



You're Fine: Words You Hear as a Student-Athlete

Senior Project

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By

Morgan Gibbs
Political Science Pre-Law
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Morgan Gibbs

Morgan Gibbs
Honors College Scholar

12/04/2022

Date

Jaleesa Harper

Jaleesa Harper
Faculty Mentor

12/04/2022

Date

Joshua Kalin Busman, Ph.D.
Senior Project Coordinator

Date

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Abstract

The following study analyzes the relationship between mental health and factors affecting college student athletes. These factors analyzed include eating behavior and performance pressure. This study was conducted using a data set from *The College Health Related Information Survey (C.H.R.I.S.-73): A Screen for College Student Athletes*. This survey was done by Hans Steiner, Renee P. Pyle, Glenn S. Brassington, Gordon Matheson, and Michelle King at the Stanford University School of Medicine in 2003. The study examined the relationships between mental health and college student athletes. Two hypotheses regarding eating habits and performance pressure were tested. The hypotheses tested were H1: In a study of college athletes, poor eating behavior will negatively impact mental health and H2: In a study of college student athletes, performance pressure will negatively affect mental health. The findings of H1 suggest a negative relationship between disordered eating patterns and mental health. The findings of H2 suggest a negative relationship between performance pressure and mental health. Both hypotheses failed to reject the null hypothesis.

You're Fine: Words You Hear as a Student Athlete

Mental health has become a prominent issue in college students, despite their athlete status. There is a stigma around mental health in the athletic community that implies an athlete should be mentally tough and not seen as weak. While exercise and athletic participation has been known to reduce stress and promote healthier living, the decline of mental health in college student athletes has become the forefront of interest for organizations. Mental health issues can lead to various disorders such as depression, anxiety, eating disorders, and burnout (Yamaguchi 2020). These issues are further affected by many factors such as social history, pressure from within organizations, individual athletes, relatives, coaches, people within the organizations, and media outlets who broadcast both failures and achievements (Bauman 2016).

In a study done by Shinji Yamaguchi at the Institute of Health and Sports Science & Medicine in Japan, the results showed that out of the 224 athletes surveyed, "46.4% showed signs of depression, eating disorders, and anxiety disorder." These shocking numbers lead researchers to question if these student athletes are receiving proper treatment. Evidence shows that a team's culture and perceived norms surrounding mental health play a role in whether student athletes exhibit treatment seeking behavior (Moreland 2018). According to the 2021 NCAA Student-Athlete Wellbeing Study of Fall 2021, under half of the 9,800 athletes surveyed felt comfortable seeking treatment and did not believe that mental health was a priority to their athletics department (NCAA, 2021).

This paper examines the relationship between eating behavior and performance pressure on mental health in college student athletes. Data on these factors are limited and the NCAA, National Collegiate Athletic Association, no longer releases their wellness survey datasets that would provide invaluable insight to these relationships. However, a study done by Hans Steiner, Renee P. Pyle, Glenn S. Brassington, Gordon Matheson, and Michelle King at the Stanford University School of Medicine in 2003 titled *The College Health Related Information Survey (C.H.R.I.S.-73): A Screen for College Student Athletes*, does provide some insight. While college student athletes are the focus of this paper, this study used 518 participants. Out of the 518 participants, 110 were not athletes. The way in which the data was presented, there was no way to separate the data based on athlete status, given the limitations mentioned previously.

To analyze the relationships between eating habits, performance pressure and mental health, the following thesis was proposed: Mental health in college student athletes is affected by eating habits, performance pressure, and social support. This study focuses on the variables of eating habits and performance pressure. The findings for this study conclude that there is a negative correlation between disordered eating behavior and mental health in college athletes. The results also showed a negative correlation between high performance pressure and mental health in college athletes. Furthermore, this study fails to reject the correlations between eating behavior, performance pressure, and mental health.

Literature Review

Eating Behavior

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One of the factors that affects mental health is eating behavior. Similarly, to other mental health issues, understanding eating behavior and how it can be an issue is referred to as mental health literacy (MHL). Mental health literacy is denoted by the “knowledge and beliefs about mental disorders which aid their recognition, management, or prevention” (Jorm 1997, Gratwick-Sarll 2013). Eating behavior related disorders include “anorexia nervosa, bulimia nervosa, and binge-eating” (Eating n.d.) and are recognized by the DSM-5, The Diagnostic and Statistical Manual of Mental Disorders. The *Mayo Clinic*, a medical center in Minnesota, discusses that eating disorders are less about food and more about coping with emotional problems. Food just happens to be the catalyst in controlling a person’s internal and external pressures. This coping mechanism mixed with “genetic, biological, behavioral, psychological, and social factors” (Eating n.d.) are the reasons eating disorders occur.

The link between eating disorders and mental health is heavily prevalent in college athletes. College athletes are at a higher risk for developing eating disorders due to size/shape of uniforms, ideal weight to improve performance, and sport body stereotypes (Thompson 2014, Rodriguez 2016). These factors all exacerbate the already at-risk population by reinforcing how an athlete of a certain sport should look. The ideal track runner or swimmer is seen as thin and muscular, while a football or softball player is stronger and thicker. Depending on which sport an athlete is involved in, they may feel the pressure to subscribe to that “ideal” weight or look. Coaches may even judge players outwardly on their appearances, further

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reinforcing those stereotypes. Because of this, eating behavior either increases in occurrences or dwindles drastically.

Performance Pressure

Pressure in sports is natural territory for athletic performers. Some may even consider pressure a privilege. But how much pressure is too much? Performance pressure can come from all sides of the coin: teammates, peers, coaches, parents, professors, and self. In college athletics especially, the ability to perform well under pressure is mandatory and the consequences of not performing up to par can be scary (Oudejans 2011). Evidence suggests that elevated levels of anxiety in sports are due to pressure and lead to decreased performance outputs (Behan & Wilson, 2008; Gucciardi et al., 2010; Murray & Janelle, 2003, Oudejans 2011).

The idea of perfectionism is another performance pressure factor that affects student athletes; Seeking out perfection in sports has been correlated both negatively and positively with production (Dunn 2022). This perceived pressure to perform at a perfect level comes from both parents and coaches and evidence shows that there may be “heightened fear of failure/social evaluation, reduced optimism, and heightened psychological needs-thwarting” (Mallinson & Hill, 2011, Dunn et al., 2020, Dunn 2022). However, the anxiety related to competitive stressors is a negative emotional response but does not necessarily mean all pressure creates anxiety and vice versa (Schweickle 2021).

Pressure can also originate from the student aspect of the athlete sphere. Balancing both sports and academics is difficult and demands pristine time management and organization (O’Neill 2013). Some institutions have built fail safes

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for their student athletes such as mandatory study hall and grade progress reports. These institutions are prime examples of what it means to be a student first, athlete second. However, missing class often for sports related activities does occur and students must make up missed work, notes, or exams which adds on to the ongoing stress. Due to the stressful nature that occurs in the student athlete world, support from others is always needed.

Social Support

The amount of support available to relieve the stressful aspects of being a student athlete can affect the condition one's mental health is in. Social support can come from coaches, teammates, friends, family, or a significant other. It can also be construed into three dimensions: "emotional support, tangible support, and informational support" (Kristiansen 2010, Cutrona and Russell 1990, Rees 2004).

The impact of coach support was by far greater than other types of social support (Kristiansen 2010) for adolescent athletes. When discussing athletic performance, coaches know how to fix the techniques and skills of a sport, which can provide satisfaction to their athletes. Similarly, teammates provide a closer insight into the sports side of support. Like coaches, they understand what is happening and have lived it themselves. A study done in 2021 by Goichi Hagiwara et al. suggests that "receiving social support from teammates was negatively correlated with depression and sports helplessness." For some athletes, the support of athletically related persons may go further than their family members providing words of affirmation.

Support from family members is also a key aspect to maintaining good mental health and has been said to be one of the most important social support factors for successful athletes (Lundy 2019). Positive support such as encouragement and high esteem can positively correlate to an athlete's well-being and performance (Côté & Hay 2022). The overly involved and under involved family can produce negative effects on an athlete. These different family types can alter how much support an athlete gets and how well they succeed and feel (Lundy 2019, Lee 2021).

Conclusion

The mental health of a college student athlete can be affected by eating behavior, performance pressure, and social support. Eating behavior can be detrimental to a student athlete and reinforced by stigmas set by society and collegiate sports. Performance pressure can be perceived as more than it is, but there is no denial that pressure does exist and is real. The support system of a student athlete can make or break their mental health. The more support available, especially from coaches and family members, the better mental health a student athlete will have. These factors all play pivotal roles in the well-being of students, athletes, and student athletes, but must not be regarded as the only factors.

Research Question

To analyze the effect of eating behavior and performance on mental health in college student athletes, this question is asked: How does being a student athlete in college affect mental health? Using the two factors of eating behavior and

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performance pressure that affect college student athletes, two hypotheses were created.

Hypotheses

H1: In a study of college athletes, poor eating behavior will negatively impact mental health.

H2: In a study of college student athletes, performance pressure will negatively affect mental health.

For the first proposed hypothesis, eating correlates with the chemical serotonin. Serotonin is “chemical messenger that helps the brain and nervous systems cells communicate” (Georgina 2022). This chemical helps stabilize moods and if there is not enough, mood can fluctuate and deteriorate which leads to poor mental health.

For the second proposed hypothesis, performance of any kind comes with the feeling or perception of pressure. Pressure can lead to higher feelings of stress and anxiety due to the fear of failure. If failure is at the forefront of one’s mind, negative thoughts and actions can lead to poor mental health.

Dependent Variable

The dependent variable in this study is mental health problems and will be divided into two sections: poor mental health and good mental health. Mental health problems are defined as symptoms of sadness, distress, loneliness, depression,

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temper, concentration, anxiety, and thoughts of suicide or suicidal ideation. This dependent variable was operationalized into a categorical variable. For this study, 1 denotes poor mental health and 2 denotes good mental health. Good mental health symptoms were decimals ranging from 0.0 to 0.5 and poor mental health symptoms were decimals ranging from .6 to 1.

Independent Variable

The independent variable of H1 is eating behavior and will be divided into two sections: disordered eating patterns and normal eating patterns. Disordered eating behavior is defined as any type of disordered eating that includes calorie counting, fasting, anorexic/bulimic tendencies, use of laxatives or diet pills or limiting/removing individual food groups. This independent variable was operationalized into a categorical variable. For this study, 1 denotes disordered eating patterns, while 2 denotes normal eating patterns. Normal eating patterns were decimal results ranging from 0.0 to 0.5 and disordered eating patterns from 0.6 to 1.

The independent variable of H2 is performance pressure and will be divided into two sections: high pressure and low pressure. Performance pressure is defined as “the feelings an athlete has about performing in a sporting situation” (Cohn 2019). This independent variable was operationalized into a categorical variable. For this study, 1 denotes high pressure and 2 denotes low pressure. Low pressure was decimal results ranging from 0.0 to 0.5 and high pressure was decimal results ranging from 0.6 to 1.

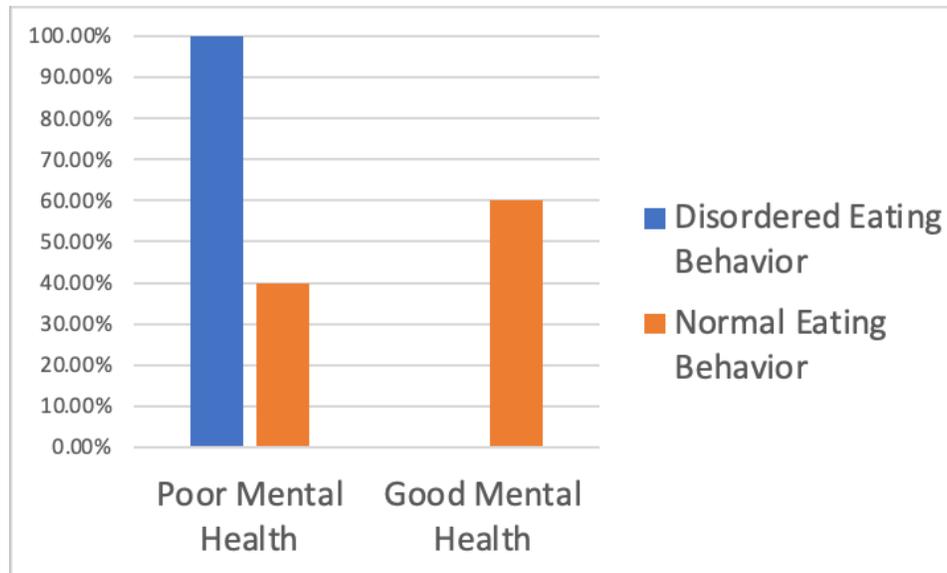
Method and Data Collection

The data collected for this study came from *The College Health Related Information Survey (C.H.R.I.S.-73): A Screen for College Student Athletes*. This survey was done by Hans Steiner, Renee P. Pyle, Glenn S. Brassington, Gordon Matheson, and Michelle King at the Stanford University School of Medicine in 2003. This study published the results and percentages including the demographics of the survey participants. Because the main concern of this study was to find relationships between factors affecting college student athletes and mental health, the demographics were not included. This study included 518 participants, 110 of which were not athletes. Because of how the data was presented, there was no way to separate the data based on athlete status, given the limitations mentioned previously.

Findings

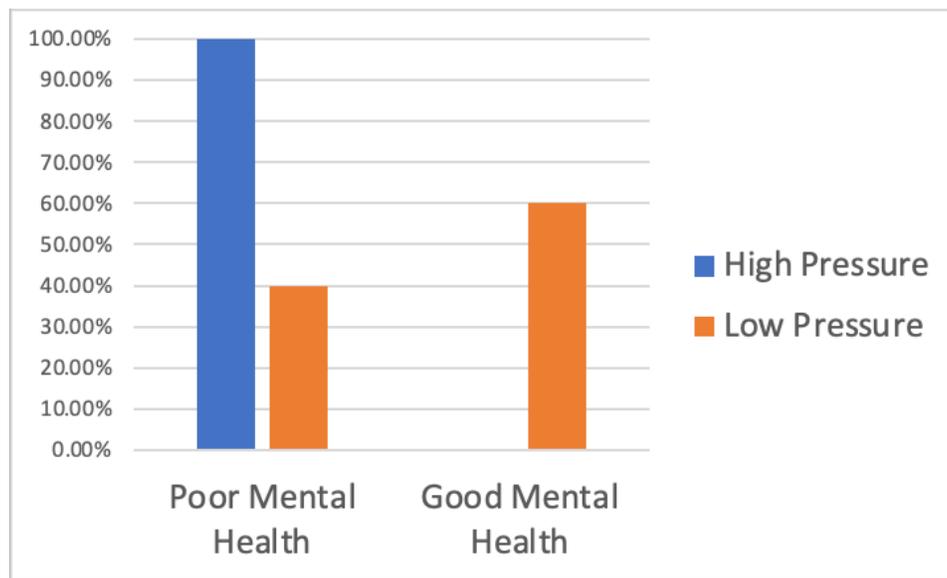
The first cross-tabulation table and graph below show the relationship between eating behavior and mental health. The results show that 100.0% of participants who exhibited disordered eating behavior had poor mental health while 0.0% of participants who exhibited disordered eating behavior had good mental health. The results also show that 40.0% of participants who exhibited normal eating behavior had good mental health while 60.0% of participants who exhibited normal eating behavior had poor mental health. This data fails to reject the original hypothesis of “H1: In a study of college athletes, poor eating behavior will negatively impact mental health.

Eating Behavior on Mental Health	Eating Behavior			
Mental Health	Disordered Eating Behavior		Normal Eating Behavior	Grand Total
Poor Mental Health		100.00%	40.00%	66.67%
Good Mental Health		0.00%	60.00%	33.33%
Grand Total		100.00%	100.00%	100.00%



The second cross-tabulation table and graph below show the relationship between performance pressure and mental health. The results show that 100% of participants who felt a high pressure to perform had poor mental health while 0.0% of participants who felt a high pressure to perform had good mental health. The results also show that 40.0% of participants who felt a low pressure to perform had poor mental health and 60.0% of participants who felt a low pressure to perform had good mental health. This data fails to reject the original hypothesis of “H2: In a study of college student athletes, performance pressure will negatively affect mental health.”

Mental Health on Performance	Performance Pressure		Grand Total
	High Pressure	Low Pressure	
Poor Mental Health	100.00%	40.00%	66.67%
Good Mental Health	0.00%	60.00%	33.33%
Grand Total	100.00%	100.00%	100.00%



Conclusion

The implications of the findings in this study demonstrate two concepts: there is a negative correlation between disordered eating behavior and mental health in athletes and there is a negative correlation between high performance pressure and mental health in athletes. Based on the first cross tabulation analysis, 100% of the participants who had disordered eating behavior also had poor mental health. Based on the second cross tabulation analysis, 100% of the participants who felt a high pressure to perform also had poor mental health. The results were

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described as “failing to reject the original hypotheses,” due to both topics being heavily generalized.

To further support the two hypotheses, a more detailed, numeric quantification of eating behavior and performance pressure would need to occur. Furthermore, to support these hypotheses, the number of participants would need to be much larger to make it more generalizable. Another step to make this study more generalizable would be to branch out across divisions of college athletics. This study only included a small sample of Division I athletes, where there may be heightened scrutiny of mental health and the factors surrounding it. Divisions in college athletics vary in terms of athletics and academic commitment and resources. Division I is the most time consuming athletically, while Division III focuses more on academia. Resources may vary within each academic institution and division of athletics, which could become intervening variables that affect the relationships between eating behavior, performance pressure, and mental health.

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