

The Battle Behind the Game: Mental Health in Student-Athletes at Dartmouth College

Dartmouth Peak Performance (DP2)

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Socy 11: Research Methods

Dartmouth College

The 2021 academic year is one that has scarred the Dartmouth community and has changed it for posterity. After the tragic loss of 3 freshman students to suicide, the college received a grim wake-up call about the mental health crisis brewing in its campus during the pandemic (Gaylord and Feuerstein 2021). Studies show, however, that mental health struggles in college students is not a phenomenon unique to the COVID-19 pandemic. “Stress and stressors have been found to be significantly linked to depression and psychological distress” in studies across the world (Ross et al. 2005) and although the pandemic added a new variety of stressors to undergraduate students at Dartmouth, these stressors did not replace those that were already present.

Post-secondary education is a key transition period into adulthood for many people so there exists a pressure to perform academically and socially. A study involving university students in Scotland concluded that “fear of failing a course, worries about examinations and grades, and long hours of studies” (Ross et al, 2005) contributed a great amount to the stress felt by said students. In a place as academically rigorous as an Ivy League college, students are bound to share that sentiment, especially student-athletes. Student-athletes at Dartmouth are held to the same academic standard as the rest of the student population with the added responsibility of performing competitively for their sport. If long study hours, failing courses, and examinations are a worry for the normal college student, student-athletes must worry about these aspects of school too but within a much tighter timeline; student-athletes are constantly involved in long training hours, traveling for games, and competing in games all while keeping up with their academic responsibilities. Too often is student athletes’ mental health placed as a secondary concern due to their perceived privileged social status and physical prowess (Gill 2008), without

taking into account the stressors that can emerge from being a full-time student as well as a full-time athlete.

Mental Health in College. Previously a taboo topic, mental health has been increasingly discussed as international research has shown that mental illnesses can lead to reduced quality of life and even death. Stress, as mentioned before, has been found to be detrimental to mental health across the literature. In Japan, a country with the fifth-highest suicide rate according to the World Health Organization, terms such as *karo jisatsu* (suicide driven by excessive overwork) and *karo utsubyo* (depression caused by excessive overwork) developed to describe the common occurrence of decaying mental health and death due to stress from overworking (Shimizu 2019). Much like a job, college can be extremely stressful. A 2008 survey by the American College Health Association found that “more than one in three undergraduates reported ‘feeling so depressed it was difficult to function’ at least once in the previous year, and nearly one in 10 reported ‘seriously considering attempting suicide’ in the previous year” (Hunt and Eisenberg 2010). Given that a report by the U.S Census Bureau indicates that the amount of the U.S. population who has earned at least a bachelor’s degree had been steadily increasing for the past 15 years (Nietzel 2021), it is safe to conclude that feelings of stress, depression, and suicide among college students has also increased.

Sport Participation. There is a clear gap in the literature when it comes to mental health specific to college student-athletes outside of the COVID-19 pandemic. However, there is extensive research on the relationship between mental health and belonging to a sports team, in children, teens, and professional athletes. Research shows that being part of a sports team can have varying effects on athletes’ mental health. On the one hand, performance and the competitive nature of sports can add to personal stress. Individual athletes, like gymnasts and

figure skaters, are more likely to report feelings of anxiety and depression than team athletes as “these athletes feel immense pressure to differentiate themselves from the competition in the pursuit of perfection and a judge’s approval” (Pluhar et al. 2019). On the other hand, participating in organized team sports has been constantly correlated with better overall mental health due to vigorous physical activity (Downs and Ashton 2011) and social belonging. Participation in sports allows for personal connections and promotes social integration (Oberle et al. 2019) which is beneficial to mental health.

Emotional Support and Well-Being. Research shows that social ties and social support are positively and causally related to improving physical and mental well-being. Social relationships buffer the harmful impacts of stress exposure, making social support a key element of mental well-being (Thoits 2011). There are many kinds of social support, however, emotional support is often singled out as the type of support that is the most effective in reducing the effects of stress as well as the type of support that is most helpful under a variety of situations (Krycak, Murdock, and Marszaleck 2012). In an environment such as college, in which social networks and structures are so important, emotional support is bound to be not only the most common type of support but also the most effective in dealing with adversity.

Up until now, we’ve described mental health in relation to that which detracts it—stress. Another aspect of mental health that is just as important is well-being. Mental well-being relates to how pleased a person is with their life and with themselves. While it is imperative to take into account that which harms mental health, to take a holistic approach, one must also look at that which determines when a person is happy and fulfilled. Emotional support, support in which social network members communicate through love and care making the recipient feel

special, understood, and cared for, can bring happiness and uplift their spirits (Ross et al. 2005) thus contributing to their well-being.

Dartmouth College student-athletes, like any other student, experience the stress that comes as a result of the academic rigor of an Ivy League institution. Added to that academic stress is the pressure of performing competitively as well as long hours of training. However, based on the literature there seems to be a silver lining: belonging to a team brings forth the possibility of making social ties that can potentially buffer harmful stress exposure through emotional support. This research aims to study what exactly is it about team structures that have a stress-buffering effect on athletes. Hopefully, with this information, the research can inform strategies to prevent another loss as tragic as the ones the Dartmouth community experienced in the 2021 academic year.

RESEARCH QUESTION

This proposal attempts to address the question, “Which characteristics of varsity athletic teams at Dartmouth College contribute the most to emotional support, leading to better mental health in regards to stress and well-being?” The characteristics that we chose to focus on include team size and whether the sport is individual or team-based. This enabled us to narrow our focus when looking at teams as a whole. Athletic team characteristics served as our independent variable. Our dependent variable was mental health. We chose to look at stress and well-being because of how broad the topic of mental health can be. We felt that stress and well-being were the most applicable to our research and related to our mediating variable, social support, perfectly. There are several types of social support, of which we focused on emotional support. Emotional support is the type of support that often involves physical comfort, such as pats on the back or high fives, as well as listening and empathizing. Given our research on previous studies

and literature, we expect there to be a positive correlation between being involved in athletics and experiencing stress. We expect there to be a strong negative correlation between emotional support and stress. We expect bigger teams to report higher levels of emotional support which reduces stress levels in comparison to smaller teams. Additionally, we expect those that engage in individual sports to report lower levels of emotional support thus increasing stress.

METHODS

This study aims to use quantitative methods to analyze which areas in athletes' lives DP2 can address to improve the mental health and well-being of Dartmouth's varsity athletes. The study will be conducted through a web-based survey in which Dartmouth student-athletes will be self-assessing and evaluating their experiences as varsity athletes here at this college. The hope is for the student-athletes to be reflective and honest about their experiences when participating in the survey. DP2 can use broadband approaches like Listserv as well as localized distribution methods such as specific program rosters to approach student-athletes. A web-based survey is the most appropriate method to answer the research question as it is the most practical procedure to obtain the most responses from student-athletes.

Advantages and disadvantages. The data collected is meant to help assess which characteristics of athletic teams contribute the most to individual mental health through social support. This information can help improve DP2 work and show areas to focus on. The data may be presented to teams, coaches, athletic directors. A web-based survey will be informative for resource distribution and useful for enacting changes to team cultures. Collecting quantitative data helps to synthesize results more clearly than utilizing qualitative methods that take more time to interpret. Instead of having to rely on qualitative methods like interviews, which can take a long time to process and analyze, our community partner will be able to efficiently crunch

numbers and observe the results. One potential drawback to our web-based survey is that the researchers performing our study must have some sort of background in statistics, but overall, this approach should save a significant amount of time and resources. Conducting this study through a web-based survey will save DP2 a lot of money. Executing face-to-face in depth-interviews, or paper-and pencil questionnaires would require additional time, money, and staff. It is important to note that surveys measure what people say, not what they always do. They are susceptible to reactive measurement effects. Face-to-face interviews are great as interviewers can clarify or restate questions and response rates tend to be higher, however, they are considerably more costly in regards to time and money than our mode. Additionally, paper-and-pencil questionnaires may be less expensive than FTF interviews, and anonymity protects privacy, but it requires human labor to read the results and not everyone sends them back in. Moreover, the quality of measurement of a paper-and-pencil questionnaire ranks lowest out of all the survey modes. Nonetheless, using a web-based survey does pose some disadvantages. For example, we will have no way of controlling the environment that our respondents are in while taking the survey and no way of clarifying any confusing statements that respondents might run into. Response rates are an issue that DP2 should be able to avoid by either providing incentives or coordinating with coaches to make the survey encouraged. The survey cannot be made mandatory due to ethical issues as it would constitute a violation of respect for persons. To ensure that none of the questions put forth are confusing, DP2 can perform a test run or preliminary survey, having a few athletes look through the survey before it is finalized to make sure it all makes sense. This process can help improve the survey draft and eliminate as many errors as possible. We have no way of controlling the environment people take the survey in, but we accept this as an unavoidable disadvantage of using a web-based survey.

Causality. This study does not attempt to find a causal relationship between our independent and dependent variables. Instead, the study aims to find which characteristic of varsity teams has the strongest relationship with mental health and social support. The scope of the research will not enable a full deep dive into causality but could lead to further research that does. By identifying which characteristic has the strongest relationship with mental health, future research will have guidance on what to focus on.

Inductive vs. Deductive. We are taking a deductive approach in our research. As discussed in the literature review, there is a plethora of work that focuses on the relationship between emotional support and well-being. There is also plenty of research that has been done on college students and mental health. Our approach is a bit different as we will be examining mental health in collegiate student-athletes, but this is still deductive as we are taking the theories developed and tested by others a step further.

Sampling. The participants of this study will be Dartmouth undergraduate varsity student-athletes. This study does not sample at all. Rather, the study will attempt to gather data from all members of the target population: Dartmouth College varsity athletes. The participants will come from the Dartmouth Athletics database of student-athletes which will provide a congruent population and sampling frame. DP2 can use broadband methods like Listserv as well as localized distribution methods such as specific program rosters to approach students. The positive to recruiting this way is that it's an affordable way to gather data in a limited time. The downside to this strategy of obtaining participants is the potential result of biased responses due to the reasons why some people choose to take part and some do not. Additionally, there is a possibility of under- or over-representation of the population. To mitigate some of the negatives,

we recommend DP2 to keep emailing student-athletes weekly until an agreeable number of responses have been submitted and to have coaches encourage participation.

Cross-Sectional or Longitudinal. The study will be longitudinal where we look at data from student-athletes at Dartmouth at different points throughout the year. The plan is for DP2 to collect the data through a web-based survey that we create and send out the survey two times a year to the participants: once in-season and once in the off-season. This allows DP2 to see how stress within athletes may change when they're in-season compared to when they are in the off-season.

Generalizability. Because we intend not to sample, but to reach out to all varsity athletes here at Dartmouth, our study is very generalizable. The only potential shortcoming is if our response rates are significantly lower than expected. If certain teams, especially smaller ones, have no participation in our study, we will have to communicate that in our results as something that will still need to be investigated. However, if we are able to get responses from all the teams, we won't have to worry about that. As far as transferring our results to a broader scale goes, Dartmouth is a relatively small and unique community. We, therefore, believe that aside from other colleges of similar size, our results will not be generalizable in this way.

Reliability. We expect our results from this research to be very reliable. We will be accounting for certain factors such as whether a student-athlete is in season or not in our survey so we don't have to worry about the results not being reliable. One potential factor that could skew results in the past and ongoing presence of COVID-19. College students in general and athletes, in particular, have had to deal with constant adversity over the past two years. Some teams, however, have lost two seasons while others have only lost one. The differing effects of

the virus on athletes who play in different seasons is our only concern in terms of reliability, but we hold that the effects have been similar for the most part across the board.

Validity. This is a strength of our research. We are adopting well-being and emotional support measures from previous research on those topics. Our methods also line up with what we are hoping to observe simply and efficiently. Overall we have no reason to believe that our results will lack validity.

Research Instrument. The web survey should take about 10-15 minutes for participants to complete because we want to be respectful of respondents' time when completing it. We hope to have our community partner send out the survey until the desired number of responses are gathered. The survey asks respondents to complete a consent form first, then transitions to statements that ask for responses on an agreeability scale from strongly disagree to strongly agree (see appendix for exact measures.)

Analysis & Interpretation. We hope that through our outlined research process, DP2 will be able to use the results to determine which team characteristic has the strongest relationship with mental health. In order to test each of our hypotheses, they will be able to use the data on what teams student-athletes play on, and observe the relationship between that and our mental health indicators. In order to do the latter, they will be able to put all of the mental health-related questions we ask together, forming a single measure for this abstract concept. Ultimately we hope that this research will lead to improved mental health for athletes here at Dartmouth due to an increased understanding of how team characteristics play a role in this. Teams that seem to struggle from a lack of emotional support and potentially the resulting worse mental health will be aided in fixing this. If a team does not struggle with these things, DP2 will be able to discern

why exactly this is the case and attempt to spread these positive circumstances around to all the teams here.

ETHICAL CONSIDERATIONS

Ethics is an important consideration when designing any type of research. In constructing this research proposal, we consulted the Belmont report which summarizes the basic ethical principles that must be followed when conducting research with human subjects. There are three main ethical principles outlined in the Belmont report—Respect for persons, Beneficence, and Justice—all of which we applied to the design of this research proposal. In terms of respect for persons, the researchers shall assure that no person is to be coerced, convinced, or bribed to complete the survey. A consent form, explaining the scope of the research, will ask for explicit consent before continuing to the survey. Furthermore, participation in this research will by no means be mandatory thus covering the basics of respect for persons in our research design. We also aim to reduce risk or harm, which is an application of beneficence, by making our survey anonymous. Although DP2 will be distributing the survey using a list of all the emails of student-athletes at Dartmouth, there will be no way of linking a person's email to their answers in the survey, thus assuring anonymity. The questions in the survey will be constructed in such a way that it prevents a person from giving possibly identifiable information. As an added advantage, we hope that anonymity will encourage our participants to be as honest as possible by reducing fear of retaliation. In terms of justice, participants' answers will be assessed and used to inform strategies to better the mental health of varsity student-athletes, thus maximizing benefits to the Dartmouth student-athlete community. Our research warrants that participants engaging in our study are treated equally throughout the process. We hope that the researchers, when carrying out

the project, will ensure that members of the varsity teams are provided the emotional support resources they need as we are aware that this topic can be very difficult to discuss.

FEASIBILITY AND SIGNIFICANCE

Our community partner is Dartmouth Peak Performance, or DP2, which is a program that is designed to position student-athletes to achieve the highest levels of physical, intellectual, and personal growth during their careers at Dartmouth. DP2 has various aspects within its program, but the focus of our study is on the Leadership and Mental Performance aspect. Since our study focuses on team characteristics and the impact it has on mental health of student-athletes at Dartmouth, it is best that our study be used to improve the leadership, team building, and mental performance training component of DP2 since those are keys to the success of Dartmouth student-athletes and teams. Given what we know about DP2's goals, activities, needs, and resources, we believe our design is feasible for DP2 because it does not require a lot of manpower or funds to disperse and analyze the data we are looking at. Our design consists of quantitative methods to analyze which areas in athletes' lives DP2 can address to improve the mental health and well-being of Dartmouth's varsity athletes. The study will involve a web-based survey which is a practical choice for DP2 in obtaining the answer to the research question because it increases productivity by saving time and the data is quickly available and can be easily transferred to some statistical software if more detailed analysis is needed. Our research matters because the scope and purpose of the research align perfectly with DP2's mission of helping athletes achieve at the highest levels of physical, mental, and intellectual growth during their careers at Dartmouth as the results can be used to inform management strategies that promote social support, leading to improved well-being and reduced stress in student-athletes. Since DP2 meets with coaches and student-athletes one-on-one, our research design can assist

them in helping coaches and leaders of teams better understand how to promote the well-being of athletes on their prospective team. In terms of the sociological community as a whole, our proposed research will serve to fill in the gap in the literature regarding the mental health of student-athletes and what characteristics of team sports serve to hinder or benefit mental health.

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APPENDIX A: INFORMED CONSENT FOR SURVEY PARTICIPATION

You have been asked to fill out a voluntary survey on your experience in Dartmouth Athletics. Whether you fill this out will not impact your status with the Dartmouth Athletics in any way.

If you complete the survey, your responses will be used to assess how various characteristics of athletic teams affect mental health through emotional support.

The survey will ask questions that relate to your team's characteristics and your personal experience in athletics. The survey takes less than 10 minutes to complete.

PERSONAL GAIN

There is no monetary compensation involved for taking this survey and you are not likely to benefit personally from taking it; however, the results of this survey may impact how DP2 approaches different teams.

CONFIDENTIALITY

All of your responses are confidential. No information related to your name or NetID will be recorded.

QUESTIONS

If you have any further questions regarding this survey, you may direct them to Stephen Gonzalez, at stephen.p.gonzalez@dartmouth.edu.

CONSENT

Please be aware that you are free to stop the survey at any time. Do you wish to participate in the survey? (Yes/No)

APPENDIX B: SURVEY QUESTIONS

Note from authors: This survey has been programmed into Google Forms as part of the study. For access as a collaborator to the file, please email stephen.p.gonzalez@dartmouth.edu.

I. TEAM INFORMATION

Instructions: Please complete this survey for only one team. If you participate in more than one Dartmouth Athletics program, please complete this survey separately for each program.

1. What team are you on? (drop down menu)

- a. Baseball
- b. Basketball Men
- c. Basketball Women
- d. Crew Heavyweight Men
- e. Crew Lightweight Men
- f. Crew Women
- g. Cross Country Men
- h. Cross Country Women
- i. Equestrian
- j. Field Hockey
- k. Football
- l. Golf Men
- m. Golf Women
- n. Ice Hockey Men
- o. Ice Hockey Women
- p. Lacrosse Men
- q. Lacrosse Women
- r. Rugby Men
- s. Rugby Women
- t. Sailing
- u. Skiing Alpine Men
- v. Skiing Alpine Women
- w. Skiing Nordic Men
- x. Skiing Nordic Women
- y. Soccer Men
- z. Soccer Women
- aa. Softball
- bb. Squash Men
- cc. Squash Women

- dd. Swimming and Diving Men
- ee. Swimming and Diving Women
- ff. Tennis Men
- gg. Tennis Women
- hh. Track and Field Men
- ii. Track and Field Women
- jj. Volleyball
- kk. Club sport or other student

II. SOCIAL SUPPORT

2. Approximately how many hours per week do you spend with your teammates outside of athletics (i.e. not in practice or competitions)?
 - a. 0-3
 - b. 4-7
 - c. 8-11
 - d. 12-15
 - e. 16+

3. How many of your closest friends are on your athletic team?
 - a. None
 - b. Few
 - c. Some
 - d. Most
 - e. All

4. I have a role on my team and feel like I am included and make a difference.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree/disagree
 - d. Disagree
 - e. Strongly disagree

5. I know I can trust my teammates and they know that they can trust me.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree/disagree
 - d. Disagree
 - e. Strongly disagree

IV. MENTAL HEALTH

6. How often have you felt anxiety in the last month?
 - a. Constantly
 - b. Most every day
 - c. Occasionally
 - d. Rarely
 - e. Never

7. In general, I feel confident and positive about myself.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree/disagree
 - d. Disagree
 - e. Strongly disagree

8. In the last month, I have felt like I could not cope with all the things that I had to do.
 - a. Strongly agree
 - b. Agree
 - c. Neither agree/disagree
 - d. Disagree
 - e. Strongly disagree

9. I often feel overwhelmed by my responsibilities.
 - a. Strongly disagree
 - b. Slightly disagree
 - c. Neutral
 - d. Slightly agree
 - e. Strongly agree

10. Over the past month how often have you felt lonely?
 - a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Always

V. CONFIRMATION MESSAGE

Your response has been recorded! Thank you for taking the time to fill out this survey.

Please remember that if you have any concerns about this survey or your response, or additional questions, you may direct them to Stephen Gonzalez, at stephen.p.gonzalez@dartmouth.edu.