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Kicking the Way Through a Global Pandemic: How NCAA Division I Soccer Players and Institutions Have Responded to the COVID-19 Pandemic and Related Protocols

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Abstract

The Coronavirus Disease 2019 (COVID-19) pandemic rapidly spread throughout the United States in 2020, affecting many lives in the process. As health communicators, dealing with this disease and sharing effective health messaging in a fluid and unknown situation was key to preventing greater spread of COVID-19 and keeping the public safe from harm. For athletics, like all other aspects of society, protocols needed to be put in place to ensure that athletes could safely participate and compete in their sport. The present study looks to examine NCAA COVID-19 protocols of mask wearing and social distancing and how NCAA Division 1 soccer players personally felt about the protocols and how these athletes viewed their institution's take on these protocols. A cross-sectional (online) survey was distributed through a snowball sample to NCAA Division 1 soccer players (N = 110). Key findings include significant differences between male and female athletes' perceptions of protocols, high optimism bias and comparative bias among athletes, high self-efficacy and response efficacy in relation to the protocols, and significant influences on the athletes' beliefs about COVID-19 by their parents and teammates. Implications highlight the inequalities between male and female athletes and the risk of lack of credibility among the NCAA in future health messaging.

CHAPTER ONE: RATIONALE AND LITERATURE REVIEW

The pandemic that rapidly spread to the United States in 2020 has affected so many lives in various ways. The Coronavirus Disease 2019 (COVID-19) is described by the Centers for Disease Control and Prevention (CDC) as being "caused by the virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a new virus in humans causing respiratory illness which can be spread from person-to-person" (Centers, 2021). COVID-19 was identified in Wuhan, China in December 2019 and quickly spread across the world and reached the United States in January 2020. By December 2020 there were 118,720 COVID-19 patients in U.S. hospitals and 65,000 confirmed deaths in the U.S. in that month alone (National Data, n.d.). A vaccine was not available to the general public until the following spring. A global pandemic is a rare occurrence and the health communication and risk management related to the pandemic have varied widely. The CDC has been leading the way in advising the best responses to the COVID-19 pandemic in the United States (2021).

With the rapid increase in cases and the fear that surrounded the novel virus, extensive health communication was necessary. Health communication is defined as the study and use of communication tools and strategies in order to inform individuals and the community on decisions made to advance health (The Community Guide, 2021). Additionally, health communication is designed to persuade or encourage people to adopt health-promotive behavior. Risk communication is related to health communication. The concept of risk encompasses both objective and subjective qualities; risk judgments are considered a by-product of one's social, cultural, and psychological influences. In this way, "risk" is viewed as a social construct, and risk communication is defined as "an iterative exchange of information among individuals, groups,

and institutions related to the assessment, characterization, and management of risk" (McComas, 2006, p. 76).

While dangerous and unpredictable, pandemics also provide a compelling context to observe people's responses to novel risks. For example, individuals tend to take action contrary to their typical day-to-day lives. They may panic when faced with new or uncertain risks in particular. Taylor (2021) explores that tendency of individuals to panic-buy during a pandemic. Panic buying and hoarding toilet paper and disinfectant wipes, for example, was seen at the beginning of the COVID-19 pandemic when individuals were told to self-isolate. Panic buying is only one example of the way a pandemic can influence society that is unrelated to health promotive behavior. However, panic buying is a good example of actions related to Social Learning Theory, which will be discussed later that will apply to health promotive behavior.

The COVID-19 pandemic has not only affected individual lives but has also impacted society at the organizational level, including the sports world. This included a response from the NCAA and collegiate sports leagues across the country, the principal focus of the present study. By March 2020, the coronavirus had spread quickly through the United States and massive shutdowns resulted, including collegiate sports. Since then, collegiate athletes, including this study's author, have had to navigate the constantly changing guidelines and regulations provided from athletic departments and coaches. In fall 2020, there were vastly different approaches and responses to the pandemic by each athletic department, school, and league.

Regarding the Big East Conference, there were discussions of splitting the Big East in half to limit travel, but the Big East decided that postponing all fall sports would be the best decision based on recommendations from the CDC and guidelines from the NCAA ("College," n.d.). While this was the reality for the Big East, other leagues around the country decided to

play in the fall. For example, the Atlantic Coast Conference (ACC) and the Southeastern Conference (SEC) continued their fall 2020 sports, even after the NCAA decided to postpone the National Championships. Therefore, when presented with the same scientific data and guidelines, the NCAA leagues responded in disparate ways.

Additionally, the leagues across the NCAA not only made a decision about playing a fall season, but also each league interpreted CDC guidelines and NCAA protocols differently. While each of the five major conferences had COVID-19 testing protocols in place, all protocols were slightly different. For example, the way the Big Ten administered COVID-19 testing and COVID-19 protocols, using the point of contact (POC) test and then a PCR test if an individual were to test positive, was unique in comparison to testing practices of the ACC, Big 12, and SEC who relied on the PCR COVID-19 test (McCleary, 2020). Additionally, the ACC and Big 12 required three PCR COVID-19 tests per week, and the ACC even took it a step further and required one of the tests to be administered the day before a game and 48 hours after the completion of a game (McCleary, 2020). Therefore, it is clear that while each league in the NCAA was given the same information from the CDC, each league construed the information distinctly and created guidelines they believed fit best. The lack of consistency in leagues' and institutions' COVID-19 protocols no doubt was confusing to athletes. Understanding athletes' perceptions of these different practices may shed light on their attitudes toward and compliance with COVID-19 protocols. Therefore, examining existing literature and theoretical frameworks on health communication as well as health and risk behavior will be advantageous before conducting primary research on the response to the COVID-19 pandemic by NCAA Division 1 programs and athletes.

Literature Review

Examining existing research and relevant theory is essential to gaining a better understanding of the topic at hand. Throughout this pandemic, the NCAA has developed guidelines for schools and leagues to follow. These guidelines have changed and evolved when necessary, but nonetheless, there have been directives issued to advise teams on what to do in the midst of this unprecedented time. A review of health and risk communication research offers insights as to why programs and individual athletes respond differently to COVID-19 policies and these recommended guidelines.

Optimism Bias

One model that explains individual response differences that is relevant to COVID-19 is Optimism Bias. The Optimism Bias is the idea that individuals believe that their own outcomes in a specific situation will be more favorable than their peers in the same situation even if a "relevant, objective standard" does not align with that belief (Shepperd, Waters, Weinstein, & Klein, 2015). While usually considered an individual trait, the Optimism Bias also can explain the different responses and approaches taken regarding the COVID-19 pandemic and NCAA Division 1 collegiate sports at the institutional level. While some organizations decided to forgo, postpone, or even cancel entire seasons, others decided to play, believing that the guidelines in place would be sufficient in order to take part in collegiate athletics. Additionally, while some individuals take COVID-19 protocols strictly and seriously, others see them just as suggestions. A study by Lapsley and Hill (2010) discussed the Optimism Bias among individuals entering adulthood. The study looked to examine the relationship between subjective invulnerability and optimism bias regarding risk behavior (such as delinquent behavior or substance abuse). The study also explored danger and psychological invulnerability regarding risk-taking and risk

behaviors. The participants included 350 undergraduate students at a large, public university ranging from 18 to 25 years old who were "predominantly White/European American" (Lapsley & Hill, 2010, p. 849). The subject invulnerability was assessed through an adolescent invulnerability scale (AIS) and optimism bias was assessed through a comparative conditional risk assessment. The researchers found that males scored higher on danger and psychological invulnerability and that these two invulnerabilities are more closely related to risk behaviors than optimism bias. Additionally, it was found that psychological invulnerability lessened the probability of "self-esteem problems, depression problems, and interpersonal problems" (Lapsley & Hill, 2010, p. 854). This study is beneficial in gaining a better understanding of optimism bias and how it can be measured and studied.

Another study by Shukla, Mishra, and Rai (2021) examined optimism bias related to COVID-19 among college students in India. This survey study examined college students in India and if their COVID-19 optimism bias increased with risky behavior. It was found that students who were in the presence of friends, rather than neighbors or strangers, had a higher optimism bias and were more likely to take part in risky behavior. The researchers laid out three research questions: 1) Does COVID-19 optimism bias predict tendency for risky behavior? 2) Does being in a close or distant group influence the tendency for risky behavior for individuals with high optimism bias? 3) Do social norms increase the impact of optimism bias on risky behavior? The study included 473 completed responses from college students in India ranging from 18 - 23 years. The respondents were divided into two groups. Group 1 was labeled having high optimism bias related to COVID-19, Group 2 was labeled having no COVID-19 optimism bias. It was found that students with high COVID-19 optimism bias were more likely to engage in risky behaviors regarding COVID-19 and were more likely to take risks when with friends

than with strangers. It was also found that if students with high COVID-19 optimism bias are primed with social norms that encourage risk avoidance practices, these students are less likely to take part in risky behaviors. This study is beneficial in understanding how college-aged individuals view and act in regard to the COVID-19 pandemic.

Comparative Optimism

Another theoretical framework similar to the Optimism Bias is comparative optimism. Comparative optimism differs from optimism bias in that comparative optimism is the belief that negative events are more likely to happen to others than oneself and Optimism Bias is the idea that individuals believe that their own outcomes in a situation will be more favorable than others in that same situation. This is useful for health risk communication and is the belief that negative events are more likely to happen to others rather than oneself. A study by Asimakopoulou et al. (2020) examined if comparative optimism has been present during the COVID-19 pandemic. The researchers developed an online cross-sectional survey to gain a better understanding of individuals' thoughts and psychological behaviors regarding the COVID-19 pandemic and risk associated with the pandemic such as getting sick and recovering. This study used a snowball sampling method and collected anonymous data "during weeks 5-8 of the UK COVID-19 lockdown" (Asimakopoulou et al., 2020, p. 1502). This was an international survey that included 15,084 responses from 10 European countries, yet the focus of this study was 645 adults in the UK. They found that comparative optimism was stronger with controllable variables (such as getting infected with the virus) rather than uncontrollable variables (such as being hospitalized due to the virus). The participants also expressed comparative optimism when asked about being accidentally infected with COVID-19 as compared to others of their same age and gender. Additionally, the participants were comparatively optimistic when asked about the likelihood of

being hospitalized from COVID-19. Yet, it was also found that the participants were comparatively pessimistic when asked about being infected with COVID-19 in the future. The participants expressed that they felt that they were likely to be exposed to COVID-19 in the next year or to develop COVID-19-related symptoms. This study benefits the current study in a variety of ways. First, the study directly discusses the COVID-19 pandemic and how it relates to the comparative optimism theoretical framework and therefore, helps gain insight to literature already developed regarding the COVID-19 pandemic and health-related beliefs. Second, this study utilized an online, cross-sectional, snowball sampling survey method that is beneficial in consulting for the survey in this study.

Theory of Planned Behavior

Theory of Planned Behavior (TPB) is another theoretical framework that is vital to explore when analyzing behaviors of individuals and what causes these behaviors. TPB is based on the belief that "behavior can be predicted based on the intention to carry out that behavior" (Lambert, Chang, & Mann, 2020, p. 216). In this study, the authors applied the TPB to examine college students' intentions to eat healthy snacks. In order to do so, the researchers conducted an online survey of college students at a public university and included demographic information, questions regarding intention to choose healthy snacks, and measures of attitude, subjective norm, and perceived behavioral control. The researchers found that key indicators of behavioral intention to choose healthy snacks were the students' attitudes and perceived behavioral control. Therefore, this study supported TPB and its effectiveness of recognizing predictable nutritional behavior (Lambert et al., 2020). A similar study by Thompson, Asare, Millan, and Unstattd Meyer (2020) used TPB and role model beliefs (RMB) to predict physical activity and eating behaviors of college students. This study utilized a 26-item, cross-sectional survey and analyzed

data from senior college students from health-related disciplines. The researchers identified four predictors of physical activity and eating behaviors among the participants that included outcome evaluation, behavioral belief, college major, and RMB. Therefore, this study also supports TPB in effectively predicting behavior, as well as mentioned RMB and its ability to predict behaviors. Another study by Frounfelker, Santavicca, Li, Miconi, Venkatesh, and Rousseau (2021) used the TPB to identify relationships between the COVID-19 experiences and behavioral control, social norms, and future intentions to follow social distancing protocols. A cross-sectional, online survey was conducted with 3,183 respondents over the age of 18 in Quebec, Canada. The researchers used a TPB measurement model to examine perceived COVID-19 discrimination, fear of getting COVID-19, previous exposure to COVID-19, and previous social distancing practices. It was found that TPB constructs were associated with intention to follow social distancing guidelines and fear of getting COVID-19 and previous social distancing guidelines were associated with behavioral intentions. However, it was also found that perceived COVID-19 discrimination was not associated with the TPB constructs. The researchers used these findings to conclude that COVID-19 campaign messaging focusing on COVID-19 prevention efforts should balance heightened fear of infection with "positive attitudes, perceived controls, and social norms" regarding social distancing.

While both the study by Lambert et al. (2020) and Thompson et al. (2020) discussed TPB in regard to nutritional behaviors, TPB can also be applied to other behaviors, such as following guidelines or protocols in a situation like a pandemic, as was discussed in the Frounfelker et al. (2021) study. Additionally, the insight on RMB from the Thompson et al. (2020) study will be beneficial for this research on the COVID-19 pandemic. Specifically, are student athletes influenced by individuals in a higher position, such as a coach (do they serve as role models), or

by their peers (how do they impact their subjective norms), when considering guidelines and protocols put in place?

Health Belief Model

Related to Theory of Planned Behavior is the Health Belief Model (HBM). HBM is based on the idea that six factors affect and predict health behavior: risk susceptibility, risk severity, benefits to action, barriers to action, self-efficacy, and cues to action (Champion & Skinner, 2008). Therefore, modifying these factors influence engagement in health behaviors. HBM is one of the most referenced theories in health communication. A study by Case, Cook, Lazard, and Mackert (2016) utilized TPB and HBM to better understand the perceptions of e-cigarettes among college students in order to inform future health campaigns regarding e-cigarettes. The researchers examined 30 undergraduate students, 15 e-cigarette users and 15 non-users, from a public university through engaging in structured interviews that were developed from consulting TPB and HBM. Therefore, the questions included on the interview guide involved aspects from the two theories such as "knowledge, attitudes, perceived benefits/perceived advantages, perceived threats/perceived disadvantages, perceived barriers, perceived norms, and perceived self-efficacy" (Case et al., 2016, p. 382). From the interviews, the researchers found that the key disadvantages and barriers to e-cigarette use among the participants were negative effects regarding health, social stigma around e-cigarettes, and negative perception of e-cigarette users. The researchers concluded that these findings will help advise future health campaigns regarding e-cigarettes (Case et al., 2016). This study, although focusing on the health behavior of e-cigarette use, is beneficial regarding TPB and HBM helping inform and guide the questions formulated for the present study. Using TPB and HBM as a basis for gaining insights regarding health behaviors related to the COVID-19 pandemic, such as wearing a mask or following social

distancing guidelines or COVID-19 testing guidelines, will be advantageous in understanding the way student athletes approach health behaviors. This includes identifying perceived key benefits and barriers to engaging in those health promotive behaviors.

Social Learning Theory

Finally, another relevant theoretical model that helps explain health behavior is Social Learning Theory (SLT), developed by Albert Bandura (1977). Related to Role Model Beliefs and now commonly part of social cognitive theories, SLT is based on the idea that both environmental and cognitive factors play a role in human learning and behavior. Human beings learn how to behave based on their environment and on observational learning (Bandura, 1977). Individuals often seek models in their environment to observe how to think and to act. Depending on if the behavior or attitude demonstrated by the model is either rewarded or punished, the observer will behave accordingly. SLT was discussed by Taylor (2020) regarding the panic buying observed at the start of the COVID-19 pandemic. SLT has a strong connection to life in a pandemic. For example, when people started to see others panic buying various items in the stores, such as toilet paper, because of the uncertainty around COVID-19, everyone started to stock up on home supplies. Regarding NCAA sports, the Ivy League took the lead and served as a model for other athletic programs. In the summer, the Ivy League decided to cancel all 2020 fall sports competitions in hopes of potentially playing in the spring. The Ivy League was the first of many teams and conferences opting to postpone or cancel seasons in the fall. Some athletic programs were waiting to see what others would decide, before making decisions. After the Ivy League made its move, multiple fall sport cancellations followed (“College,” n.d.). This is an example of SLT because other leagues began to behave based on what the model, in this case the Ivy League, decided to do.

Risk Perceptions, Cultural Cognition, and Compliance Behavior

In addition to these theoretical models applied to health and risk behavior, several new studies have emerged about COVID-19, risk perceptions and compliance behavior. For example, a study by Shelus et al. (2020) examined the use of facial coverings to prevent the spread of COVID-19. The researchers focused on gaining a better understanding of motivations and barriers to using facial coverings as well as "reactions to messaging promoting the use of facial coverings" (Shelus et al., 2020, p. 1). The study utilized a focus group method and engaged in six virtual focus groups with 34 residents of North Carolina. The study found that participants reported wearing facial coverings in situations outside of being with family and close friends. Additionally, it was found that the most prevalent motivation for wearing a facial covering was to respect others, especially those in high-risk populations. The key barriers to wearing facial coverings were discomfort, low perceived susceptibility to contracting COVID-19, misinformation, and difficulty in the ability to recognize others' faces. It was also found that messages regarding facial coverings should emphasize unity, protecting yourself and others, explaining the reasoning behind wearing a facial covering, and making it more normal to wear a facial covering in public.

Another study by Liu and Yang (2021) examined how cultural cognition, risk perception, and the emotions of anger, fear, sadness, and hope influence Americans' responses to COVID-19 messaging from the United State government. The researchers identified two research questions: 1.) "Do discrete emotions (anger, fear, sadness, and hope) mediate the relationship between risk perception and support for COVID-19 responses in the U.S.?" and 2.) "Do cultural cognition worldviews moderate the relationship between risk perception and discrete emotions (RQ2a), as well as the relationship between risk perception and support for U.S. government response

measures (RQ2b)?" To evaluate the U.S. public's risk perceptions and support for COVID-19 reponses by the U.S. government, the researchers used a representative final sample of U.S. adults (N=1009) to complete a survey by using *Ipsos Public Affairs* to recruit the participants. The results of the survey indicated that participants who were individualists or hierarchists were less likely to support COVID-19 responses since these people tend to believe that individuals should fend for themselves. Regarding the second research question about discrete emotions, it was found that the emotions of anger and fear mediated the relationship between risk perception and support for COVID-19 responses. It was also found that individualistic worldviews decreased anger's effect on the relationship between risk perception and support for COVID-19 responses. Overall, these findings suggest that messages should be adjusted and tailored to the audience the message is intended to reach. Individuals' cultural worldviews should be taken into consideration. However, on a 6-point scale from 0 to 5, a moderate level of fear was reported by the participants (M= 2.93, SD= 1.56). Therefore, connecting cultural cognition and emotion together, these findings suggest that when individualists sense high risk and increased anger, they are actually more willing to support COVID-19 responses. In turn, communication messaging should increase people's risk perceptions and anger which will actually result in increased support for COVID-19 protective protocols among people with different cultural views.

Research Questions and Hypotheses

This research seeks to explore the effects of various health communication efforts present during the COVID-19 pandemic in a student athlete population. This review of relevant theories as well as recently published health communication research addressing COVID-19 suggests several key concepts for studying student athletes during the pandemic. Specifically, concepts from optimism bias, comparative optimism, unrealistic optimism, role model beliefs, social

learning theory, theory of planned behavior and the health belief model have been applied. Therefore, the review of this relevant literature in health and risk communication as well as specific information on COVID procedures and NCAA has led to the following research questions and hypotheses:

- RQ1: How do NCAA Division I soccer players feel about their school's COVID-19 protocols?
    - Hypothesis 1: There are clear and signficant disparities between NCAA Division 1 men and women soccer players about their beliefs\feelings regarding their school's COVID-19 protocols.
- RQ2: To what extent do NCAA Division I soccer players think that men's and women's sports are treated differently in regard to COVID-19 protocols?
    - Hypothesis 2: It is viewed by NCAA Division I soccer players that men student athletes do not have to follow COVID-19 protocols like NCAA Division I women athletes.
    - Hypothesis 3: It is believed among NCAA Division I soccer players that sports that bring in large revenue (such as men's basketball and men's football) have more relaxed requirements for following COVID-19 protocols than other sports.
- RQ3: How do student athletes respond to risk and health messages?
    - Hypothesis 4: Student athletes will have a lower perceived risk of getting COVID-19 when they are in control of following protocols (mask, social distancing) but will have a higher perceived risk when entrusting others to follow the protocols.

- RQ4: How do role models and peers affect an individual's beliefs about COVID-19 and its severity?
    - Hypothesis 5: The beliefs of parents regarding COVID-19 protocols have a greater influence on student athletes' view of the COVID-19 protocols in contrast to the views of student athletes' coaches..
    - Hypothesis 6: The beliefs of teammates regarding COVID-19 protocols have an influence on a student athletes' view of the COVID-19.

Identifying explanations for these disparate responses on both levels, the organizational and the individual, is also a focus of this study.

CHAPTER TWO: METHODOLOGY

Methodology

Participants

A cross-sectional (online) survey of male and female soccer players from current Division I NCAA teams was conducted in order to gain insight on what NCAA Division 1 programs across the country have done in response to the pandemic. The student athletes were surveyed about their Fall 2020 and Spring 2021 semesters, when most students were not vaccinated. This survey utilized a snowball sampling method by distributing the survey link online to 50 students known by the researcher, asking these students to share with their teammates and other NCAA Division 1 soccer players across the country. The reason for choosing soccer players for participants, besides the author's personal connection to the sport, is that collegiate soccer generally does not have the TV deals and the audience draw that football and basketball programs enjoy. In this way, the economic argument will not come to play as much in explaining different soccer leagues' COVID-19 responses.

Survey

The summer after receiving Butler University Institutional Review Board's (IRB) approval on April 14, 2021, the survey was shared with the researcher's initial student athlete contacts. The survey mostly utilized Likert-type scales and included a variety of questions to illuminate each athlete's experience with COVID-19 and how collectively their schools and programs responded to the pandemic. Key variables from the theoretical models described above were considered in the survey's construction. The survey instrument was developed by adapting content from existing measures employing concepts from some of the studied models, such as Optimism Bias, Comparative Optimism, TPB, HBM, and SLT. For example, the study by

Lapsley and Hill (2010) provides an entire instrument that measures Optimism Bias. Some items included in the instrument for this study assess Optimism Bias as a trait (asking the likelihood of): "Getting caught if I cheat on a test," "Giving up on a task after being criticized," and "Failing a class if I don't study regularly" (Lapsley & Hill, 2010, p. 852). Additionally, there are items in the instrument that were adapted to COVID-19. For example, "Getting a sexually transmitted disease if I have unprotected sex" was reworded to say "Getting COVID-19 if I do not wear a mask" and "Getting COVID-19 if I do not practice social distancing" (Lapsley & Hill, 2010, p. 852). Additionally, the questionnaire included questions about who individuals see as role models and listen to, as well as how compliant individuals felt they personally were in following COVID-19 protocols compared to how compliant these individuals felt others are behaving in regard to the protocols in place (from SLT and social norms). Additional questions were included that seek to understand current behaviors of the individuals regarding following health guidelines and protocols as well as the behaviors of other people in their lives, such as their family, their coaches, and their teammates. For example, questions in the survey that reflect components of SLT include "My parents believe I should follow the COVID-19 protocols put in place by my university" and "My coach believes the COVID-19 pandemic is a serious issue." Items that reflect the impact of social norms include "My teammates always follow the COVID-19 protocols laid out at my sports program" and "Please estimate the percentage of your teammates who are always compliant with COVID-19 protocols both on and off campus."

The survey also asks players to evaluate their personal risk, perceived severity of the COVID-19 threat, and actual behaviors related to protecting their health. Items in the survey that reflect personal risk and perceived severity include "I am worried about getting COVID-19" and

the “The COVID-19 pandemic is a serious issue.” These statements were followed by questions about the percentage of time these individuals follow the COVID-19 protocols put in place.

Additionally, the Lambert et al. (2020) study that examined college students’ intentions of eating healthy snacks provides an instrument for measuring TPB. This study developed a questionnaire and utilized a 7-point Likert scale ranging from very likely to very unlikely. An item that measured behavioral intention was “Next time I eat a snack, I intend to select a healthy snack.” Additionally, other items measured concepts like attitudes toward behaviors and subjective norms. The item used to measure attitudes toward behaviors was “Eating a healthy snack is ... ” This item was repeated four times on the 7-point scale to better understand desirability, perceived benefit, enjoyment, and satisfaction. For the present study, this measure was adapted to fit a 5-point Likert scale ranging from strongly agree (1) to strongly disagree (5) to examine COVID-19 protocols reflecting self-efficacy, such as: “Wearing a mask is an easy solution to protect myself from being exposed to COVID-19” and “Social distancing is an easy solution to protect myself from being exposed to COVID-19.” Each of these items were measured to examine how desirable the action is and the perceived benefit (response efficacy) of the action.

At the conclusion of theory-based questions, there are questions about seeking mental health resources during the 2020-2021 academic school year, as well as information on testing positive for COVID-19, whether it be the athlete or family and friends. There is also a question about which sports the individual felt does not follow the COVID-19 protocols at their school. At the conclusion of the survey, there was a series of demographic questions such as age, gender, race/ethnicity, the geographic location of the individual’s school, use of mental health services,

and whether the individual opted-out of playing soccer during the 2020-2021 school year (see Appendix A).

CHAPTER THREE: RESULTS

General Results

Respondent Demographics

The online survey received a total of 110 responses. (See Appendix B for a list of all mean and standard deviation scores for scaled items.) Of the respondents, 75.45% (N = 83) were female, 23.64% (N = 26) were male, and 0.91% (N = 1) was gender variant/ non-conforming. Additionally, 9.09% of respondents were 18 years old (N = 10), 22.73% of respondents were 19 years old (N = 25), 17.27% of respondents were 20 years old (N =19), 33.64% of respondents were 21 years old (N = 37), 13.64% were 22 years old (N = 15), 1.82% were 23 years old (N = 2), 0.91% were 25 years old (N = 1) and 0.91% responded as Other (N = 1).The respondents were predominantly White (87.18%, N = 102), along with 5.13% African American (N = 6), 5.13% Hispanic (N = 6), and 2.56% Asian American/Pacific Islander (N = 3). Respondents also spanned across 13 U.S. states. Additionally, out of the 110 respondents, 106 (96.36%) did not opt out of playing their sports season in the 2020-2021 school year.

Regarding COVID-19, 44.55% of respondents have tested positive for COVID-19 at least once (N = 61), 67.27% of respondents have had at least one family member test positive for COVID-19 (N = 74), 7.27% of respondents have had a family member pass away from COVID-19 (N = 8), 96.36% of respondents have had friends test positive for COVID-19 (N = 106), and 94.55% of respondents have had teammates test positive for COVID-19 (N = 104). It was found that those who have not gotten COVID-19 feel greater risk of contracting the virus in

contrast to their peers who were previously infected: $t(109) = 2.04$, $p < .05$. It is not surprising that those who have already been sick believe they are protected from getting COVID-19 again.

Perceptions of Male Athletes versus Female Athletes Regarding COVID-19

To examine the differences between male and female athletes and their attitudes toward the COVID-19 protocols, a 5-point scale from strongly agree (5) to strongly disagree (1) was developed. A significant difference was shown between male and female athletes reporting whether they think that their coaches believe they should follow the COVID-19 protocols put in place by their university. Female athletes (Mean = 4.31) agreed more than the male athletes (Mean = 3.81). An independent samples t-test confirmed significant gender differences regarding perceptions of coaches' seriousness about COVID-19 protocols: $t(109) = 3.03$, $p < .01$. This suggests that females believe more strongly than do males that their coaches are stressing COVID-19 protocols. However, there was not a significant difference shown between males and females regarding their parents believing they should follow the COVID-19 protocols put in place by their university. Regarding coaches reminding student athletes to follow social distancing guidelines, however, there was a significant difference between males and females. Females agreed significantly more than males that their coaches remind them about the social distancing guidelines (Female mean = 4.14 and male mean = 3.69; $t(109) = 2.69$, $p < .01$). For coaches reminding student athletes to follow the mask-wearing guidelines, the data was significant as well (Female mean = 4.16 and male mean = 3.73; $t(109) = 2.72$, $p < .01$).

Looking at whether student athletes think that men's teams are more relaxed about COVID-19 requirements than women's teams, females agreed more strongly than males (female mean = 3.98 and male mean = 3.15). An independent samples t-test also showed significant gender differences regarding the belief that men's teams are more relaxed about COVID-19

requirements than women's teams: $t(109) = 3.72$, $p < .01$). However, both men and women soccer players agree that women's teams are not more relaxed about COVID-19 protocols than men's teams and therefore, there was not a significant gender difference found (Male mean = 2.27, female mean = 2.00; $t(109) = 1.66$, $p < .01$).

The survey also assessed if student athletes think that their university fairly treats all of the NCAA Division I teams in regard to COVID-19 requirements. Results indicated that females significantly disagreed more than males about all teams being treated equally (Male mean = 3.38 and female mean = 2.72; $t(109) = 2.34$, $p < .05$). Also, females strongly believed more than males that some sports have less stringent requirements for COVID-19 compared with soccer (Male mean = 3.15 and female mean = 3.94). An independent samples t-test confirmed significant gender differences regarding the belief that some sports other than soccer (such as basketball and football) have less stringent requirements for COVID-19: $t(109) = 3.55$, $p < .01$. Similarly, females more strongly agree than males that some sports on their campus are more relaxed about compliance with COVID-19 protocols than their team (Female mean = 3.95 and male mean = 3.38). An independent samples t-test confirmed significant gender differences regarding the belief that some sports on their campus are more relaxed about compliance with COVID-19 protocols compared to their sports team: $t(109) = 2.85$, $p < .01$. Research indicated that males are bigger risk takers in general. Aligned with this, the survey indicated that there was 67.52% compliance on average for female athletes regarding COVID-19 protocols but only 61.15% compliance on average for male athletes. Yet, further testing found no significant differences in compliance as a function of gender, $t(109) = 1.20$. Additionally, of the 110 survey respondents, 65.45% of the respondents (N = 72) either agreed or strongly agreed that men's teams are more relaxed about COVID-19 requirements than women's teams. Whereas, when

asked the same question about women's teams being more relaxed about COVID-19 requirements than men's teams, only 1.82% agreed or strongly agreed (N = 2). Results indicated clear disparities among NCAA Division I soccer players regarding their beliefs about COVID-19 protocols, thus addressing **RQ1** and supporting **Hypothesis 1**. For example, there are significant gender differences in perceptions of inequality. Female soccer players more than males perceive men's soccer teams have a more relaxed approach to COVID-19 protocols. They believe coaches of men's teams do not regulate social distancing and mask wearing as strictly as do women's teams.

Additionally, both men and women players believe that major sports such as football and basketball followed NCAA COVID-19 protocols less strictly than their soccer teams did. When respondents were asked which teams at their university do not follow the COVID-19 protocols laid out at their school, men's football (18.27%, N = 57) and men's basketball (17.31%, N = 54) gathered the highest responses. The next highest percentages were men's baseball (12.50%, N = 39) and men's soccer (12.18%, N = 38). The women's sport perceived to have the highest percentage of noncompliance was women's basketball (5.45%, N = 17). This directly addresses **RQ2** and supports **Hypothesis 2 and Hypothesis 3**.

Student Athletes Responses to Risk and Health Messaging

Several questions addressed students' COVID-19 risk perceptions and recommended prevention protocols. There is a positive and strong correlation between getting COVID-19 if the student athlete does not wear a mask and the student athlete being worried about getting COVID-19 ($r = .61$, $p < .01$). In other words, the more concerned they are about getting COVID-19, the more they believe they will get the virus if they do not wear a mask and *vice-versa*. There is also a positive and strong correlation between getting COVID-19 if the

student athlete does not social distance and the student athlete being worried about getting COVID-19 ($r = .67$, $p < .01$). However, in regard to ease of following protocols, only 50% of the respondents (N = 55) either agreed or strongly agreed that it is easy to follow their team's COVID-19 protocols, which related to the self-efficacy aspect of TPB. The more worried an individual is about getting COVID-19 the more likely they think that if they do not follow protocols like wearing a mask or social distancing they will get COVID-19. Therefore, when asked about the effectiveness of the COVID-19 protocols, 57.27% of respondents (N = 63) either agreed or strongly agreed that wearing a mask is an easy solution to protect from being exposed to COVID-19, and 71.81% of respondents (N = 79) either agreed or strongly agreed that social distancing is an easy solution to protect from being exposed to COVID-19. This reflects the aspect of response efficacy in TPB, and this even shows that respondents think social distancing is an easier solution to prevent COVID-19 than wearing a mask. However, there is no significant difference between the respondents' self-efficacy and response efficacy, meaning that respondents think protocols are easy to follow, as well as an easy solution in preventing COVID-19.

A significant difference was found between perceived risk of contracting COVID-19 when the student athlete does not follow COVID-19 protocols compared to when others do not follow COVID-19 protocols. This reflects Comparative Bias. When asked if the respondent would get COVID-19 if their teammates/friends did not wear a mask, 51.82% (N = 57) either agreed or strongly agreed. However, when respondents were asked about the likelihood of their teammates/friends getting COVID-19 if the respondent does not wear a mask, only 42.73% (N = 47) either agreed or strongly agreed. Similarly, when the respondent was asked if they would get COVID-19 if their teammates/friends did not social distance, 46.79% (N = 51) either agreed or

strongly agreed. However, when respondents were asked about the likelihood of their teammates getting COVID-19 if the respondent does not social distance, only 39.09% (N = 43) either agreed or strongly agreed, and when respondents were asked about the likelihood of their friends getting COVID-19 if the respondent does not social distance, only 36.37% (N = 40) either agreed or strongly agreed. This shows that a high percentage of individuals believe there is more of a risk of getting COVID-19 if it is based on others following protocols than if the respondent is following protocols. An independent samples t-test confirmed a significant difference between when the respondents wear a mask compared to when others wear a mask and the perceived risk of getting COVID-19: $t(109) = 2.39$, $p < .05$. An independent samples t-test was conducted for the effectiveness of social distancing by the respondent compared to when others social distance and a significant difference was also shown: $t(109) = 1.09$, $p < .05$. This may indicate that respondents think wearing a mask is more effective than social distancing in preventing COVID-19. However, there was a significant difference when the respondents were asked if they were to get COVID-19 if they did not practice social distancing compared to if the respondents think that practicing social distancing helps prevent others from getting COVID-19, $t(109) = 4.75$, $p < .01$.

The Impact of Role Models and Peers on Student-Athlete Perceptions of COVID-19

When asked if the respondents' coaches believe the COVID-19 pandemic is a serious issue, 82.73% (N = 91) either agreed or strongly agreed. When asked if the respondents' parents believed the COVID-19 pandemic is a serious issue, 72.72% (N = 80) either agreed or strongly agreed. When asked if the respondents believe the COVID-19 pandemic was a serious issue, 74.54% either agreed or strongly agreed (N = 82). It was found that there is a positive correlation between the belief that student athletes' coaches and parents believe that they should follow the

university's COVID-19 protocols ($r = .46$, $p < .01$). There was also a positive correlation found between student athletes' belief that the COVID-19 pandemic is a serious issue and their coaches' beliefs that the COVID-19 pandemic is a serious issue ($r = .40$, $p < .01$). However, the strongest positive correlation was found between student athletes' belief that the COVID-19 pandemic is a serious issue and their parents' beliefs that the COVID-19 pandemic is a serious issue ($r = .71$, $p < .01$). This supports **RQ4** and **Hypothesis 5** that while student athletes are influenced by their coaches and parents, the student athletes are more strongly impacted by their parents' beliefs about COVID-19 than their coaches' beliefs about COVID-19.

Of the 110 survey respondents, the average percentage of time the respondents reported being compliant with COVID-19 protocols both on and off campus was 65.50% (SD = 23.93). The same question was asked about teammates being compliant with COVID-19 protocols and the average percentage of time the respondents reported was 52.38% (SD = 25.24). Additionally, when asked if the respondents' teammates believe the COVID-19 pandemic is a serious issue, 49.09% (N = 54) either agreed or strongly agreed. It was also found that there was a positive correlation between the belief that student athletes' teammates believe the COVID-19 pandemic is a serious issue and whether the respondent believes the COVID-19 pandemic is a serious issue ($r = .49$, $p < .01$). This relates to the Health Belief Model and TPB aspect of subjective norms. This supports **RQ4** and **Hypothesis 6** that student athletes' teammates' beliefs about COVID-19 influence the beliefs of the respondents about COVID-19 (see Appendix B).

CHAPTER FOUR: DISCUSSION

Summary and Discussion

The principal aim of this study was to examine COVID-19 protocols, the way student athletes think about the protocols and how they act on them. To address this, the study tested some important concepts relevant to health and risk communication in this population, such as unrealistic optimism and its influence on behavior, the impact of role models on health perceptions and behaviors, as well as the connection between perceived susceptibility to the virus and health behaviors. The study also sought to examine gender differences in these perceptions, possibly illuminating yet another bone of contention regarding perceived inequality in men's and women's NCAA sports. An additional concern the study addressed is that throughout the COVID-19 pandemic, the public was exposed to changing data and guidelines on the effectiveness of COVID-19 protocols like wearing a mask or social distancing. Therefore, it was expected that respondents would have differing opinions about the protocols and their efficacy.

As predicted, male and female respondents differed in their views of COVID-19 protocols and how serious institutions are in enforcing the protocols. Additionally, a clear rift was found between male and female athletes. Women significantly more than men believed men's teams were more lax in enforcing Covid-19 protocols than women's teams. Both male and female athletes agreed that women's teams were not more relaxed than were men's teams in enforcing pandemic protocols. The researcher also expected disparities in how strict the protocols are enforced among different programs and sports. It was found that men's football and men's basketball, the two sports that tend to bring in the most revenue for universities, were seen as not having to follow COVID-19 protocols as strictly as other sports at the same universities.

Comparative Optimism is the belief that negative events are more likely to happen to others than oneself and Optimism Bias is the idea that individuals believe that their own outcomes in a situation will be more favorable than others in that same situation. Optimism Bias was shown in the frequency data provided about respondents' perceived risk of getting COVID-19 based on whether they would get COVID-19 if others did not follow COVID-19 protocols or if others would get COVID-19 if the respondents did not follow COVID-19 protocols. There was a higher percentage of respondents who either agreed or strongly agreed that they would contract COVID-19 if their teammates/friends did not follow COVID-19 protocols like wearing a mask or practicing social distancing. This could mean that some people think they are safer than others, given similar contexts and behaviors. The factor of personal control might also be at play. People know what they are doing and if they are following safety protocols, so they do not think they will infect others. However, people are not certain what others are doing to be safe, so they are less trusting. Of the findings in this study, this may be the most compelling. It is interesting that the perceived risk of contracting COVID-19 is situational based on who is posing a risk. The finding suggests that individuals trust their own actions rather than others' actions. This also relates to an individual's ability to control the risk of contracting COVID-19 and the fact that individuals do not have the ability to control other people's actions.

The results also reflect self-efficacy and response efficacy, both aspects of TPB. Self-efficacy is an individual's belief in their own ability to execute specific behaviors, such as following COVID-19 protocols, and response efficacy is an individual's belief that recommended actions will avoid an identified threat. In this case, the recommended action would be following the COVID-19 protocols and the threat would be contracting COVID-19. Self-efficacy was shown in respondents' high agreement that it is easy to follow health and safety

protocols related to COVID-19, such as wearing a mask and social distancing. It was also found that there was no significant difference between respondents' self-efficacy and response efficacy. This means that respondents feel that COVID-19 protocols are easy to follow and an easy solution in preventing COVID-19.

It was also expected that players looked to role models, such as teammates, parents, and/or coaches to take cues for COVID-19 protocol compliance. Findings suggest that student athletes' parents have a more significant impact on their health communication beliefs than the student athletes' coaches. This may be due to the fact that student athletes align with their parents' value systems since they grew up in their household. Therefore, individuals may be more willing to listen to their parents and be impacted by their parents' beliefs more than their coaches who they have only known for a few years. Another reason may be that the student athletes think that their coaches only support the protocols in order to ensure that the team will be allowed to participate in competitions.

Implications

In the sports world, it is clear that men's sports are favored over women's sports in many cases. Recently at the professional level, there has been a push for equal pay among athletes, regardless of gender. One of the most notable public stances for equal pay is among the United States Women's National Team (USWNT). The USWNT filed a lawsuit against the U.S. Soccer Federation for gender discrimination regarding paying players. At the collegiate level, Title IX, which is part of the Education Ammendments of 1972, was created to protect individuals from discrimination based on sex. Title IX states that "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance"

(US Department of Education, 2021). The present study examined the issue of inequality in men's and women's sports and specifically revealed that the pandemic reflected student athletes' perceptions of disparity. The finding that women perceive men's sports to have less strict guidelines for following COVID-19 protocols demonstrates the inequalities between men and women athletes. This gap created between men and women athletes, although an unintended consequence of COVID-19, may have even escalated resentment among women athletes who do not feel they are treated fairly in the sports world. Also, it was found that student athletes believe that certain sports that bring in more revenue have less stringent COVID-19 protocols which may even mean that there are different classes among sports programs throughout institutions across the country.

Regarding health communication among the NCAA, these findings suggest that it is important to mandate that all student athletes follow the same protocols regardless of revenue brought into the institution by the sport. I would recommend that institutions make it clear in their messaging and in their actions that all student athletes are treated equally and receive the same health messaging and that protocol compliance is equitably monitored across sports. The NCAA should know that it is commonly held belief and perception that there are differences between sports. While using fear to get people to comply would not be the best option, implementing serious repercussions for institutions that do not require the same protocols throughout the athletic department could be beneficial. It could also be beneficial to utilize social norm messaging to increase compliance as well, meaning that messaging would focus on what the student athlete's peers are doing as a means of persuasion. Furthermore, knowing that there is the reality that certain athletes do not need to follow protocols and health messaging, this could impact future health crises. It is reasonable to believe that student athletes will not feel the need

to take health messaging seriously if at the institutional level the messaging is not taken seriously.

Limitations

As with all studies, there are limitations. First, the number of respondents was much lower than expected. Initially, the researcher was expecting around 250 responses to the survey. However, the final tally was 110, in spite of multiple outreach efforts and reminders. Given that this is a very small sample of NCAA D1 soccer players out of the total number throughout the country, this is considered a limitation. A potential reason for this could have been the unwillingness of the researcher's connections to share the survey with their teammates. Also, our world has been engulfed with COVID-19 and it has been a main topic of discussion for the past two years. Thus, individuals may have been unwilling to participate in anything related to COVID-19, leading them to ignore the survey due to the topic subject line. Therefore, future research on this topic should include a larger sample size. A larger variety of athletes should be studied to gain a more well-rounded understanding of athletes' beliefs regarding health messaging like that of the COVID-19 pandemic rather than limiting the research to soccer players. Knowing that athletes not involved in a large revenue sport believe that sports that do bring in a larger revenue do not need to follow protocols, studying athletes in these main sports could help communication researchers understand another perspective. Diving deeper into the likely "classes" of sports can also assist in comprehending the inequalities that continue to exist in sports. Therefore, athletes other than soccer players should be studied, as well, to determine if these findings branch out to other sports. A small sample size typically limits the statistical power to detect differences in the data, normally. Despite the small sample and the one-sport study, however, the significant findings provide strong evidence in support of the hypotheses.

Another limitation was related to the assessment of important role models and their impact on student compliance. The survey asked respondents about friends and teammates separately. The vague nature of the difference between friends and teammates may have confused respondents. It is reasonable to think that for some of the respondents, teammates are also considered friends, and the survey did not detect a clear distinction. Future research should better operationalize these important categories related to athletes' role models and subjective norms. Additionally, exploring specific messages targeted to athletes and obtaining the athletes' perceptions of these specific messages and the messages' ability to persuade the athletes to change their beliefs and take action can help communicate with this target audience more effectively and efficiently could be another point of interest for future research.

However, this study does provide value to health communicators wanting to reach student athletes. The findings suggest that parents have a more significant impact on the way student athletes view COVID-19 protocols than do student athletes' coaches. Therefore, this gives insight on how to effectively reach student athletes regarding health communication by understanding what student athletes are being exposed to at home. It was also found that student athletes' teammates have an influence on the way student athletes respond to health communication. Therefore, creating messages based on social norms can be effective to reach this audience, as well.

Conclusion

In sum, this study supports the notion that individuals do not absorb and respond to health communication messaging the same way. Some are influenced by family, while others are influenced by peers. Additionally, some people have higher Optimism bias and Comparative Bias than others. Like any other persuasion technique, knowing your target audience and what

that audience listens to and takes action on is vital in sharing an effective message. The health communication about COVID-19 has continuously changed as the pandemic has evolved and this may have contributed to the variety of health communication messages about the COVID-19 pandemic and the disparities in response to the pandemic. These inconsistencies in messaging have also resulted in differing views about recommended protocols. This study has highlighted the differences in the way student athletes view COVID-19 protocols and has illuminated the differences between male and female sports, as well as differences in requirements for athletes participating in sports that are big money-makers for institutions. If specific sports and certain athletes do not have to follow protocols like other athletes in the same situation, it will be hard to mandate protocols for future health crises. This also may impact the credibility of the NCAA and its health protocols recommendations for member institutions if these institutions unequally require protocols. Therefore, regulating recommendations and ensuring that all member institutions implement the same protocols for each athlete regardless of their sport will help strengthen the credibility of the organization. Overall, while this study provided initial insight to the beliefs and perceptions of NCAA Division 1 soccer players, the identified gender differences may be the most important finding, as they underscore the burgeoning/growing resentments between male and female collegiate athletes. COVID-19 has added yet another layer of inequality.

APPENDIX A

Honors Thesis Survey

Hello, my name is Celia Gaynor and I am a current Division I athlete (soccer) at Butler University. I recently experienced this historic year of collegiate athletics during a global pandemic. To this end, for my honors thesis project, I am studying different athletic programs' responses to COVID-19 and student athletes' resulting experiences and viewpoints. This survey is being distributed to soccer players in athletic programs across the country to get a diversity of perspectives. My thesis director is Dr. Rose Campbell, Professor of Strategic Communication at Butler. If you have any questions, please direct them to her (rcampbel@butler.edu).

To that end, we are asking if you would please consent to participate in a study about being in college and playing Division 1 sports during the pandemic. Questions are mostly opinion-based. I am also asking you to please forward this survey to your teammates and encourage them to complete it. It will take less than 10 minutes and it is completely anonymous. We do not even ask you to identify your university, just the state where your university is located, but you may skip that question if you prefer.

Survey consent statement: Your participation in this project is entirely voluntary. You are free to decide not to participate in this study or to withdraw at any time. Your decision will not result in any loss of benefits to which you are otherwise entitled. If you choose to participate, you may withdraw at any time by simply closing the survey without submitting it. Whether you choose to participate or not, it has no bearing on your academic or athletic standing or services you receive from your University. The information obtained in the study may be published and/or presented at academic meetings, but because no personal identifying information will be asked of you, it is completely anonymous. This research is intended for individuals 18 years of age or older. If you are under age 18, please do not complete the survey.

We think you will enjoy taking this survey. If you consent to participate, please click on the link below.

The following questions address your orientation toward certain tasks or activities. For each, please indicate the degree of likelihood that best reflects you. For the questions about COVID-19, reflect on your response as if it were during the COVD-19 pandemic, pre-vaccine.

1. "Giving up on a task if I were criticized."

Extremely Unlikely
Unlikely
Somewhat Unlikely
Neutral
Somewhat Likely
Likely
Extremely Likely

2. "Failing a test if I do not study."

Extremely Unlikely
Unlikely
Somewhat Unlikely
Neutral
Somewhat Likely
Likely
Extremely Likely

3. "Getting caught if I cheat on a test."

Extremely Unlikely
Unlikely
Somewhat Unlikely
Neutral
Somewhat Likely
Likely
Extremely Likely

4. "Getting in a car accident if I drive faster than the speed limit."

Extremely Unlikely
Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

5. “Successfully completing a task if I procrastinate.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

6. “Having dental issues if I do not floss on a regular basis.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

7. “Having health issues if I eat unhealthy food.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

8. “Being a successful student-athlete during the COVID-19 pandemic.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

9. “Maintaining my typical academic performance when I am in season.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

10. “Getting COVID-19 if I do not wear a mask.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

11. “Getting COVID-19 if I do not social distance.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

12. “Next time I eat a snack, I intend to select a healthy snack.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

13. “Next time I have an exam, I intend to study for it.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

14. “Next time I drive a car, I will drive at the speed limit.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

15. “I will exercise daily in the next year.”

Extremely Unlikely

Unlikely

Somewhat Unlikely

Neutral

Somewhat Likely

Likely

Extremely Likely

Again, assuming this is a time before a COVID-19 vaccine was available, please respond to the following statements by indicating whether you: Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N), Disagree (D), or Strongly Disagree (SD):

16. My teammates would get COVID-19 if they did not wear a mask.

SA A N D SD

17. My friends would get COVID-19 if they did not wear a mask.

SA A N D SD

18. I would get COVID-19 if my teammates/friends did not wear a mask.

SA A N D SD

19. My teammates would get COVID-19 if I did not wear a mask.

SA A N D SD

20. My friends would get COVID-19 if I did not wear a mask.

SA A N D SD

21. I would get COVID-19 if I did not wear a mask.

SA A N D SD

22. My teammates would get COVID-19 if they did not practice social distancing.

SA A N D SD

23. My friends would get COVID-19 if they did not practice social distancing.

SA A N D SD

24. I would get COVID-19 if my teammates/friends did not practice social distancing.

SA A N D SD

25. My teammates would get COVID-19 if I did not practice social distancing.

SA A N D SD

26. My friends would get COVID-19 if I did not practice social distancing.

SA A N D SD

27. I would get COVID-19 if I did not practice social distancing.

SA A N D SD

28. Wearing a mask is an easy solution to protect myself from being exposed to COVID-19.

SA A N D SD

29. Social distancing is an easy solution to protect myself from being exposed to COVID-19.

SA A N D SD

30. It is easy to follow my team's COVID-19 protocols.

SA A N D SD

31. I always follow the COVID-19 protocols laid out at my sports program.

SA A N D SD

32. My teammates always follow the COVID-19 protocols laid out at my sports program.

SA A N D SD

33. Each team at my university/college has the same COVID-19 protocols.

SA A N D SD

34. I am worried about getting COVID-19.

SA A N D SD

35. I am concerned about being exposed to COVID-19.

SA A N D SD

36. The COVID-19 pandemic is a serious issue.

SA A N D SD

37. My parents believe the COVID-19 pandemic is a serious issue.

SA A N D SD

38. My teammates believe the COVID-19 pandemic is a serious issue.

SA A N D SD

39. My coach believes the COVID-19 pandemic is a serious issue.

SA A N D SD

40. Wearing a mask helps prevent individuals from getting COVID-19.

SA A N D SD

41. Practicing social distancing helps prevent individuals from getting COVID-19.

SA A N D SD

42. I always wear a mask when in public (not just on my campus or when required).

SA A N D SD

43. It's safe to be around my friends without a mask, even if close by.

SA A N D SD

44. I believe my teammates always wear their masks when in public (even away from the university/campus).

SA A N D SD

45. My coaches remind us often about the mask guidelines/rules put in place by my university.

SA A N D SD

46. My coaches remind us often about the social distancing guidelines/rules put in place by my university.

SA A N D SD

47. My coaches believe I should follow the COVID-19 protocols put in place by my university.

SA A N D SD

48. My parents believe I should follow the COVID-19 protocols put in place by my university.

SA A N D SD

49. Our team has sanctions aside from the university to address team players who do not comply with our university's COVID-19 policy.

SA A N D SD

50. I think men's teams are more relaxed about COVID-19 requirements than women's teams.

SA A N D SD

51. I think women's teams are more relaxed about COVID-19 requirements than men's teams.

SA A N D SD

52. I think our university fairly treats all of our division 1 teams in regard to COVID-19 requirements.

SA A N D SD

53. I believe that some sports at my university have less stringent requirements for COVID-19 compared with soccer.

SA A N D SD

54. I believe that some sports on my campus are more relaxed about compliance with COVID-19 protocols compared to my sports team.

SA A N D SD

Please respond to the following.

55. On a scale of 0 to 10 (0 being no anxiety and 10 being high anxiety), please indicate your level of anxiety playing sports during the COVID-19 pandemic.

___ 0 ___ 1___ 2___ 3___ 4___ 5___ 6___ 7___ 8___ 9___ 10

56. On a scale of 0 to 10 (0 being not safe at all and 10 being very safe), please indicate how safe you have felt playing sports during the COVID-19 pandemic.

___ 0 ___ 1___ 2___ 3___ 4___ 5___ 6___ 7___ 8___ 9___ 10

57. For the first time in my life, I sought out professional mental health services during the 2020-2021 academic year.

____ Yes
____ No
____ Unsure
____ Prefer not to answer

58. For the first time in my life, I sought out online mental health resources during the 2020-2021 academic year.

____ Yes
____ No
____ Unsure
____ Prefer not to answer

Again, assuming this is a time before a COVID-19 vaccine was available.

59. Please estimate the percentage of your teammates who are always compliant with COVID-19 protocols both on and off campus. _____
60. Please estimate the percentage of time you are always compliant with COVID-19 protocols both on and off campus. _____
61. How many different times have you been quarantined during the 2020-2021 school year? _____
62. Have you had COVID-19?

____ Yes

____ No

63. Have any of your family members contracted COVID-19?

____ Yes

____ No

64. Have any of your family members passed away from COVID-19?

____ Yes

____ No

65. Have any of your friends contracted COVID-19?

____ Yes

____ No

66. Have any of your teammates contracted COVID-19?

____ Yes

____ No

67. Please check any of the following sports that you feel do not follow the COVID-19 protocols at your school. Check as many or as few that apply.

____ Men's Basketball
____ Women's Basketball
____ Men's Soccer
____ Women's Soccer
____ Softball
____ Baseball
____ Men's Tennis
____ Women's Tennis
____ Men's ice hockey
____ Women's ice hockey
____ Men's lacrosse
____ Women's lacrosse
____ Men's golf
____ Women's golf
____ Men's volleyball
____ Women's volleyball
____ Men's football
____ Women's football

Please answer the following demographic questions. **If you are uncomfortable answering, you may select "prefer not to answer."**

68. How old are you? __

69. ___

Prefer not to answer _____

70. What is your gender?

____Male

____Female

____Transgender Male

____ Transgender Female

____Gender Variant/Non-Conforming

____Other

____Prefer not to answer

71. What is your ethnicity (Check all that apply)?

____Asian American/Pacific Islander

____African American

____White

____Hispanic

____Other

____Prefer not to answer

72. What sport do you play?

___ NCAA Division I Men's Soccer

___ NCAA Division I Women's Soccer

___ Other

____Prefer not to answer

73. What state is your university located? _____

Prefer not to answer _____

74. Did you opt out of playing your sports season in the 2020-2021 school year?

___ Yes

___ No

____Prefer not to answer

Thank You! Those are all the questions we have. I appreciate your participation.

APPENDIX B

Table 1: *Mean and Standard Deviation Scores for Scaled Items Related to Unrealistic Optimism*

Question	N	Min	Max	Mean	Standard Deviation
Q1: "Giving up on a task if I were criticized."	110	1	6	2.71	1.423
Q2: "Failing a test if I do not study."	110	1	7	4.21	1.551
Q3: "Getting caught if I cheat on a test."	110	1	7	3.61	1.648
Q4: "Getting in a car accident if I drive faster than the speed limit."	110	1	6	3.26	1.366
Q5: "Successfully completing a task if I procrastinate."	110	1	7	5.06	1.454
Q6: "Having dental issues if I do not floss on a regular basis."	110	1	7	3.73	1.579
Q7:"Having health issues if I eat unhealthy food."	110	1	7	4.95	1.694
Q8: "Being a successful student-athlete during the COVID-19 pandemic."	110	1	7	5.03	1.411
Q9: "Maintaining my typical academic performance when I am in season."	110	1	7	5.45	1.438

Q10: "Getting COVID-19 if I do not wear a mask."	110	1	7	4.25	1.678
Q11: "Getting COVID-19 if I do not social distance."	110	1	7	4.32	1.702
Q12: "Next time I eat a snack, I intend to select a healthy snack."	110	2	7	5.61	1.126
Q13: "Next time I have an exam, I intend to study for it.	110	2	7	6.06	1.111
Q14: "Next time I drive a car, I will drive at the speed limit."	110	1	7	4.26	1.554
Q15: "I will exercise daily in the next year."	110	1	7	6.1	1.219

Table 2: *Mean and Standard Deviation Scores for Scaled Items Related to Optimism Bias and Comparative Optimism Regarding COVID-19*

Question	N	Min	Max	Mean	Standard Deviation
Q16: "My teammates would get COVID-19 if they did not wear a mask."	109	1	5	3.33	0.953
Q17: "My friends would get COVID-19 if they did not wear a mask."	110	1	5	3.34	0.96
Q18: "I would get COVID-19 if my teammates/friends did not wear a mask."	110	1	5	3.24	0.985
Q19: "My teammates would get COVID-19 if I did not wear a mask."	110	1	5	3.1	0.967
Q20: "My friends would get COVID-19 if I did not wear a mask."	109	1	5	3.08	0.973
Q21: "I would get COVID-19 if I did not wear a mask."	110	1	5	3.35	0.943
Q22: "My teammates would get COVID-19 if they did not practice social distancing."	110	1	5	3.21	0.996
Q23: "My friends would get COVID-19 if they did not practice social distancing."	110	1	5	3.21	1.032

Q24: "I would get COVID-19 if my teammates/friends did not practice social distancing."	109	1	5	3.13	1.01
Q25: "My teammates would get COVID-19 if I did not practice social distancing."	110	1	5	3.06	0.97
Q26: "My friends would get COVID-19 if I did not practice social distancing."	110	1	5	3.02	0.948
Q27: "I would get COVID-19 if I did not practice social distancing."	110	1	5	3.16	0.934
Q28: "Wearing a mask is an easy solution to protect myself from being exposed to COVID-19."	110	1	5	3.51	1.107
Q29: "Social distancing is an easy solution to protect myself from being exposed to COVID-19."	110	1	5	3.65	1.07
Q30: "It is easy to follow my team's COVID-19 protocols."	110	1	5	3.29	1.112
Q31: "I always follow the COVID-19 protocols laid out at my sports program."	110	1	5	3.29	1.128

Q32: "My teammates always follow the COVID-19 protocols laid out at my sports program."	110	1	5	2.84	1.054
Q33: "Each team at my university/college has the same COVID-19 protocols."	110	1	5	2.66	1.198
Q34: "I am worried about getting COVID-19."	110	1	5	2.68	1.227
Q35: "I am concerned about being exposed to COVID-19."	109	1	5	2.78	1.336
Q36: "The COVID-19 pandemic is a serious issue."	110	1	5	3.87	0.996
Q37: "My parents believe the COVID-19 pandemic is a serious issue."	110	1	5	3.83	1.012
Q38: "My teammates believe the COVID-19 pandemic is a serious issue."	110	1	5	3.35	0.952
Q39: "My coach believes the COVID-19 pandemic is a serious issue."	110	1	5	4.04	0.867
Q40: "Wearing a mask helps prevent individuals from getting COVID-19."	110	1	5	3.43	1.129

Q41: "Practicing social distancing helps prevent individuals from getting COVID-19."	110	1	5	3.59	1.095
Q42: "I always wear a mask when in public (not just on my campus or when required)."	110	1	5	2.61	1.22
Q43: "It's safe to be around my friends without a mask, even if close by."	110	1	5	3.39	1.032
Q44: "I believe my teammates always wear their masks when in public (even away from the university/campus)."	110	1	5	2.37	0.985
Q45: "My coaches remind us often about the mask guidelines/rules put in place by my university."	110	2	5	4.05	0.715
Q46: "My coaches remind us often about the social distancing guidelines/rules put in place by my university."	110	1	5	4.01	0.818
Q47: "My coaches believe I should follow the COVID-19 protocols put in place by my university."	110	1	5	4.16	0.807

Q48: "My parents believe I should follow the COVID-19 protocols put in place by my university."	110	1	5	3.77	0.935
Q49: "Our team has sanctions aside from the university to address team players who do not comply with our university's COVID-19 policy."	110	2	5	3.69	0.916
Q50: "I think men's teams are more relaxed about COVID-19 requirements than women's teams."	110	1	5	3.75	1.068
Q51: "I think women's teams are more relaxed about COVID-19 requirements than men's teams."	110	1	4	2.07	0.726
Q52: "I think our university fairly treats all of our division 1 teams in regard to COVID-19 requirements. "	110	1	5	2.88	1.276
Q53: "I believe that some sports at my university have less stringent requirements for COVID-19 compared with soccer."	110	1	5	3.73	1.066

Q54: "I believe that some sports on my campus are more relaxed about compliance with COVID-19 protocols compared to my sports team."	110	1	5	3.79	0.949

Table 3: *Mean and Standard Deviation Scores for Scaled Items Related to Respondents Anxiety and Safety Regarding COVID-19 and Being a D1 Athlete*

Question	N	Min	Max	Mean	Standard Deviation
Q55: Feel Anxiety	103	0	10	4.1359	2.94075
Q56: Feel Safe	109	0	10	7.0642	2.53595

Table 4: *Mean and Standard Deviation Scores for Scaled Items Related to Compliance with COVID-19 Protocols*

Question	N	Min	Max	Mean	Standard Deviation
Q59: Mean % of Time Teammates Comply	109	0	100	52.3761	25.35554
Q60: Mean % of Time Respondent Complies	109	0	100	65.5046	24.03995

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