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Over the last several years, scholars have drawn attention to the growing rates of food insecurity among college and university students in the US (Broton & Goldrick-Rab, 2018; The Hope Center for College, Community, and Justice [The Hope Center], 2021). Food insecurity is a multifaceted concept commonly defined as the limited availability of nutritious foods, the uncertain ability to acquire nutritious foods, or the inability to acquire nutritious foods (Anderson, 1990). Food insecurity also constitutes interrupted eating patterns or a reduction in the quality of diet due to the lack of resources to access nutritious food (Coleman-Jensen et al., 2020). An estimated 40% of undergraduate students experience food insecurity (The Hope Center, 2021). Although research on food insecurity in college students is expanding, examinations into whether there are different rates of food insecurity by students' demographic characteristics have focused primarily on students' race/ethnicity, age, income or socioeconomic status, and sex or gender (The Hope Center, 2021; Morris et al., 2016; Wood & Harris, 2018). At present, researchers have not focused on food insecurity rates among college students with disabilities.

The omission of food insecurity research on college students with disabilities is concerning due to the prevalence of students with disabilities in higher education—nearly one in five undergraduates has a disability (National Center for Education Statistics [NCES], 2021). Due to many forms of oppression, including ableism, racism, classism, and more, students with disabilities encounter more barriers in higher education, leading to reduced degree completion rates (Lett et al., 2020; NCES, 2022). Food insecurity is a factor associated with lower degree completion rates among students and is one of many factors that could exacerbate the existing disparities in degree completion rates (Wolfson et al., 2021). The topic of food insecurity is even more important to examine during the initial semesters of the COVID-19 pandemic when college students experienced significant and sudden financial hardships (Soria et al., 2022; The Hope Center, 2021). Therefore, the purpose of this study was to examine whether college students with disabilities had significantly different odds of experiencing food insecurity compared to their peers when controlling for additional demographic variables and COVID-19 experiences.

CONCEPTUAL FRAMEWORK

We used Glover and colleagues' (2020) conceptual framework for mitigating the equity harms of COVID-19. The model stipulated

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that inequitable COVID-19 policies may have generated additional harms to individuals who were already marginalized, oppressed, and disenfranchised prior to the pandemic, including individuals with disabilities. Exacerbated food insecurity rates among marginalized groups (such as students with disabilities) during the pandemic may be a manifestation of pre-existing intersectional forms of oppression (i.e., ableism, racism) coupled with inequitable COVID-19-related policies. Glover et al. cited demographic variables associated with COVID-19 equity harms, including disability, employment, race/ethnicity, gender, and family education, and we used many of those demographic variables in our analysis.

METHODOLOGY: INSTRUMENT, SAMPLE, MEASURES, AND ANALYSIS

We used data from the 2020 #RealCollege Survey, which was administered to 1.84 million college students at 130 community and technical colleges and 72 four-year colleges in 42 states from September to November 2020. The response rate averaged 10.6% (N = 195,629), although only a smaller subset of 70,210 students who were also enrolled in spring 2020 answered the COVID-19-specific items (Table 1). The survey assessed students' food security using the U.S. Department of Agriculture's (USDA, 2012) 18-item set of questions (full items and methodology for summing the scale are available online via The Hope Center, 2021). The scale had excellent reliability in this study (α = .924) and can be converted to a four-level measure of food security level (i.e., very low, low, marginal, or high; The Hope Center, 2021). However, we dichotomized the results to provide a snapshot of whether students experienced food insecurity (0 = student is food secure [marginal or high food security], 1 = student is food insecure [very low or low food security]). Students reported demographic characteristics, which we converted using effect coding except in the case of dichotomous variables (e.g., full-time or part-time enrollment). In effect coding, the coefficients or odds ratios are interpreted relative to the average of the full sample, and all groups are included in analyses (Ro & Bergom, 2020). Students also reported on their COVID-19-related experiences during spring 2020, the previous semester (coded 1 = had the experience, 0 = did not have the experience). Students responded yes/no regarding whether they had a disability in six areas: (a) chronic illness; (b) physical disability; (c) psychological disorder; (d) other disability or medical condition; (e) no disability; or (f) cognitive, learning, or neurological disorder/disabilities. We summed the disability categories to create a category for students who had multiple disabilities. We analyzed the data using multivariate logistic regression to examine the odds of experiencing food insecurity controlling for demographic variables and COVID-19 experiences.

RESULTS, DISCUSSION, AND RECOMMENDATIONS

We observed descriptive differences in students' food insecurity by disability: 31.3% of students with cognitive, learning, or neurological disorders/disabilities were food insecure, followed by 31.8% of students without disabilities, 34.7% of students with physical disabilities, 35.3% of students with chronic illnesses, 38.0% of students with other disabilities, 39.4% of students with psychological disorders, and 47.1% of students with multiple disabilities.

The results of the logistic regression analysis suggest that students with physical disabilities, psychological disorders, and multiple disabilities had significantly increased odds of experiencing food insecurity during the COVID-19 pandemic compared to their peers (Table 1). Students with chronic illnesses; students with

Table 1.
Logistic Regression Analysis for Students' Food Insecurity

	Descriptive statistics		Food insecurity	
	n	%	OR	*p*
Demographic Variables				
Chronic illness	3,583	5.1	0.913	*
Cognitive learning or neurological disorder/disabilities	2,601	3.7	0.889	*
Other disability or medical condition	616	0.9	1.109	
Physical disability	804	1.1	1.125	*
Psychological disorder	12,514	17.8	1.072	*
Multiple disabilities	13,590	19.4	1.289	***
No disability or medical condition	36,502	52.0	0.811	***
Female	49,468	70.5	0.958	
Male	18,102	25.8	1.044	
Nonbinary	852	1.2	1.078	
Transgender	990	1.4	1.123	
Prefer to self-describe or not to provide gender	798	1.1	0.881	
White	34,014	48.4	0.753	***
Black or African American	6,961	9.9	1.262	***
Middle Eastern, North African, Arab, or Arab American	610	0.9	0.803	*
Southeast Asian	1,399	2.0	1.087	
American Indian or Native American	346	0.5	1.254	*
Hispanic, Latinx, or Chicanx	12,276	17.5	0.841	***
Pacific Islander or Native Hawaiian	197	0.3	1.441	*
Other Asian or Asian American	2,817	4.0	0.968	
Multiracial	10,004	14.2	0.875	***
No race/ethnicity provided	1,586	2.3	1.143	***
Heterosexual or straight	54,021	76.9	0.873	***
Gay or lesbian	2,811	4.0	0.941	*
Bisexual	8,115	11.6	1.062	*
Prefer to self-describe sexual orientation	2,122	3.0	0.994	
Prefer not to answer sexual orientation	3,141	4.5	1.059	
Family had trouble making ends meet financially growing up	29,606	42.2	1.773	***
Continuing generation (parents have ≥ a bachelor's degree)	25,526	36.4	0.806	***
Student has a spouse or partner	18,797	26.8	0.865	***
Full-time student	42,018	59.8	0.952	*
Student has been in foster care	1,608	2.3	1.200	**
US citizen or permanent resident	67,376	96.0	0.898	*
Student is a parent	13,026	18.6	1.341	***
Age (M = 26.0, SD = 9.44)			0.999	

Table 1, continued.

	Descriptive statistics		Food insecurity	
	n	**%**	**OR**	***p***
Institutional Variables				
Two-year college	40,163	57.2	1.169	***
Total years enrolled in college (M = 2.93, SD = 1.91)			0.973	***
College is in the Midwest	11,756	16.7	1.071	
College is in the South	22,441	32.0	1.195	***
College is in the Northeast	8,941	12.7	0.934	
College is in the West	27,072	38.6	1.116	***
Financial Variables				
Uses Pell grants to pay for college	32,833	46.8	1.341	***
Uses student loans to pay for college	24,944	35.5	1.254	***
Has a job (to pay for college)	45.997	65.5	0.949	*
Pays for college with support from family/friends	36,886	52.5	0.996	
COVID-19 Experiences				
My college/university moved classes online	67,666	96.4	0.803	***
My campus closed	60,947	86.8	0.912	***
I had problems with computer or internet access	26,908	38.3	1.636	**
I had difficulty concentrating on classes	51,740	73.7	1.021	
I attended classes less often	27,316	38.9	1.151	***
I stopped attending my college or university for at least one month	10,744	15.3	1.088	**
I had to take care of a family member while attending class	28,159	40.1	1.437	***
I had to help children in my home with their schooling while attending classes	21,413	30.5	1.177	***
I struggled to pay to go back home	8,451	12.0	1.662	***
I could not afford to go back home	4,633	6.6	1.754	***
I had to move out of off-campus housing	6,611	9.4	0.856	***
I transferred to a different college or university	1,541	2.2	1.044	
I had difficulty paying my rent	23,407	33.3	4.412	***
I was evicted	1,154	1.6	1.414	***
I lived in a place where I felt unsafe	5,014	7.1	1.784	***
I couch-surfed because I had nowhere else to go	3,418	4.9	1.380	***
I was homeless	1,217	1.7	1.906	***
I lost a job	22,239	31.7	1.285	***
I started a new job	19,587	27.9	0.997	
I experienced cuts to my hours or pay at work	31,222	44.5	1.350	***
I experienced an increase in hours or pay at work	11,977	17.1	0.954	
I worked as a frontline worker supporting COVID	9,354	13.3	1.207	***

Table 1, continued.

	Descriptive statistics		Food insecurity	
	n	%	OR	*p*
I was sick with COVID	4,691	6.7	1.054	
A close friend or family member was sick with COVID	28,626	40.8	1.144	***
A close friend or family member died of COVID	8,680	12.4	1.190	***
Constant			0.162	***

Note. Nagelkerke R^2 = .412. Cox and Snell R^2 = .301.
*p < .05. **p < .01. ***p < .001.

no disabilities or medical conditions; and students with cognitive, learning, or neurological disorders/disabilities had significantly reduced odds of experiencing food insecurity during the pandemic. The effect sizes were often small, and it is easy to achieve small *p*-values with large sample sizes (Chen et al., 2010); therefore, the results should be interpreted with caution.

Several demographic variables and COVID-19 experiences were also associated with increased odds of food insecurity, which may provide support for Glover and colleagues' (2020) assertions about the effects of COVID-19 policies upon marginalized and disenfranchised people. Given the variation observed in the results for students' individual demographic categories, the results also suggest it is important to avoid homogenizing groups of students. Not all students with disabilities had significantly higher odds of experiencing food insecurity compared to their peers—and the same was observed among other commonly homogenized groups, like students of color. As a result of those findings, we encourage student affairs practitioners to conduct basic needs insecurity studies on their own campuses while disaggregating students' demographic characteristics.

After conducting analyses on their own campuses, practitioners should develop specific strategies for the students who may most benefit. For instance, as it relates to students with disabilities, we encourage practitioners to stock food pantries with allergen-safe food options, ensure food pantry locations or hours of operation are accessible, offer food delivery options or a mobile food pantry, add a food pantry within or near disability support services offices or disability cultural centers, and create multiple food pantry locations on campus (e.g., little free pantries). To consider the needs of immunocompromised students with disabilities, practitioners should consider alternatives to food pantries, such as gift cards for food delivery services or discounts at grocery stores with food delivery options.

Many students experienced significant difficulties during the pandemic that were associated with increased odds of food insecurity. Thousands of students in our sample were homeless or evicted, had difficulty paying rent, lived in a place where they felt unsafe, lost jobs, were sick with COVID, or lost friends or family members who died from COVID. As a function of ableism, practitioners may incorrectly assume that students can easily navigate resources located in multiple areas of campus (or online). We recommend that practitioners consider students' holistic needs and reorganize their services to establish a "single point of contact" resource center to provide wraparound care for students with disabilities (Broton, 2021). Basic needs resources and staff who can navigate basic needs resources (e.g., emergency housing, federal Supplemental Nutrition Assistant Program,

or SNAP benefits) can also be embedded within existing disability resource centers.

Students with disabilities are marginalized on college campuses, even though they constitute a growing proportion of enrolled students. The results of this study suggest that students with physical disabilities, psychological disorders, and multiple disabilities had greater odds of experiencing food insecurity during the COVID-19 pandemic. We encourage practitioners to assess the experiences of students with disabilities on their own campuses and advocate for additional resources to support students' holistic well-being and success.

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REFERENCES

Anderson, S. A. (1990). Core indicators of nutritional state for difficult-to-sample populations. *The Journal of Nutrition, 120*(11), 1557–1599. doi: 10.12691/jfs-4–2–3

Broton, K. M. (2021). Poverty in American higher education: The relationship between housing insecurity and academic attainment. *Journal of Postsecondary Student Success, 1*(2), 18–45. https://doi.org/10.33009/fsop_jpss129147

Broton, K. M., & Goldrick-Rab, S. (2018). Going without: An exploration of food and housing insecurity among undergraduates. *Educational Researcher, 47*(2), 121–133. https://doi.org/10.3102/0013189X17741303

Chen, H., Cohen, P., & Chen, S. (2010). How big is a big odds ratio? Interpreting the magnitudes of odds ratios in epidemiological studies. *Communications in Statistics—Simulation and Computation, 39*(4), 860–864. https://doi.org/10.1080/03610911003650383

Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2020). *Household food insecurity in the United States in 2020*. U.S. Department of Agriculture Economic Research Service.

Glover, R. E., van Schalkwyk, M. C. I., Akl, E. A., Kristjannson, E., Lotfi, T., Petkovic, J., Petticrew, M. P., Pottie, K., Tugwell, P., & Welch, V. (2020). A framework for identifying and mitigating the equity harms of COVID-19 policy interventions. *Journal of Clinical Epidemiology, 128*, 35–48. https://doi.org/10.1016%2Fj.jclinepi.2020.06.004

The Hope Center for College, Community, and Justice. (2021). *#RealCollege 2021: Basic needs insecurity during the ongoing pandemic*. https://hope4college.com/wp-content/uploads/2021/03/RCReport2021.pdf

Lett, K., Tamaian, A., & Klest, B. (2020). Impact of ableist microaggressions on university students with self-identified disabilities. *Disability & Society, 35*(9), 1141–1456. https://doi.org/10.1080/09687599.2019.1680344

Morris, L. M., Smith, S., Davis, J., & Null, D. B. (2016). The prevalence of food security and insecurity among IL university students. *Journal of Nutrition Education and Behavior, 48*(6), 376–382. https://doi.org/10.1016/j.jneb.2016.03.013

National Center for Education Statistics. (2021). *Digest of Education Statistics, 2019* (2021–009), Chapter 3. https://nces.ed.gov/fastfacts/display.asp?id=60

National Center for Education Statistics. (2022). *Beginning Postsecondary Students: 2012/2017(BPS)*. Computation by NCES PowerStats.

Ro, H. K., & Bergom, I. (2020). Expanding our methodological toolkit: Effect coding in critical quantitative studies. In H. K. Ro & E. M. Broido (Eds.), *Voices from the margins, conducting inclusive assessment for minoritized students in higher education* (New Directions for Student Services, No. 169, pp. 87–97). Wiley. doi: 10.1002/ss.20347

Soria, K. M., Horgos, B., & Shenouda, J. D. (2022). Disparities in college students' financial hardships during the COVID-19 pandemic. *Journal of Student Affairs Research and Practice*. Advance online publication. https://doi.org/10.1080/19496591.2022.2046597

U.S. Department of Agriculture, Economic Research Service. (2012). *U.S. adult food security survey module: Three-stage design, with screeners*. https://www.ers.usda.gov/media/8279/ad2012.pdf

Wolfson, J. A., Insolera, N., Cohen, A., & Leung, C. W. (2021). The effect of food insecurity during college on graduation and type of degree attained: Evidence from a nationally representative longitudinal survey. *Public Health Nutrition*, 25(2), 389–397. https://doi.org/10.1017/s1368980021003104

Wood, J. L., & Harris, F., III. (2018). Experiences with "acute" food insecurity among college students. *Educational Researcher, 47*(2), 142–145. https://doi.org/10.3102%2F0013189X17752928