categories: 1) thoughts, feelings, and perceptions of stressful situations, and 2) the physical bodily responses to stressful conditions" (Performance Media 2006). Through recent studies, educational psychologists have discovered stress management techniques help the athlete learn how to cope with the pressures they face. Stress and anxiety management strategies can improve the athlete's mood which in turn will improve his performance. Better performance is not the only benefit to stress management techniques.

Other benefits of implementing stress and anxiety management include decreasing pain, decreasing the occurrence of an injury, increasing the adherence of rehabilitation, enhancing physical healing, assisting in adjustment to being injured improved coping with the stress of the injury, and enhancing mental readiness to return to full participation. (Ray & Wiese- Bjornstal).

Some of the psychological strategies that can be implemented in order to decrease stress include coping techniques such as social support, relaxation techniques, imagery, goal setting, positive self-talk, pain management, education, stress management, and cognitive reconstruction. (Ray and Wiese- Bjornstal). Support systems can provide the athlete with more education and assistance in implementation of the technique. Athletes who report having lack of social support or high stress related to life events are more likely to sustain injury. (Ray & Wiese-Bjornstal). These techniques can all be useful to the athlete, but each athlete must find the technique that works best for their individual needs.

Cognitive behavioral treatment (CBT) is another form of therapy that helps athletes alter the negative thoughts and behaviors that contribute to their feelings of depression. Sports psychologists offer treatment to the athletes in the form of antidepressants, medications that increase serotonin levels in the body and alleviate symptoms of depression. (Bruen).

Not only must the athlete be educated about depression, coaches and athletic staffs need to become familiarized with symptoms of depression to help identify athletes struggling with the mental health condition. Fortunately, with more and more athletes coming forward about their depression, the attitude towards the disease is slowly changing. In interviews, nine mental health experts who treat athletes unanimously asserted that disorders of the mind are gradually shedding their stigma in sports. In some cases, the shift in attitude is merely a matter of semantics. When Dr. John Murray was doing his doctoral work, he approached the soccer coach at one university and asked if he could consult the team on matters of sports psychology. "He wouldn't even listen to me -I had said the magic word, psychology," says Murray. "Then I came back a while later and called what I was doing 'mental coaching,' and he got all excited. This attitude towards "psychology" needs to be changed. Progress is being made in this area as coaches and organizations see the benefits to mentally healthy athletes. (Wertheim).

Turning our attention to the global pandemic and its impact on the mental health of athletes, researchers in sport management, sport psychology, and behavioral analysis will soon have a plethora of topics to consider in this important area. With famous professional athletes beginning to open up about their personal experiences during the pandemic, the hope for researchers is that better data can be collected from athletes to determine if the isolation or athletes increased their anxiety and stress levels or if the ability to play sports even in a bubble helped them through the toughest days of the pandemic. Two professional athletes from the NFL and the NBA discussed their experiences during the COVID-19 lockdowns. Dak Prescott, Quarterback of the NFL's Dallas Cowboys recently opened up about his battle with anxiety and stress resulting from a devastating injury, the death of his brother, and the pandemic. Prescott revealed he was already battling anxiety and low-grade depression at the start of the coronavirus quarantine, before his brother died on April 24. "All throughout this quarantine and this offseason, I started experiencing emotions I've never felt before," he said. "Anxiety for the main one. And then, honestly, a couple of days before my brother passed, I would say I started experiencing depression. And to the point of, I did not want to work out anymore. I didn't know necessarily what I was going through, to say the least, and hadn't been sleeping at all." (Reimer). The reaction to Dak's admission was mixed with some supporters commending his courage while others still stuck in the stigmatization and depression is weakness mindset, ridiculed or diminished his condition and feelings. For depression sufferers, Dak can be a voice in the darkness letting them know that being depressed is not their fault, and that even those on the brightest stage can succumb to the disease.

NBA superstar, Paul George of the Los Angeles Clippers acknowledged the NBA's decision to lockdown the players inside of a bubble for about 100 days impacted him mentally and emotionally. This ultimately would affect his abilities to perform at his customary high level. "I underestimated mental health, honestly," George said. "I had anxiety, a little bit of depression, from being locked in here. I just wasn't here, I was checked out." (Esnaashari). George took appropriate steps to manage his depression by visiting with the team psychiatrist. He also received the support of his teammates which helped George battle through the anxiety and stress. "Everybody reached out, whether it was in person, through a text," George said. (Esnaashari). "The energy, the synergy, the camaraderie, the brotherhood. I can't thank this squad enough." (Esnaashari). By admitting his mental health was negatively impacted by the lockdown, George has opened the door for other athletes to come forward to discuss the affects the lockdown has had on them. Hopefully, more will be encouraged to do so from the examples of these two professional athletes.

The results from educational and sports psychologists are encouraging with progress being made in the identification of the signs of depression, the treatment of depression in athletes and the reduction of the stigma associated with it. More work needs to be done but the sports world is headed in the right direction.

BIBLIOGRAPHY

1. Brenner, J.S. (2007). Overuse Injuries, Overtraining, and Burnout in Child and Adolescent Athletes. *Pediatrics*. 119(6), 1242-1245.
2. Brody DJ, Pratt LA, Hughes JP. Prevalence of depression among adults aged 20 and over: United States, 2013–2016. US Department of Health and Human Services NCHS website. [cdc.gov/nchs/data/databriefs/db303.pdf](https://www.cdc.gov/nchs/data/databriefs/db303.pdf). Accessed January 18, 2019. Retrieved from <https://www.ajmc.com/journals/supplement/2019/economic-burden-mdd-analysis-healthcare/economic-burden-mdd>
3. Bruen, J. (2010 March 23). Depression in Athletes. Retrieved from <http://www.livestrong.com/article/84436-depression-athletes>
4. Egede LE, Bishu KG, Walker RJ, Dismuke CE. Impact of diagnosed depression on healthcare costs in adults with and without diabetes: United States, 2004-2011. *J Affect Disorders*. 2016;195:119-126. doi: 10.1016/j.jad.2016.02.011. Retrieved from <https://www.ajmc.com/journals/supplement/2019/economic-burden-mdd-analysis-healthcare/economic-burden-mdd>
5. Esnaashari, F. (2020, August 26). Paul George reveals he was dealing with depression in NBA Bubble. *Sports Illustrated LA Clippers News, Analysis and More*. <https://www.si.com/nba/clippers/news/paul-george-reveals-depression-and-anxiety-issues>.
6. Gouttebauge, V., Castaldelli-Maia, J. M., Gorczynski, P., Hainline, B., Hitchcock, M. E., Kerkhoffs, G. M., Rice, S. M., & Reardon, C. L. (2019). Occurrence of mental health symptoms and disorders in current and former elite athletes: a systematic review and meta-analysis. *British Journal of Sports Medicine*, 53(11), 700–706. <https://doi.org/10.1136/bjsports-2019-100671>
7. Greenberg PE, Fournier AA, Sisitsky T, Pike CT, Kessler RC. The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *J Clin Psych*. 2015;76(2):155-162. doi: 10.4088/JCP.14m09298. Retrieved from <https://www.ajmc.com/journals/supplement/2019/economic-burden-mdd-analysis-healthcare/economic-burden-mdd>
8. Hyman, M. (2009). *Until it Hurts: America's Obsession with Youth Sports and how it harms our Kids*. Boston, Ma: Beacon.
9. Nirmita Panchal, R. K., & 2021, F. (2021, April 14). The Implications of COVID-19 for Mental Health and Substance Use. KFF. <https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>.
10. Performance Media. (2006). Stress Management. Retrieved September 20, 2006 from <http://www.performance-media.com/stress-management.php>
11. Ray, R., & Wiese-Bjornstal, D. (1999). *Counseling in Sports Medicine*. Champaign: Human Kinetics.
12. Reimer, A. (2020, September 10). Skip Bayless Is Wrong About Dak Prescott and Depression. *Forbes*.
13. Saunders, P. (2003, March 10). Athletes, who have spent years fine-tuning their bodies, find it difficult to accept mental illness and its stigma. *Denver Post*.
14. Tarkan. L. (2000 September 29). Athletes Sidelined by Injury Must Cope with Sense of Loss / Depression fills void when sports aren't possible. *New York Times*.
15. Wann, D. L. (1997). *Sport Psychology*. Upper Saddle River, NJ: Prentice Hall.
16. Wertheim, J.L. (2003 September 8). Prisoners of Depression. *Sports Illustrated Magazine*. Retrieved from <http://www.smartproinsight.com/SportsIllustrated090803.htm>
17. <http://www.faqs.org/sports-science/Pl-Sa/Psychological-Disorders.html>
18. <http://www.webmd.com/depression/recognizing-depression-symptoms/physical-symptoms>.
19. <http://www.suicideandmentalhealthassociationinternational.org>
20. <http://www.psychologyofsports.com>
21. <http://www.athleticinsight.com>
22. <http://www.brianmac.co.uk/psych.htm>
23. <https://www.nimh.nih.gov/health/statistics/major-depression>