



Front Porch? What About No porch? Exploring Housing Insecurity Among NCAA College Athletes During the COVID-19 Pandemic

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This study explored housing insecurity among NCAA college athletes during the 2020 COVID-19 pandemic. In 2020, 1,130 college athletes completed the #RealCollege Survey, a national survey examining housing and food insecurity among college students. Housing insecurity is a growing issue among general college students and the findings suggest it is also a potential issue for college athletes, particularly males, college athletes of color, and first-generation college students. Descriptive statistics examined how housing insecurity and housing insecure symptoms appeared among NCAA college athletes, Chi-squares test of independence explored the relationship between student characteristics (e.g., race, sex) and housing insecurity. Additionally, binary logistic regression models understand how COVID-19 impacted those relationships. These exploratory findings encourage more research on college athlete experiences with housing insecurity to understand better the impact housing insecurity has on college athletes.

Keywords: housing insecurity; college athlete well-being

Sports are a microcosm of society, and college athletics is no different. Across the United States, college students experience housing insecurity which remains an important research topic on general college students (Hallett et al., 2019; Hallett & Crutchfield, 2018). However, this research rarely examines college athletes' experiences with housing insecurity. In 2019 the *Hungry to Win: A First Look at Food and Housing Insecurity Among Student-Athletes* report by the Hope Center for Community and Justice (Hope Center) revealed 14% of NCAA Division I, 19% of NCAA Division II, and 13% of NCAA Division III "student-athletes" had experienced homelessness in the previous 12 months (Goldrick-Rab et al., 2020). This was one of the first empirical explorations into housing insecurity, specifically among college athletes but there is still a dearth of research on housing insecurity among college athletes.

Some view college athletics as a front porch that make universities more visible to the public (Bass et al., 2015). When the lights come on, college athletes take the courts, fields, arenas and other venues to perform in front of fans while representing their universities. Once the game ends and the crowds are gone, most college athletes return home to rest and prepare for the next day. However, instead of going home after athletic events, a smaller portion of college athletes must figure out where they will sleep that night. For example, in a recent *Last Chance U Basketball* episode, Shemar Morrow documented his experiences with homelessness as a college athlete (McDonald, 2022). *Last Chance U* follows college athletes at junior colleges who are looking for a "last chance" opportunity to play college sports, but experiencing housing insecurity or homelessness is an issue that college athletes at any institution may experience.

For instance, several NCAA college athletes have received national attention for experiencing housing insecurity. In 2014, Antoine Turner, a defensive lineman at Boise State University made headlines after it was revealed he was experiencing homelessness and the public was encouraged *not* to help him due to potential NCAA violations (Green, 2014). A year later, Silas Nacita experienced being homeless while attempting to play football at Baylor University, but ultimately lost his eligibility for receiving benefits to help alleviate his housing insecurity experiences (Strachan, 2015). Five years later, during the 2020 COVID-19 pandemic as colleges closed dorms and required students to return home, college athletes such as Sam Williams football player at Ole Miss, were forced to leave their campus housing and return to either unsafe homes or no homes at all (Desai, 2020).

Housing insecurity and homelessness are not new issues in college athletics, but these issues have received little attention in college athlete research. Academic research serves as a primary source of knowledge for academic communities and signals what topics are essential to an academic field (Brennan & Teichler, 2008). News media has highlighted individual experiences that some college athletes have with housing insecurity and homelessness, but there is still much to learn about the scope of this issue in college athletics. Previous research by the Hope Center indicates that housing insecurity is something that at least a portion of NCAA college athletes experience (Goldrick-Rab et al., 2020). However, this work did not identify which college athletes are at risk for experiencing housing insecurity. Additionally, while housing insecurity was already an issue among college athletes, COVID-19 undoubtedly exacerbated this issue.

Therefore, the purpose of this paper is to explore how housing insecurity manifests among college athletes and how COVID-19 affected those experiences. This study was guided by four research questions:

- RQ 1: What student characteristics are related to housing insecurity for NCAA college athletes?
- RQ 2: Based on student characteristics, which NCAA college athletes are likely to experience housing insecurity?
- RQ 3: How did housing insecurity appear among NCAA college athletes during the COVID-19 pandemic?
- RQ 4: How, if at all, did COVID-19 affect the likelihood of which NCAA college athletes experiencing housing insecurity?

Literature Review

Housing Insecurity in Higher Education

Housing insecurity is “any form of residential arrangement that is not adequate, stable, and safe” (Hallett et al., 2019, p. 3) and is a growing issue for college students because of how expensive college has become (Goldrick-Rab, 2017). Housing insecurity is at times simplified or equated to homelessness despite housing being an experience with breadth and complexity. Hallett and Crutchfield (2018) developed a four-category continuum for housing (see Figure 1): homelessness, housing instability, recent housing instability, and housing security. This nuanced definition accounts for the reality that college students may experience a range of housing situations and may move between different stages throughout their time on campus. Utilizing a holistic definition to understand housing insecurity provides students with various options that could better address their living situations.

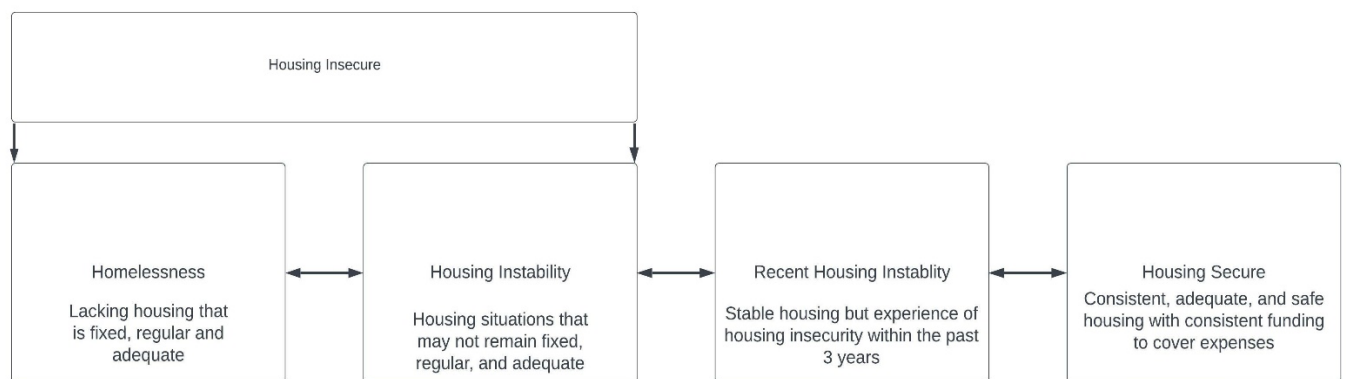


Figure 1.

Note: Adapted from Hallett & Crutchfield (2019)

It can be difficult to capture housing insecurity because it can be viewed as homelessness. However, it is also difficult because college students may feel ashamed about their housing experience and hesitate to share their situations (Hallett et al., 2019; Hallett & Crutchfield, 2018). This is partially why there is limited empirical research on housing insecurity among college students (Broton, 2020). There is no available research using nationally representative samples, as most available literature examines housing insecurity at a single institution or

multiple institutions within the same university system (Broton, 2020). Despite this, the research does indicate that “1 in 10 college students are homeless and 45% are housing insecure, defined as a broad range of challenges related to housing affordability and stability, including homelessness” (Broton, 2020, p. 34). Students attending two-year institutions are most likely to experience housing insecurity, however, those attending four-year institutions also experience this phenomenon. Although there is not a nationally represented sample, research has consistently indicated that college students from economically disadvantaged backgrounds or those that hold racially minoritized identities may be at a greater risk of experiencing housing insecurity (Goldrick-Rab et al., 2018; Hallett et al., 2019; Hallett & Crutchfield, 2018).

College students may employ several strategies to address housing insecurity. One option is living in residence halls, but those are often too expensive for students, and some choose to live in off-campus housing to help make college more affordable. However, as the housing market rises off-campus housing can cost more than on-campus housing (Hallett, 2012; Hallett et al., 2019). Additionally, affordable off-campus housing that is near campus may not always be in safe locations, particularly as universities seek to put up walls between their schools and local communities (Baldwin, 2021). Students may also couch-surf between friends to address their housing needs, but this does not provide stable housing (Hallett et al., 2019). Conversely, college students may find roommates to help share costs, but when this happens, college students may have more people living in their house than the house can hold (e.g., eight college students splitting a four-bedroom house). While this can save money, it leaves college students without a private bedroom, bathroom, or dining space (Hallett et al., 2019). When a college student is out of housing options they resort to various shelters, their cars, or in public spaces (e.g. park benches), which are the worst options as they put students at significant safety risks (Hallett et al., 2019).

When students are housing insecure they may struggle academically (Broton, 2020). Studies have found housing insecurity is associated with poorer academic outcomes, such as lower GPAs (Hallett et al., 2019; Hallett & Crutchfield, 2018). Students reported an inability to focus on studies or putting off class to attend work and make money for housing (Hallett et al., 2019). These studies have not examined college athletes, so there have not been empirical investigations into how athletes and their educational outcomes are affected by housing insecurity.

Basic Needs Insecurity in College Athletics

Research on food and housing insecurity in higher education has grown throughout the past decade in response to the growing number of college students experiencing food and/or housing insecurity. This work has been driven by institutes, such as the Hope Center for College, Community, and Justice (The Hope Center), which seek to use research to identify real issues that college students face (Goldrick-Rab et al., 2020). As the literature has grown, scholars call for BNI research to expand by exploring BNI among targeted identities (Duran & Núñez, 2021). College athlete identity is a unique identity due to their dual roles as student and athletes (Patton et al., 2016). There is limited research on college athletes' experiences with BNI (Brown et al., 2021; Goldrick-Rab et al., 2020; Poll et al., 2020).

In 2019, The Hope Center released the *Hungry to Win: A First Look at Food and Housing Insecurity Among Student-Athletes* report, which was the first comprehensive study of food and homelessness among college athletes (Goldrick-Rab et al., 2020). In this initial report, 14% of NCAA Division I, 19% of NCAA Division II, and 13% of NCAA Division III “student-athletes” in their 2019 #RealCollege Survey had experienced homelessness in the previous 12

months, while 24% of NCAA Division I, 26% of NCAA Division II and 21% of NCAA Division III experienced very low or low food security. As a first report, it provided insight into the reality that food, and housing insecurity could be more prevalent in college athletics than one might expect. However, there were limitations. The initial report did not disaggregate data by sport, nor did it consider these trends based on social identities. Scholars have built on the Hope center report by examining other aspects of BNI, though most have centered on food insecurity. Poll et al. (2020) and Brown et al. (2021) helped established BNI as a research topic among college athletes, but neither examined housing insecurity.

Methodology

Data Source

This study used data from the #RealCollege Survey (#RealCollege) Database-v1. The #RealCollege Survey is a multi-institutional panel study of BNI among college students. The Hope Center annually collects data on BNI from college students around the United States. The survey includes multiple blocks of questions that participants can complete or skip at their discretion and is designed to explore problems affecting college students, which are then addressed through policy or interventions. The survey was developed in 2015 to provide colleges with information about students' basic needs. Institutions distribute the survey to their students, and the survey includes questions about basic needs insecurity, such as food and housing insecurity (*#RealCollege 2021: Basic needs insecurity during the ongoing pandemic*). Since 2015, over 500,000 college students from 530 colleges and universities have participated in the survey¹.

Data was provided to me as a member of the inaugural #RealCollege™ Research collaborative in 2021. The Hope Center provided select scholars with access to their #RealCollege data after receiving funding from the Spencer Foundation to provide a deeper understanding of how BNI affects college students from a variety of backgrounds. The data used in this study comes from the Fall 2020 #RealCollege Survey, which was disseminated during the height of COVID-19 and included responses from 195,629 college students at 72 four-year colleges and 130 two-year colleges. There was an estimated response rate of 11 percent to the 2020 #RealCollege Survey (*#RealCollege 2021: Basic Needs Insecurity during the Ongoing Pandemic*, 2021).

Sample

The 2020 #RealCollege survey asked participants if they were a varsity student-athlete on a team sponsored by their college athlete department and participants could select: “Yes”; “No”; or “Prefer not to answer”. Since this study was focused on NCAA college athletes, only responses from those who selected “Yes” to the question about being a varsity student-athlete were kept. Further, participating institutions were grouped by athletic governing body (NCAA, NJCAA, NAIA) which was used to identify which college athletes were at NCAA institutions. Those who were not college athletes at NCAA institutions were dropped from the data. Listwise deletion was used to address missing data in the outcome and independent variables. This left an

¹ See <https://hope.temple.edu/sites/hope/files/media/document/HopeSurveyReport2021.pdf> for more information on the #RealCollege Survey.

analytic sample of 1,130 individuals who identified as college athletes and responded to the measures that will be discussed next. The sample was primarily White college athletes ($n = 688$, 60.9%), female ($n = 746$, 66.0%), and continuing generation college students ($n = 623$, 55.1%). When considering scholarship status, almost half of the college athletes did not have scholarships ($n = 513$, 44.9%) and a majority attended NCAA Division I institutions ($n = 730$, 64.6%). Table 1 presents the full descriptive statistics based on racial identity, sex, college student generation, scholarship status, and NCAA division.

Table 1
Race, Gender, Scholarship Status, & NCAA Division (n = 1,130)

Racial Identities Categories	N	%
White	688	60.9
Black or African American	186	16.5
Hispanic, Latinx or Chicax	151	13.4
Other Racial Identities	105	9.3
Sex Identity Categories	N	%
Male	368	32.6
Female	746	66.0
Other Sex Identities	16	1.4
College Student Generation	N	%
First Generation	507	44.9
Continuing Generation	623	55.1
Scholarship Categories	N	%
No Scholarship	513	45.4
Partial Scholarship	442	39.1
Full Scholarship	175	15.5
NCAA Divisions	N	%
NCAA Division I	730	64.6
NCAA Division II	263	23.3
NCAA Division III	137	12.1

Variables

Student Characteristics. Race/ethnicity, sex, college student generation status, scholarship status and NCAA Division were self-reported student characteristic measures. For racial identity, participants could select their racial identity from the following options: “Black”; “White”; “Hispanic”; “Asian”; “Indigenous, or Native American”. Racial identity was recoded as a categorical variable where 1= White; 2 = Black; 3 = Hispanic; and 4 = Other Racial Identities. Participants who identified as Asian, Indigenous, or Native American were categorized into the “Other Racial Identities” because of low cell numbers (Pallant, 2020). This type of categorization is not ideal as it can erase the individual experiences that underrepresented racialized identities have (Zuberi, 2001; Zuberi & Bonilla-Silva, 2008), however, it was done so that participants could be included and not removed from the analysis. Regarding sex,

participants could identify as “Male”; “Female”; “Gender non-binary”; “Prefer not to answer”; or “Prefer to self describe”. Sex was recoded into a categorical variable where 1 = “Male”; 2 = “Female”; 3 = and “Other Sex” (i.e., gender non-binary; prefer not to answer; prefer to self-describe) = 3.

College student generation was captured using two questions about the education level of participants’ parents. Participants could have selected their parent(s) educational level by indicating if their parent(s) obtained one of the following educational outcomes: “Less than a high school education”; “A high school diploma”; “Some college (e.g., trade school or associate degree)”; “Bachelor or graduate degree”; “Prefer to answer or unknown”. The variable was recoded where 0 = continuing generation (i.e., Bachelor’s or graduate degree) and 1 = first generation (i.e., less than a high school education, a high school diploma, and some college). Participants were also asked about their athletic scholarship status and could select one of the following options: “No athletic scholarship”; “Partial athletic scholarship”; “Full athletic scholarship”; “Was supposed to have a partial scholarship, but it’s canceled”; “Was supposed to have a full scholarship, but it’s canceled”; “Prefer not to answer”. This variable was recoded into a categorical variable where 1 = No scholarship (including was supposed to have a partial scholarship, but it’s canceled; and was supposed to have a full scholarship, but it’s canceled); 2 = partial scholarship; and 3 = full scholarship. There were less than five responses that selected prefer not to answer, so those were dropped from the data set. Lastly, NCAA division was captured using institutional data and coded as a categorical variable where 1 = NCAA Division I; 2 = NCAA Division II; and 3 = NCAA Division III. #RealCollege Survey Database-v1 does not provide any other institutional-level data to maintain privacy to institutions, so the NCAA division is the only institutional variable included. Race/ethnicity, sex, college student generation status, and scholarship status were assessed at the time the survey was distributed, while NCAA Division was added by the Hope Team later based on the participating institutions’ name.

Housing Insecurity and Housing Insecure Symptoms. Housing insecurity was assessed using one variable that asked if students were housing insecure; participants could answer 0 = No or 1 = Yes. Housing insecure symptoms were measured using nine individual questions from the survey. Each question was framed as experiences over the past 12 months (Fall 2019 – Fall 2020). The questions were “In the past 12 months”: “been unable to pay or underpaid rent/mortgage”; “received a summons to appear in housing court;” “not paid the full amount of utilities”; “had an account go into collections or default”; “moved in with other people due to financial issues”; “lived with others beyond the capacity of the house/apartment”; “had rent/mortgage increase that was difficult to pay”; “lived in a household where you felt unsafe”; “moved at least three times”. Questions were asked independently, and participants could answer 0 = No, or 1 = Yes.

COVID-19 Impact on Housing. Given the timing the survey was conducted, it was imperative to account for the COVID-19 pandemic. Thus, seven questions were used to measure COVID-19’s impact on housing. Each question began with “Did you experience any of the following from spring term 2020 to present due to the COVID-19 pandemic”, and the following questions were utilized: “I struggled to pay to go back home”; “I could not afford to go back home”; “I had to move out of off-campus housing”; “I had difficulty paying my rent”; “I was evicted”; “I lived in a place where I felt unsafe”; “I couch-surfed because I had nowhere else to go”. Questions were asked independently, and participants could answer 0 = No, or 1 = Yes.

Statistical Analysis

Descriptive Analysis. Descriptive statistics are useful for providing information about characterizing and organizing data (Pallant, 2020). Descriptive statistics were used to understand how housing insecurity appeared among NCAA college athletes during COVID-19. The number and percent of college athletes that identified as experiencing housing insecurity, housing insecurity symptoms, and COVID-19 impact on housing variables were used as descriptive statistics.

Chi-Square. Chi-square tests for independence allow researchers to explore the relationship between categorical variables (Pallant, 2020). Five chi-square tests for independence were used to explore how student characteristics related to housing insecurity. A dichotomous housing insecurity variable (0 = Housing secure, 1 = Housing insecure) was used as the outcome for each chi-square test, while racial identity, sex, college student generation, scholarship status and NCAA division were used as the comparison variables.

Binary Logistic Regression. Binary logistic regression is an extension of multiple regression, in that it assesses the impact a set of predictors has on a dependent variable, but it differs in that it can include categorical variables (Andrew et al., 2020; Pallant, 2020). Further, logistic regression reports odds ratios, which allows researchers to tests models that predict the probability of a given outcome (Andrew et al., 2020; Pallant, 2020). In this study, two binary logistic regression models were developed using housing insecurity as the outcome for both. The first model contained only the student characteristics as independent variables to gain a general idea of which college athletes might be more likely to experience housing insecurity. The second model added the COVID-19 impact on housing variables to explore if COVID-19 increased the likelihood of experiencing housing insecurity. All analysis was completed using IBM SPSS 27.

Results

Four research questions directed the analysis: RQ 1) How did housing insecurity appear among NCAA college athletes during the COVID-19 pandemic? RQ 2) What student characteristics are related to housing insecurity for NCAA college athletes? RQ 3) Based on student characteristics, which NCAA college athletes are likely to experience housing insecurity? RQ 4) How, if at all, did COVID-19 affect the likelihood of which NCAA college athletes experiencing housing insecurity? This section starts by discussing the descriptive analysis which address RQ 1. Next, the section turns to the Chi-Square analysis which addresses RQ 2. The section concludes by discussing the logistic regression model results which address RQ 3 and RQ 4.

Descriptive Analysis

Table 2 presents the descriptive results examining how housing insecurity appeared among NCAA college athletes during the COVID-19 pandemic. Five hundred thirty-five participants (47%) experienced housing insecurity when surveyed in Fall 2020. In the 12 months preceding Fall 2020, 142 (12.6%) were unable to pay or underpaid their rent/mortgage, and 12 (1.1%) were summoned to appear in housing court. Additionally, 137 (12.1%) had not paid the full amount for utilities and 64 (5.7%) had to go into collections or default due to housing costs. Further, 142 (12.6%) athletes moved in with other people due to financial issues in the 12

months preceding Fall 2020, while 91 (8.1%) lived with others beyond housing capacity over that same period. Lastly, in the 12 months predating Fall 2020, 262 (23.2%) moved at least three times, 139 (12.3%) had a rent or mortgage increase that was difficult to pay, and 96 (8.5%) lived in housing where they felt unsafe.

Table 2
Housing Insecurity and Housing Insecure Symptoms (n = 1,130)

Housing Insecure	N	%
No	595	52.7
Yes	535	47.3
In past 12 months: Been unable to pay or underpaid rent/mortgage	N	%
No	998	87.4
Yes	142	12.6
In past 12 months: Received a summons to appear in housing court	N	%
No	1118	98.9
Yes	12	1.1
In past 12 months: Not paid the full amount of utilities	N	%
No	993	87.9
Yes	137	12.1
In past 12 months: had an account go into collections or default	N	%
No	1066	94.3
Yes	64	5.7
In past 12 months: Moved in with other people due to financial issues	N	%
No	988	87.4
Yes	142	12.6
In past 12 months: Lived with others beyond the capacity of the house/apartment	N	%
No	1039	91.9
Yes	91	8.1
In past 12 months: Had a rent/mortgage increase that was difficult to pay	N	%
No	991	87.7
Yes	139	12.3
In past 12 months: Lived in a household where you felt unsafe	N	%
No	1034	91.5
Yes	96	8.5
In past 12 months: Moved at least three times	N	%
No	868	76.8
Yes	262	23.2

Table 3 presents descriptive results that examine how COVID-19, specifically, impacted housing for NCAA college athletes. Two hundred sixty-six (23.5%) struggled to pay to return home after college campuses closed, while 118 (10.4%) could not afford to move back home at all. As a result of college campuses closing housing options, 313 (27.7%) had to move out of their on-campus housing and 260 (23.0%) had trouble paying their rent. Eighty-five (7.5%) couch-surfed because they did not have housing, 77 (6.8%) lived in a place that felt unsafe, and 31 (2.7%) were evicted.

Table 3
COVID-19 Impact on Spring 2020 Housing (n = 1,130)

Pandemic Challenges: I struggled to pay to go back home	N	%
No	864	76.5
Yes	266	23.5
Pandemic Challenges: I could not afford to go back home	N	%
No	1012	89.6
Yes	118	10.4
Pandemic Challenges: I had to move out of off-campus housing	N	%
No	817	72.3
Yes	313	27.7
Pandemic Challenges: I had difficulty paying my rent	N	%
No	870	77.0
Yes	260	23.0
Pandemic Challenges: I was evicted	N	%
No	1099	97.3
Yes	31	2.7
Pandemic Challenges: I lived in a place where I felt unsafe	N	%
No	1053	93.2
Yes	77	6.8
Pandemic Challenges: I couch-surfed because I had nowhere else to go	N	%
No	1045	92.5
Yes	85	7.5

Chi-Square

Five chi-square tests for independence were used to explore which, if any, student characteristics were related to housing insecurity among NCAA college athletes. The tests independently assessed the relationships between housing and, in order, explored how racial identity, sex, college student generation status, athletic scholarship status, and NCAA division.

Chi-square test for independence indicated no significant association between sex and housing insecurity, $X^2(2, n = 1,130) = 1.98, p = .37$. There were also no significant associations between NCAA Division and housing insecurity $X^2(2, n = 1,130) = 2.06, p = .36$. However, chi-square test for independence did indicate a significant association between racial identity and

housing insecurity $X^2(3, n = 1,130) = 10.85, p = .01$, Cramer's V was .098, indicating a small effect size (Pallant, 2016). Additionally, college student generation had a significant relationship with housing insecurity $X^2(1, n = 1,130) = 5.72, p = .02, \phi = .071$, which also indicated a very small effect. A final chi-square revealed that scholarship status had a significant relationship with housing insecurity $X^2(2, n = 1,130) = 6.83, p = .003$, Cramer's V was .078, indicating a small effect size. Table 4 presents the results from each chi-square test.

Table 4
Student Characteristics x Housing Insecurity

Racial Identities Categories	Housing Insecure		Housing Secure		χ^2
	n	%	n	%	
White (n = 688)	301	56.3	387	65.0	10.85*
Black or African American (n = 186)	100	18.7	86	14.5	
Hispanic, Latinx, or Chicana (n = 151)	74	13.8	77	12.9	
Other Racial Identities (n = 105)	60	11.2	45	7.6	
Sex Identities Categories	n	%	n	%	1.98
Male (n = 368)	185	34.6	183	30.8	
Female (n = 746)	342	63.9	404	67.9	
Other Sex Identities (n = 16)	8	1.5	8	1.3	
College Student Generation	n	%	n	%	5.72*
First Generation (n = 623)	275	51.4	348	58.5	
Continuing Generation (n = 507)	260	48.6	247	41.5	
Scholarship Categories	n	%	n	%	6.83*
No Scholarship (n = 513)	257	48.0	256	43.0	
Partial Scholarship (n = 442)	188	35.1	254	42.7	
Full Scholarship (n = 175)	90	16.8	85	14.3	
NCAA Divisions	n	%	n	%	2.06
NCAA Division I (n = 730)	357	66.7	373	62.7	
NCAA Division II (n = 263)	116	21.7	147	24.7	
NCAA Division III (n = 137)	62	11.6	75	12.6	

* $p < .05$, ** $p < .01$, *** $p < .001$.

Logistic Regression Models

Two direct logistic regression models were analyzed to assess the impact student characteristics and COVID-19 had on likelihood of NCAA college athletes experiencing housing insecurity. The first model contained five independent variables (racial identity, sex, college student generation, scholarship status, and NCAA division) to explore the likelihood of experiencing housing insecurity, generally. In the second model, the seven pandemic variables were added to the second model to assess how COVID-19 affected the likelihood of college

athletes experiencing housing insecurity. The results from each regression model will be discussed independently.

The first model, containing only student characteristic variables, was statistically significant, $X^2(10, n = 1,130) = 24.54, p = .006$, indicating the model was able to distinguish between college athletes who experienced housing insecurity and those who did not. The model explained between .2% (Cox and Snell R square) and 3% (Nagelkerke R squared) of the variance in experiencing housing insecurity, which is small (Pallant, 2020). Further, the model correctly classified 57% of cases. Racial identity and college student generation both were the only significant predictors. When controlling for other factors in the model, college athletes in the other racial identity category were 1.61 times more likely to experience housing insecurity, while Black or African American college athletes were 1.43 times more likely to experience housing insecurity, when compared to White college athletes. Further, college athletes that were first-generation college students were 1.30 times more likely to experience housing insecurity than continuing generation college athletes. Table 5 presents the first logistic regression model results.

Table 5
Logistic Regression Predicting Likelihood of Experiencing Housing Insecurity

Racial Identities Categories	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratios	
							Lower	Upper
Black or African American	.36	.17	4.40	1	.04	1.43	1.02	1.10
Hispanic, Latinx or Chicax	.12	.18	.46	1	.50	1.13	.79	1.62
Other Racial Identities	.48	.22	4.87	1	.03	1.61	1.06	2.46
Sex Identities Categories	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
Female	-.13	.13	.94	1	.33	.88	.68	1.14
Other Sex Identities	-.14	.52	.07	1	.80	.87	.31	2.43
College Student Generation	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
First Generation	.26	.12	4.62	1	.03	1.30	1.02	1.66
Scholarship Categories	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
No Scholarship	.04	.19	.04	1	.83	1.04	.72	1.50
Partial Scholarship	-.27	.18	2.22	1	.14	.76	.53	1.09
NCAA Divisions	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
NCAA Division II	-.18	.15	1.45	1	.23	.84	.62	1.12
NCAA Division III	-.26	.20	1.62	1	.20	.77	.52	1.15
Constant	-.10	.20	.24	1	.63	.91		

The second model, containing the student characteristics and COVID-19 variables, was also statistically significant $X^2(17, n = 1,130) = 209.45, p < .001$, indicating the model was able to distinguish between college athletes who experienced housing insecurity and those who did not experience housing insecurity. The model explained 17% (Cox and Snell R square) and 23% (Nagelkerke R squared) of the variance in experiencing housing insecurity and correctly classified 72.7% of cases; both were improvements from the first model. After including the COVID-19 variables, none of the student characteristic variables were statistically significant. However, five of the seven COVID-19 variables were statistically significant. College athletes who struggled to pay to go back home were 1.83 times more likely to experience housing

insecurity than those who did not, while college athletes who had to move out of their off-campus housing were 1.54 times more likely to experience housing insecurity than those who did not have to move. College athletes who had difficulty paying rent because of COVID-19 were 3.43 times more likely to experience housing insecurity, and college athletes that had to live in places where they felt unsafe were 4.25 times more likely to experience housing insecurity than those who lived in places where they felt safe. Lastly, college athletes that couch-surfed during COVID-19 were 2.19 times more likely to experience housing insecurity than those who did not couch-surf. Table 6 provides the results from the second logistic regression model.

Discussion

Some consider sports as a microcosm of society and so it is important to investigate if issues that affect general college students also affect college athletes. Housing insecurity continues to affect college students across the United States (Broton, 2020; Goldrick-Rab, 2017; Hallett et al., 2019), and this study explored how housing insecurity could be appearing among college athletes. The findings suggest that college athletes, to some degree, are experiencing housing insecurity. Nearly half the college athletes in this study, identified as housing insecure, similar to the rates among general college students at four-year institutions reported in previous studies (Broton & Goldrick-Rab, 2018; Henry, 2020; Silva et al., 2015). Previous scholars have examined other basic needs insecurity among college athletes revealing that college athletes experience food insecurity (Brown et al., 2021; Goldrick-Rab et al., 2020; Poll et al., 2020), but this was the first study specific to housing insecurity among college athletes.

Scholars have discussed how it is important to view housing insecurity among college students on a spectrum that can range from not having housing at all to moving between various living arrangements (Hallett et al., 2019) and the current findings support using this view in athletics. In the 12 months before the Fall 2020 data collection, as nearly 25% of college athletes in the sample reported moving frequently and 12% reported having to move in with others to pay rent, difficulty paying their rent, or an inability to pay their full utility amount, which are common housing insecurity symptoms that could be missed if athletic administrators only equate housing insecurity to homelessness (Hallett et al., 2019). College athletes have a dual role to perform athletically and academically (Comeaux & Crandall, 2019; Gayles & Crandall, 2019), and it is difficult to do those things without knowing how secure one's housing situation is (Hallett et al., 2019). Thus, housing insecurity could not only be a safety concern, but also a college athlete well-being and academic success concern.

Prior to COVID-19, Goldrick et. al (2020) reported that homelessness was a problem among college athletes. The current findings expand on this report by looking more closely at the relationship between housing insecurity, and student characteristics. Without accounting for COVID-19, it appears that Black, Asian or Pacific Islander college athletes, male college athletes, and college athletes that are first-generation college students could have higher likelihood of experiencing housing insecurity, which is consistent with extant literature on general college students (Hallett et al., 2019; Hallett & Crutchfield, 2018). These are trends athletic administrators may want to monitor if they investigate housing insecurity on their campuses.

When factoring in COVID-19, it appears that housing insecurity did not differ based on student characteristics. However, it was clear that COVID-19 created financial predicaments for some college athletes. Some college athletes struggled to pay rent or to pay to get back home, had to move out of their off-campus housing, lived in unsafe housing, or had to couch-surf

Table 6

Logistic Regression Predicting Likelihood of Experiencing Housing Insecurity Considering COVID-19

Racial Identities Categories	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratios	
							Lower	Upper
Black or African American	.09	.19	.22	1	.64	1.09	.75	1.59
Hispanic, Latinx or Chicax	-.14	.21	.49	1	.48	.87	.58	1.29
Other Racial Identities	.45	.23	3.52	1	.06	1.55	.98	2.45
Sex Identities Categories	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
Female	.002	.14	.00	1	.99	1.00	.76	1.33
Other Sex Identities	-.98	.68	2.02	1	.16	.38	.10	1.45
College Student Generation	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
First Generation	.12	.14	.74	1	.39	1.12	.86	1.46
Scholarship Categories	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
No Scholarship	.07	.21	.11	1	.75	1.07	.71	1.61
Partial Scholarship	-.19	.20	.89	1	.35	.83	.56	1.23
NCAA Divisions	B	S.E.	Wald	df	p	Odds Ratio	Lower	Upper
NCAA Division II	-.13	.16	.67	1	.41	.88	.64	1.21
NCAA Division III	-.10	.22	.22	1	.64	.90	.58	1.39
COVID-19 Impacts								
	B	S.E.	Wald	df	p	Odds Ratio	95% C.I. for Odds Ratios	
							Lower	Upper
Pandemic Challenges: I struggled to pay to go back home	.61	.19	10.17	1	.001	1.83	1.26	2.66
Pandemic Challenges: I could not afford to go back home	.12	.28	.18	1	.67	1.13	.66	1.93
Pandemic Challenges: I had to move out of off-campus housing	.43	0.15	8.32	1	.004	1.54	1.15	2.06
Pandemic Challenges: I had difficulty paying my rent	1.23	.18	47.74	1	.000	3.43	2.42	4.86
Pandemic Challenges: I was evicted	1.17	.67	3.09	1	.079	3.24	.87	11.98
Pandemic Challenges: I lived in a place where I felt unsafe	1.44	.39	14.11	1	.000	4.25	2.00	9.05
Pandemic Challenges: I couch-surfed because I had nowhere else to go	.79	.32	5.92	1	.015	2.19	1.17	4.13
Constant	-.77	.23	11.17	1	.001	.465		

because of COVID-19 (Desai, 2020). These challenges increased the likelihood of housing insecurity for those college athletes during a time when options were limited. In a 2020 interview with *Sports Illustrated*, then University of Mississippi linebacker, Sam Williams, said:

We worked so hard to get out the hood but forced back to the hood. Still gotta pay rent so all our money be gone and I can't swipe my ID nowhere in Alabama. Then if we get help it's a violation. I just don't understand (Desai, 2020, para. 3).

Williams' quote highlights the bleak reality that COVID-19 brought to college athletics. The findings from this study support his experience; just as COVID-19 impacted college students, some college athletes were also left without housing. Further, his comments highlight the dire situation that college athletes face when navigating housing issues. If a college athlete were to receive housing assistance, they could potentially lose athletic eligibility due to strict NCAA rules that fail to consider these situations. To demonstrate the extent to which this is not hyperbole, in 2015 former Baylor running back, Silas Nacita, was deemed permanently ineligible after receiving help to address his homelessness (Strachan, 2015).

It is possible that housing insecure students or basic needs insecure students might be more likely to take this survey. It is also true that some housing insecure symptoms do not always indicate housing insecurity. For example, some students may move in together to save money, as opposed to being housing insecure. Thus, one might draw the assumption that these findings represent a small portion of college athletes. However, the overall assumption is flawed for two reasons. First, housing insecurity comes with a stigma where students may feel ashamed of their situations and therefore avoid disclosing their status (Hallett et al., 2019). Second, college athletes, particularly at the NCAA Division I level, are often separated from the general college campus and are less engaged with the broader campus community (Gayles & Crandall, 2019). Given that this data was not collected specifically from college athletes (e.g. sampling was done among all college students), it is more likely that these rates are underreported because college athletes may have felt ashamed or were unaware a survey about housing insecurity was available to take on their campus (Hatteberg, 2020; Wilkerson et al., 2020). It is important that these findings must not be dismissed as singular experiences and for athletic departments to develop practical ways to understand and address housing insecurity.

Limitations

This study has several limitations that should be noted. First, this study is based on self-reported data and there is potential for confirmation bias. Second, the study could not include participant sport teams, thus findings should not be interpreted at a sport team level. Third, this study used secondary data and could not include every variable in the study, nor could it provide institutional data that might make it possible to identify institutions due to confidentiality. This limits the analysis and statistical power, particularly for the first regression model and the conclusions that can be drawn across institutional types. Lastly, this data collection was not designed specifically for college athletes, so it is likely that other nuanced factors about the college athlete experience (e.g., time at practice, sports, competition season, etc.) are missing from this analysis and could impact the results.

Future Research

These findings are based on one dataset and findings are not generalizable to all college athletes, but serve as a springboard for future research into housing insecurity impact on college athletes. One direction for future research is to include questions about housing insecurity in athletic surveys. For example, items about housing insecurity could be added to the existing NCAA college athlete well-being survey. The survey could then be used to collect national data on college athletes and housing insecurity, allowing for deeper analysis on how housing insecurity impacts college athletes. Alternatively, individual athletic departments could partner with the Hope Center or other researchers to conduct a housing insecurity survey that is specific to their institution, which would provide more institutional specific contexts. This strategy has been used throughout BNI literature (Hallett et al., 2019).

Next, this study confirmed that housing insecurity is something that college athletes can experience. However, what is not clear is if college athletes know about the services on campus to help address housing insecurity. Therefore, future research might explore this through qualitative interviews or through quantitative surveys. This would provide a baseline for understanding what interventions need to be developed to address housing insecurity in college athletics. Concurrently, such a study should also seek to understand whether college athletes utilize campus-based services that can address housing insecurity. If college athletes are not utilizing these services, qualitative data could help explain why that is and also lead to better interventions that address housing insecurity among college athletes.

Lastly, the NCAA and many athletic departments have emphasized the importance of college athlete wellness and academic success. Although this study did not examine the impact housing insecurity has on college athletes' academic or athletic performance, this is an area ripe for future research. Future quantitative studies might seek to explore how housing insecurity is affecting athletes' academics, such as GPA or college athlete persistence, while future qualitative research could explore contextual ways that housing insecurity affects college athlete mental health or other well-being outcomes.

Conclusion

Housing insecurity continues to be an important topic for college student well-being, so it is important to understand how it affects college students within various contexts. Nearly half the sample reported experiencing housing insecurity, and while this may be a small sample of college athletes this study provides a starting point for further understanding how housing insecurity affects college athletes. These experiences with housing insecurity were amplified during the COVID-19 as close to a third were forced to leave residence halls, close to 25 percent struggled to pay to return home and more than 10 percent could not afford to move back home. These findings are not generalizable to all college athletes and it is beyond the scope of this study to theorize on how housing insecurity affects college athlete outcomes. However, future research can build on these findings by including housing insecurity in college athlete well-being surveys and by examining how housing insecurity affects college athletes' outcomes, such as GPA.

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