



## **Food Insecurity and Academic Self-Efficacy: Military Students and Student Veterans**

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### **ABSTRACT**

*Food insecurity (FI) affects households worldwide and is also seen on college and university campuses with adverse effects on student success. We examine FI and academic self-efficacy levels of military students and student veterans enrolled in higher education in the United States which has not been extensively studied regarding FI. Military students and student veterans may have access to G.I. Bill funds and may not be perceived as requiring additional assistance. The results reveal that military students and student veterans have some level of FI. The qualitative analysis yielded five themes that center on FI, economic vulnerability, inequities in the veteran community, reintegration challenges, and support system gaps.*

**Keywords:** academic self-efficacy, food insecurity, military students, student veterans

## INTRODUCTION

Food insecurity (FI) is loosely defined as not having access to food a person/family want(s) or need(s) and has been associated with socioeconomic populations with lower incomes. These include populations with single-parent households, racial/ethnic minority populations, and those living under the federal poverty level (Centers for Disease Control, 2023). Addressing the issue of a household's ability to provide (healthy) food (Godsell et al., 2019), FI is a concern for higher education administrators after reports of college students' experiences with the issue (Nikolaus et al., 2019). Support strategies are necessary to help reduce the levels of FI among higher education populations (Davitt et al., 2021; Hagedorn et al., 2019). Veterans, especially from underrepresented minority and low-income groups, have been found to have FI levels that are between 10-30% of the veteran population (Becerra et al., 2016; Coleman-Jensen et al., 2013; Miller et al., 2015; Pooler et al., 2021; Widome et al., 2015).

Military students and student veterans (MSSVs) are incredibly diverse and often come from under-resourced and historically marginalized populations and are more likely to be first-generation students. They can come to campus with different needs that affect their academic success like difficulty transitioning from a structured military environment to a loosely structured academic environment, time away from learning, and familial obligations, to name a few. There is increased attention on the effects of FI on MSSVs (Cohen et al., 2022; Haigh et al., 2024; Kamdar et al., 2020; Lutz & Welch, 2022; Pooler et al., 2021; Rabbit & Smith, 2021). MSSVs have been found to have higher academic self-efficacy than other students (Dials-Corujo, 2019; Eakman et al., 2019), however these levels can suffer if MSSVs do not have access to programs and environments that strengthen academic self-efficacy (Shirley et al., 2022).

### **Problem Statement**

FI is a major factor for veterans, even though it is perceived that MSSVs may not need financial assistance. The Military Family Advisory Network (MFAN; Kimball et al., 2019) study found that nationwide, 13% of military and veteran families were food insecure, with 8% having high levels of FI. There may also be misconceptions about how much military tuition assistance, or other benefits the G.I. Bill provides. This is especially true for unemployed veterans or veterans with families. We attempted to determine if and why there is a connection between FI and academic self-efficacy for military students/student veterans.

## **Research Questions**

The following research questions guided this study:

1. What levels of food insecurity do military students/student veterans report in their households?
2. How does food insecurity among military students/student veterans affect their academic self-efficacy?

## **LITERATURE REVIEW**

FI differs from hunger; according to the U.S. Department of Agriculture (USDA; 2022), FI is related to *household and social* levels, while hunger is at an *individual* level. FI is reported by the U.S. Department of Agriculture on a scale high to low, those with high FI have access to all the food they want or desire to those with low FI who have disrupted eating patterns or food intake (USDA, 2022). Households with very low FI are concerned with food running out or not lasting, balanced meals being unaffordable, needing to cut portions or skip meals, and not eating for an entire day (USDA, 2022).

### **Food Insecurity in the United States**

FI is not new to the US, but it has rapidly become a focus since the 1990s (Coleman-Jensen et al., 2019; National Research Council, 2006). While FI is frequently associated with low socioeconomic status (Bratanova et al., 2016; Godsell et al., 2019), FI can also be found in middle-class families (Maguire, 2016). In 2018, 11.1% of US households were classified as food insecure (Coleman-Jensen et al., 2019). FI is also associated with poor eating habits (Godsell et al., 2019; USDA Economic Research Service (ERS), 2009), poor medical health (Nagata et al., 2019), obesity (Smith et al., 2009; USDA ERS, 2009), and increased health care costs (Phojanakong et al., 2019).

### **Food Insecurity on College Campuses**

FI has impacted the lives of college students nationwide, with more than half of American undergraduate students reporting some level of FI (Broton & Goldrick-Rab, 2018). A growing number of low-income college students rely on loans and grants to pay for college (Freudenberg et al., 2019; Fry & Cilluffo, 2019). In the last 30 years, average tuition has increased from \$4,870 to 10,940 (124.6%) for public four-year in-state students (Ma & Pender, 2022). Even with grants and loans, college tuition is becoming daunting before considering living expenses. FI disproportionately affects students who are underrepresented minorities and from low-income backgrounds (Bruening et al., 2016; Maroto et al., 2014). The rate of FI

among college students eclipses the US FI rate of 12% (Freudenberg et al., 2019).

Campuses have responded to help combat FI through solutions like food pantries (Goldrick-Rab et al., 2018), campus gardens or farmers markets (Dubick et al., 2016), affordable/low-cost dining options, and meal vouchers/sharing/donations (Dubick et al., 2016; van Woerden et al., 2019). Creating programming and advocacy for FI awareness is also starting to be a part of campus life like cooking classes, food preparation, understanding and accessing Supplemental Nutrition Assistance Program (SNAP) benefits (Martinez et al., 2018), and budgeting and personal financial management skills (Morrissey, 2019). Even with these resources, there is still more to do as students are still dealing with FI issues on campus.

### **Military Veterans and Food Insecurity**

Veterans have long sought higher education, yet while having access to Veterans Administration health care services, many do not use them. Those who do tend to be minorities, have lower levels of education and/or income, higher unemployment rates, and have health issues (Wilmoth & London, 2020). The Veterans Health Administration started monitoring FI for veterans in 2017 (Cohen et al., 2022). The results from the initial survey deployed in 2017-2018 found that of the 3.3 million respondents, 44,298 (~1.4%) were food insecure. The survey was redeployed from 2021-2023 and of the 3,580,148 million respondents, 96,413 (2.7%) were food insecure (Haigh et al., 2024). Moreover, those with FI were also more likely to be minorities, recently homeless, smoke tobacco, and/or have experienced military sexual trauma, depression, PTSD, and substance abuse disorders (Cohen et al., 2022). The FY 2022 *National Defense Authorization Act* (NDAA) mandated a Basic Needs Allowance for personnel with basic needs (Lutz & Welsh, 2022); the 2023 *NDAA* expanded eligibility allowing the granting of the allowance to families who live in up to 200% of the federal poverty guideline (Congressional Research Service, 2025). While these efforts from the VA and DoD are ongoing, many veterans still suffer from FI, and both agencies are just beginning this work.

Military veterans have FI issues with reported rates between 10-30% depending on the specific population studied (Becerra et al., 2016; Miller et al., 2015; Wang et al., 2015; Widome et al., 2015). Veterans also have poor quality dietary choices resulting in poor health (Dong et al., 2019; Smith et al., 2009) or live below the poverty level (Cohen et al., 2020; U.S. Department of Veterans Affairs (VA), 2015). As previously mentioned, the MFAN study found that nationwide, 13% of military and veteran families were food

insecure, with 8% having high levels of FI (Kimball et al., 2019). The states with the highest levels of FI for military and veterans are Texas, Virginia, California, North Carolina, Washington, Florida, and New York. While some (47.3%) sought assistance through food pantries, applied for food assistance programs, or sought help from their families and communities, others reported limited food or not eating (47.2%; Kimball et al., 2019). In 2021, based on the impacts of COVID-19 on military and veteran families, 20% experienced some level of FI and most were from enlisted ranks (MFAN, 2021). For working-age veterans (18-64), 11.1% lived in food-insecure households compared to non-veterans living in food-insecure households (11.2%). Very low food security was found for 5.3% of veteran households and 4.1% veterans “who served in 2 military service periods” (Rabbitt & Smith, 2021, p. 22).

There is evidence that military service influences veteran food-eating behavior (Smith et al., 2009). Because of the physical and athletic requirements during service, military members may go for prolonged periods without eating, eat excessively to maintain caloric needs and requirements, or eat quick, ready-made meals without consideration of health impacts. These dietary choices can become habits after service, potentially resulting in FI and obesity (Smith et al., 2009). In addition, veterans who report FI can also have more symptoms like mental health issues, hypertension, and diabetes (Wang et al., 2015; Widome et al., 2014) or addiction to alcohol and/or drugs (Smith et al., 2009). The literature suggests that MSSVs have not been examined for FI beyond being identified as military or veterans in campus FI surveys.

### **Academic Self-Efficacy**

Academic self-efficacy is defined as a student’s belief in their ability to succeed in college and graduate (Lindley & Borgen, 2002; Multon et al., 1991). Students with higher academic self-efficacy do better academically (Bong, 2001; Brown et al., 1989) and are more motivated to complete necessary college-related tasks (Bandura, 1993). Student wellness also plays a key role in their academic success and self-efficacy. Weikel (2019) found that when students fell into the four core wellness categories of “socioemotional, physical with diet and exercise, altruism, and spirituality” (p. 62), they were more likely to have higher GPAs.

Student veterans have been examined for academic self-efficacy and have been found to have higher levels of academic self-efficacy (Eakman et al., 2019), higher GPAs (Cate et al., 2017; Eakman et al., 2019), and lower GPAs and sense of belonging to a college campus (Durdella & Kim, 2011). Higher GPAs for MSSVs center on a student’s ability to be task-motivated

(Emmer, 2013; Kenner & Weinerman, 2011; Novoselich et al., 2019); goal-oriented (Brawner et al., 2016; Emmer, 2013; Kenner & Weinerman, 2011), more emotionally mature (Emmer, 2013), and self-directed (Kenner & Weinerman, 2011). Lower GPA for MSSVs can be attributed to several factors, such as institution type (Semer & Harmening, 2015), number of credits attempted (Semer & Harmening, 2015), stress (Eakman et al., 2019), family and work demands (Durdella et al., 2015), and physical and emotional well-being (Ackerman et al., 2009; Barry et al., 2014). However, MSSVs are an underserved population (Jenner, 2017) and are unique in the sense that they have differing needs from their non-/post-traditional peers (Jenner, 2017; Messerschmitt-Coen, 2019), which can affect academic self-efficacy (e.g., finances, lack of academic preparation, intersectionality).

While MSSVs have higher academic self-efficacy than their peers (Dials-Corujo, 2019; Eakman et al., 2019), risk factors can have an impact on their academic self-efficacy and a sense of belonging. Some programs can build self-efficacy, like disability services (Morris et al., 2019), counseling programs (Messerschmitt-Coen, 2019), veteran support services (Anderson et al., 2011), programs tailored for veterans (Bullington et al., 2021; Eakman, 2019), and programs that establish a veteran peer community and space (Jenner, 2019; Schiavone & Gentry, 2014). While MSSVs generally have higher academic self-efficacy, the literature points to the importance of providing environments that increase MSSVs' academic self-efficacy (Baumann, 2013; Shirley et al., 2022).

### **Food Insecurity and Academic Success**

The literature is now emerging tying FI to lower academic success for college students (Maroto et al., 2015; Martinez et al., 2018, Meza et al., 2019; Phillips et al., 2018; van Woerden et al., 2019; Weaver et al., 2019; Wood & Harris, 2022) and graduation (Wolfson et al., 2021). Students experiencing FI reported issues include difficulty concentrating in class because of hunger and the inability to focus on studying (Farahbakhsh et al., 2017; Hagedorn et al., 2019; Kim et al., 2022; Meza et al., 2019). Other factors related to FI affecting academic success include physical and mental health (Martinez et al., 2018), stress (Meza et al., 2019); risky behaviors like skipping meals, and quality of diet (Bruening et al., 2018; Martinez et al., 2018) and binge drinking (Davitt et al., 2021). Food-insecure students were more likely to be in the lower 10% GPA range (Weaver et al., 2019). Students also felt frustrated with their college or university for their lack of support regarding FI (Meza et al., 2019).

## **A Gap in the Literature**

There is not enough research on veterans and FI (Cohen et al., 2020; Wang et al., 2015; Widome et al., 2015) as well as MSSVs (Barry et al., 2014; Riggs et al., 2019) and on veterans' academic self-efficacy (Eakman, 2019; Shirley et al., 2022). This review of the literature did not reveal any research tying FI to academic self-efficacy for MSSVs, thus we attempt to lessen this gap in literature by providing more information on FI and academic achievement of MSSVs.

## **METHODOLOGY**

This study used a mixed-methods non-experimental survey research design. A sample of MSSVs currently enrolled in postsecondary education was assessed to examine their FI levels.

### **Participant Selection**

Participants were chosen by identifying qualifying institutions using Listservs and social media. To participate in this study, participants had to be attending an institution of higher education, either part- or full-time, and be classified as a MSSV (served in the U.S. military for at least 90 days). The survey was open for 90 days. We considered the sample considered complete at the time of the survey closing to maintain the integrity of the study and avoid even the appearance of bias in selecting the sample population.

### **Survey Methodology**

Two existing surveys were used: the U.S. household food security survey module and the tasks for measuring stress and self-efficacy. These surveys were combined to provide a more in-depth examination of these two factors among the participants. In addition, study-specific questions were asked to gather more information from participants.

This first survey was the U.S. Department of Agriculture's household food security survey module (HFSSM; Bickel et al., 2000). The HFSSM is an 18-item survey with three stages and has screeners to ensure the reliability of the data (USDA ERS, 2012). The second survey, the college self-efficacy inventory (Solberg et al., 1993) measures academic self-efficacy by measuring levels stress and confidence on academic performance. It was developed for college freshmen and has been modified slightly for this study to accommodate the older MSSV audience (e.g., the parent question was removed and a question regarding the G.I. Bill was added). This scale allows for a comparison of academic stress and confidence levels on college tasks.

## **Validity and Reliability of Survey Instrument**

There are advantages to using the USDA food security surveys, as they have been in use since the 1990s and have surveyed local and national populations (Nickolaus et al., 2019). On average, veteran students are likely to be married (45%) and/or have children (46%) (Cate et al., 2017). The HFSSM, first implemented in 1995, has undergone three significant revisions (USDA ERS, 2012). Although there are limitations to this measurement tool (e.g., not all possible dimensions of FI may be captured, households may encounter temporary FI and not for the entire 12-month period; it is population-based rather than household-based), it is still the most reliable and valid way to measure FI levels of U.S. households with children (Nickolaus et al., 2019). The tasks for measuring stress and self-efficacy instrument, developed by Solberg et al. (1993), were found to have high internal reliability with populations of ethnically diverse students (Solberg et al., 1993, 1998; Solberg & Villarreal, 1997) and high construct validity (Gore et al., 2005). The pilot test, conducted with 11 participants (including subject matter experts who were veterans and/or academic researchers as well as recently graduated MSSVs), assessed the reliability of the instruments used in this study.

## **Additions to the Surveys**

To gather sufficient information to answer the research questions, the respondents were asked additional questions. Questions included military service (e.g., length of service, disability rating, if any), academic indicators (e.g., GPA, credits completed), demographic information, and the impact, if any, of the COVID-19 pandemic that occurred during the 12-month period surveyed.

## **Qualitative Methodology**

Qualitative inquiry allows the voices of participants to be heard, which allows researchers to better understand “(1) how people interpret their experiences, (2) how they construct their worlds, and (3) what meaning they attribute to their experiences” (Merriam, 2009, p. 23). For this study, two qualitative questions were provided at the end of the survey: Question #1 asked if the COVID-19 pandemic had any effects on their FI and Question #2 asked if there was anything the participants would like to add.

## **Data Collection**

First, we utilized the Student Veteran Association (SVA) chapter directory to identify chapter advisers and chapter leaders who were then

contacted about the study for participation of currently enrolled MSSVs. Additionally, the call for participants was advertised through avenues such as Facebook groups and Twitter hashtags. The survey had a distinct URL for users to visit and was made available for six weeks. Survey participants were provided with an informed consent form prior to beginning the survey and a list of resources to combat FI upon completion of the survey.

## **Data Analysis**

Once the survey closed, quantitative data were analyzed using SPSS. A descriptive analysis was conducted to identify frequencies for descriptive qualities, FI, and stress and confidence and examined measures of central tendency (e.g., mean). A one-way ANOVA was performed to measure academic stress and academic confidence levels compared to level of FI. A  $p$ -value of  $< 0.05$  was chosen to measure statistical significance for the post hoc comparisons using Tukey HSD tests. To examine FI levels and their effect on academic self-efficacy and to put them into nominal constructs, FI levels were determined by measuring and combining responses according to HFSSM guidelines and academic attainment was measured based on GPA. Finally, a Pearson  $\chi^2$  test examined the association between FI levels and GPA.

Qualitative data were analyzed using thematic analysis as it allows for a constructivist stance in which meaning-making is culturally and socially constructed. Thematic analysis allows researchers to proactively analyze and interpret data (Braun & Clarke, 2006; Byrne, 2021). Using reflexive thematic analysis allows researchers to take meaningful roles in interpreting codes and developing themes (Braun & Clarke, 2016) where our subjectivity is an *analytic resource* (Braun & Clarke, 2021). We used Braun and Clarke's (2006, 2021) six data analysis phases. The first is *data familiarization* where line-by-line open coding was used followed by focused coding (Corbin & Strauss, 2015). The second, *systematic data coding*, allowed us to generate initial codes that could be related to the research questions and problem statement. The third, *generating themes*, allowed us to examine the coded data and collapse multiple codes with similarities into broad themes. In the fourth stage, *reviewing potential themes*, we performed two levels of review. The first consisted of reviewing potential relationships for internal homogeneity within themes (Patton, 1990). The second level required us to review the themes for internal homogeneity (Patton, 1990). Codes and themes were added and removed through these two levels. The fifth stage, *defining and naming themes*, involved determining which data items should be included in the results section. The sixth and final stage, *producing the report*, was a final

inspection of the themes as well as researchers' agreement on the themes (Braun & Clarke, 2006, 2016; Byrne, 2021).

## FINDINGS AND RESULTS

### Quantitative Findings

Respondents' levels of FI and academic self-efficacy were measured. Overall, there were 404 complete responses; responses that were not completed were removed from the analysis. The following sections provide information on the demographic characteristics of the respondents, ANOVA, and Pearson  $\chi^2$  tests run on FI level, military service, student status, GPA, credits completed, gender, race and ethnicity, citizenship, work status, GI Bill usage, participation in Operation Enduring Freedom (OEF) and/or Operation Iraqi Freedom (OIF), VA disability level, and institution type (descriptive statistics are available in the Appendix).

### Statistical Results

Statistical analyses measured FI levels, academic stress and academic confidence levels. We then compared FI levels with academic stress and academic confidence levels.

**Food Insecurity Levels:** One question asked how often the adults did not eat or skipped meals; 349 (86.60%) reported not skipping meals, but 54 (13.40%) did skip meals and of those who skipped meals, 29 (7.20%) skipped or missed meals from at least one month to every month. For families with children, 389 families with children (96.53%) had enough to eat, and 14 (3.50%) did not have enough to eat.

**Academic Stress and Academic Confidence Levels:** Overall, respondents reported a mean stress level of 5.17 and a mean confidence level of 6.27. Table 1 shows the average academic stress and academic confidence levels for each student success task.

**Food Insecurity Level Compared to Stress and Confidence:** There was a statistically significant difference between groups for stress on FI levels at the  $p < 0.05$  level ( $F(3,399) = 13.43, p = 0.000$ ). Post hoc comparisons using a Tukey HSD test indicated that the mean score for those with high food security ( $M = 4.48, SD = 2.56$ ) was significantly different from those with marginal food security ( $M = 5.65, SD = 2.28$ ) at the  $p = 0.000$  level, those with low food security ( $M = 6.44, SD = 2.15$ ) at the  $p = 0.000$ , and those with

**Table 1***Student Success Tasks and Stress and Confidence Averages*

Task	Stress Average (1 low, 10 high)	S.D.	Confidence Average (1 low, 10 high)	S.D.
Studying	6.275	2.501	6.469	2.582
Asking questions in class	4.459	2.895	7.586	2.236
Keeping up with the required readings	6.509	2.973	5.509	2.419
Understanding my professors	4.933	2.480	6.303	2.374
Writing term papers	6.536	2.814	5.566	2.461
Making friends at school	3.315	2.632	7.045	2.535
Doing well on exams	6.906	2.959	5.459	2.944
Getting papers done on time	6.424	2.879	6.082	2.545
Having more tests in the same week	6.174	2.897	4.774	2.293
Taking good class notes	3.849	2.446	6.643	2.576
Managing both school and other responsibilities	7.342	2.885	5.484	2.353
Managing time effectively	5.744	2.869	6.156	2.251
Getting along with family members	3.747	2.589	7.759	2.334
Improving reading and writing skills	4.094	2.596	6.568	2.622
Researching term papers	5.270	2.551	6.119	2.638
Getting the grades I want	6.782	2.652	5.851	2.350
Having enough money	6.509	3.019	5.725	2.226
Talking to my professors	3.811	3.406	6.955	2.366
Getting general help and information at school	3.945	2.478	6.231	2.810
Getting help on veteran benefits at school	3.861	2.545	6.692	2.366
Doing well in my toughest class	6.769	2.552	5.340	2.627
Talking to college staff	3.377	3.072	6.940	2.500
Finding time to study	6.201	2.523	5.558	2.435
Understanding my textbooks	5.231	3.105	6.355	2.359
Participating in class discussion	4.640	3.264	6.928	2.254
Understanding college regulations	2.871	3.351	7.022	2.252
Understanding G.I. Bill regulations	3.139	2.084	7.027	2.344

very low food security ( $M = 6.73$ ,  $SD = 2.98$ ) at the  $p = 0.007$  level. Taken together, these results suggest that their academic stress is connected to FI levels. There was a statistically significant difference between groups for confidence in FI levels at the  $p < 0.05$  level ( $F(3, 399) = 10.990$ ,  $p = 0.000$ ). Post hoc comparisons using a Tukey HSD test indicated that the mean score for those with low FI ( $M = 6.76$ ,  $SD = 2.03$ ) at the  $p = 0.001$  level was significantly different from those with marginal FI ( $M = 5.94$ ,  $SD = 1.87$ ) at the  $p = 0.000$  level, those with high FI ( $M = 5.31$ ,  $SD = 1.39$ ) at the  $p = 0.000$  level, and those with very high FI ( $M = 5.19$ ,  $SD = 2.91$ ) at the  $p = 0.026$  level. This shows that there was a difference in academic stress and confidence when FI levels were high compared to those with marginal and low FI. ANOVA and post-hoc results are shown in Table 2 and Table 3.

**Table 2***ANOVA Results for Stress and Confidence on Food Insecurity Levels*

	Sum of Squares	df	Mean Square	F	Sig.
<b>Stress Level</b>					
Between Groups	239.96	3	79.989	13.434	.000
Within Groups	2375.641	399	5.954		
Total	2615.607	402			
<b>Confidence Level</b>					
Between Groups	124.725	3	41.575	10.990	.000
Within Groups	1509.365	399	3.783		
Total	1634.091	402			

**Table 3***Post-hoc Comparisons of Stress and Confidence on Food Insecurity Level*

<b>Food Insecurity Level</b>			
Tukey HSD <sup>a,b</sup>			
	N	Subset for alpha = 0.05	
		1	2
<b>Academic Stress</b>			
High Food Security	211	4.483	
Marginal Food Security	130	5.650	5.650
Low Food Security	49		6.438
Very Low Food Security	13		6.731
Sig.		.175	.234
<b>Academic Confidence</b>			
High Food Security	211		6.756
Marginal Food Security	130	5.938	5.938
Low Food Security	49	5.306	
Very Low Food Security	13	5.192	
Sig.		.359	.278

Note: Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 36.442.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

**Food Insecurity and Academic Attainment for MSSVs**

We performed a Pearson  $\chi^2$  test on FI levels and GPA and found a statistically significant association between FI level and GPA,  $\chi^{(1)} = 221.13$ ,  $p < 0.001$ . The Phi coefficient of 0.741 shows a very strong positive relationship between FI levels and GPA (0.70 or higher); Cramér's V of 0.428 shows a moderate association between FI levels and GPA, and is shown in Table 4. This indicates that FI levels influence GPA.

**Table 4***Food Insecurity Level Compared to GPA Range*

Food Insecurity Level (FIL)		GPA Range											Total		
		0.00 - 0.29	0.30 - 0.69	0.70 - 0.99	1.00 - 1.29	1.30 - 1.69	1.70 - 1.99	2.00 - 2.29	2.30 - 2.69	2.70 - 2.99	3.00 - 3.29	3.30 - 3.69		3.70 - 3.99	4.00
High	Count	0	0	0	0	0	0	11	9	17	12	44	97	39	229
	% within FIL	.00	.00	.00	.00	.00	.00	4.80	3.93	7.42	5.24	19.21	42.36	17.03	100
	% within GPA	.00	.00	.00	.00	.00	.00	57.89	75.00	47.22	27.91	97.78	58.08	61.90	57
	% of Total	.00	.00	.00	.00	.00	.00	2.73	2.23	4.22	2.98	10.92	24.07	9.68	57
Moderate	Count	0	0	0	2	0	3	2	3	13	24	1	61	15	124
	% within FIL	.00	.00	.00	1.61	.00	2.42	1.61	2.42	10.48	19.35	.81	49.19	12.10	100
	% within GPA	.00	.00	.00	66.67	.00	60.00	10.53	25.00	36.11	55.81	2.22	36.53	23.81	31
	% of Total	.00	.00	.00	.50	.00	.74	.50	.74	3.23	5.96	.25	15.14	3.72	31
Low	Count	1	1	1	1	3	1	6	0	5	4	0	9	9	41
	% within FIL	2.44	2.44	2.44	2.44	7.32	2.44	14.63	.00	12.20	9.76	.00	21.95	21.95	100
	% within GPA	33.33	100.00	100.00	33.33	60.00	20.00	31.58	.00	13.89	9.30	.00	5.39	14.29	10
	% of Total	.25	.25	.25	.25	.74	.25	1.49	.00	1.24	.99	.00	2.23	2.23	10
Very Low	Count	2	0	0	0	2	1	0	0	1	3	0	0	0	9
	% within FIL	22.22	.00	.00	.00	22.22	11.11	.00	.00	11.11	33.33	.00	.00	.00	100
	% within GPA	66.67	.00	.00	.00	40.00	20.00	.00	.00	2.78	6.98	.00	.00	.00	2
	% of Total	.50	.00	.00	.00	.50	.25	.00	.00	.25	.74	.00	.00	.00	2
Total	Count	3	1	1	3	5	5	19	12	36	43	45	167	63	404
	% within FIL	.74	.25	.25	.74	1.24	1.24	4.71	2.98	8.93	10.67	11.17	41.44	15.63	100
	% within GPA	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100
	% of Total	.74	.25	.25	.74	1.24	1.24	4.71	2.98	8.93	10.67	11.17	41.44	15.63	100

**Qualitative Findings**

We received a total of 159 qualitative responses. The first qualitative question centered on the effect of the COVID-19 pandemic on participants, with 108 qualitative responses. The second question asked if there was anything that the participants would like to add; there were 51 responses. Five themes emerged from these responses and are detailed below.

**Food Insecurity**

Participants discussed that many veterans, especially those who served in lower ranks, struggle to afford adequate food. Regarding FI, one response was telling: “Veteran benefits need to cover more for students. If I had even an additional hundred a month as a ‘food allowance’ or something I wouldn’t have to bring home disgusting food from work to make sure I have something to eat.” Others responded that their GI Bill benefits were not enough and indicated that they had to take on extra jobs to make enough money for groceries and other necessities. One responded, “people must just put [bills] on a credit card and hope for the best.”

Because of COVID a respondent’s income was “drastically reduced for several months. We had to rely more on food stamps to pay for food for

our family, which sometimes still weren't enough." Others indicated that because their children were now being taught from home, they had to buy more food. In addition, because of the pandemic, food prices increased significantly; and some used the free food provided by schools to help feed their families. Some had to choose less healthy options because they were more cost-effective than healthier foods and used food pantries and other charitable organizations.

Some felt that the GI Bill was adequate and that it would take a "multiple dependent household to cause food insecurity" because their GI Bill benefits were substantial enough to house them in "D.C. in an expensive apartment and am able to take vacations / drink alcohol on a regular basis while only making \$700 in additional income a month." And there was a clear separation for some respondents; perhaps because of where they are currently in life. An officer deployed to Afghanistan replied, "Food insecurity will be discovered in the military among junior soldiers and those with more dependents in rural areas. My situation should not negate or diminish their plight."

### **Lost Jobs/Lost Wages-Economic Vulnerability**

Participants discussed job loss and reduced wages during the pandemic. Regarding the pandemic, many discussed losing their jobs or some income. One respondent wrote, "I had to get another job to make up for school not starting on time so I could pay rent. I had to overdraft my account to pay for groceries. It's been stressful because getting BAH [housing allowance] during the school year helps me survive and unfortunately I felt the pains." Another reported losing a roommate who moved back in with their parents and left the respondent with no way to pay bills which affected the respondent's credit when their service animal got sick; they wrote, "I'm barely scraping by and cannot work more hours than I do because of aggravating the problems with my service-connected disability." Several respondents detailed the loss of jobs or being furloughed from their jobs. Making it through while waiting for unemployment added undue stress to their households and several mentioned increased expenses were taxing, considering the lost income stream. Interestingly, three respondents reported that they financially benefited from COVID: one made money on the stock market, and two found they made more money from unemployment than from the jobs they had lost, showing that there were uneven financial experiences for the respondents.

### **The Haves and Have Nots: Inequalities within MSSV Community**

Many discussed the difference between the haves and have-nots; in other words, there is a perception that “Inside the veteran community, there is almost a ‘pecking order’ where the already successful veterans think the ones that need all the help are the ‘broken ones’. We aren’t broken. We were good soldiers who fought hard and didn’t have the same opportunities as others. Just like in civilian society, people fall through the cracks. Others echoed this feeling of neglect. They felt that veterans’ needs were averaged and provided as blanket relief to all, instead of looking at veterans and their different circumstances. For example, one respondent replied, “Veterans benefits help those who are truly in the middle; the poorest veterans still lack basic needs that aren’t met. The middle demographic is simply satisfied.” The poorest veterans lack basic support; they are not getting the resources they need and are crying for help. One respondent was so despondent about their situation that they simply wrote: “I now understand why there are 22 a day” (referring to the number of veteran suicides each day).

### **Going Back to What They Know: Reintegration Challenges**

Respondents also indicated a desire to return to the military because it is familiar; they understand the processes and the structure. Some had difficulty integrating back into civilian life and culture. “I’ve seriously contemplated going Active Duty again because of issues with integrating into civilian life.” Some respondents were very frank that rejoining the military would be a guaranteed income stream. One replied, “I have struggled greatly. I’m on the home stretch, but in the past couple years of school, I have seriously contemplated giving up and just getting anything to pay the bills. But I stayed in school because I knew I’d never make enough to support my son and be happy in my life. I even thought about getting back in the military, broken as my body is after 8 years of it.” Others echoed the loss of military pay and benefits, and although some are using the GI Bill, they miss the military lifestyle and desire to return to some semblance of it.

### **Better Programming and Better Benefits**

Several respondents discussed system support gaps for veterans, whether they were from the VA or state, local, or affinity groups. One respondent remarked, “Veterans NEED better programs, or if there are, easier access to them. We study, we go to class, many of us are parents, have lives, we can’t dedicate hours upon hours seeking handouts we need but are mostly too prideful to take. It’s a Catch 22.” This response was not the first to indicate

a reluctance to ask for help. Generally, responses of this nature, pointed to a mantra if “if you build it, they will come”, without asking for it to be built.

## DISCUSSION AND CONCLUSIONS

There needs to be further study on MSSV FI. In theory and intent, the G.I. Bill covers most of the costs for college as well as living expenses during the 36 months benefits are paid out, but this analysis shows that some MSSVs and their families are still experiencing FI. While we focused solely on academic self-efficacy in relation to FI, MSSVs were also affected by stressors outside of the scope of this study. The numbers of MSSVs with FI are lower than expected. In addition, while some MSSV families reported FI, it was clear those with children made significant efforts to ensure that their children had more to eat than the adults and the adults went hungry to protect their children. This is consistent with Kamdar et al.’s (2020) findings where veterans reported reducing their personal food intake to ensure that their children could eat. FI has been linked to academic success (Maroto et al., 2015; Weaver et al., 2019; Wolfson et al., 2021; Wood & Harris, 2022), but we were not able to find many studies on MSSV FI and academic attainment. This study found statistical significance between FI levels and were able to show lower stress and higher confidence in academic self-efficacy of MSSVs. The qualitative themes further highlighted the mechanisms underlying the statistical relationships by revealing how food insecurity created cognitive distractions and while participants showed advantages around interpersonal and institutional navigation, FI, socioeconomic, programming, and reintegration challenges had negative consequences on academics as well as their lives in general. The findings reveal a complex thematic progression that moves from immediate survival concerns to deeper systemic inequities within the veteran community. Economic vulnerability emerged first through food insecurity but evolved into a broader examination of stratified experiences during the pandemic. This economic stratification then developed into the more profound subject of internal community division, where the *haves and have nots* dynamic creates a hierarchical structure that mirrors civilian inequality but with the added complexity of differences in military rank and service history determining access to resources. The themes culminate into two interconnected responses: a psychological retreat toward familiar structures and guaranteed income of military life, and a call for systematic reform that acknowledges veterans’ pride-based reluctance to seek help. These five themes demonstrate how individual economic struggles are linked to broader issues of institutional inadequacy, community fragmentation, and the challenge of translating a military identity into a civilian one. This reveals

that veteran student experiences cannot be understood through isolated economic metrics but must be viewed as part of a complex structure of social, psychological, and structural factors that perpetuate inequality even within a community bound through shared military service.

### **Implications**

This study indicates that some MSSVs are affected by FI and that academic stress levels caused by FI are moderately high. It is important for policy, research, and practice to work collectively and collaboratively to minimize FI in general but specifically for those who are MSSVs.

### **Policy**

Legislators should reexamine policies surrounding housing allowances, as housing allowance is counted as part of income for military families. Because of this, many MSSV families do not qualify for SNAP. The U.S. Government Accountability Office (GAO) has called on the Food and Nutrition Service Agency to complete its information sharing on SNAP benefits (GAO, 2022). A 2022 study from the State Council of Higher Education for Virginia (SCHEV, 2022) recommended creating a state policy that will create more training, student qualifications through FAFSA data, and application assistance for SNAP benefits, which follows the recommendations of Martinez et al. (2018). Second, regarding military pay, family assistance should have at least equal weight as other military-related expenses (i.e., equipment). Third, by introducing nutrition and financial literacy programming during service and transition planning, FI may be greatly decreased among these populations. Finally, the Basic Needs Allowance approved in the FY 2022 *National Defense Authorization Act* brings much needed help to current low-income servicemembers struggling with FI but does not provide for veterans and is a *taxable* supplemental allowance for service members; however, this needs to be reexamined so the intent remains, but the effects like being taxed are removed. GI Bill funding is insufficient for some students, as shown in the findings. The DoD and the VA should create additional policies to help low income MSSVs feed themselves and their families.

### **Research**

This article is the first in a potential longitudinal study investigating FI levels of MSSVs. Many of the articles in the literature review called for more research on FI and its effects on college students. Although these findings demonstrate that the phenomenon exists, researchers should explore

the reasons why MSSVs are affected by FI, as the study population sample is only a small fraction of MSSVs. Additionally, research should include an investigation that breaks down FI for MSSVs by state, region, or locality. Qualitative focus groups or interviews could investigate how FI levels affect MSSVs. While this study focuses on FI and its effect on academic self-efficacy, the fact that MSSVs are experiencing FI at all reveals systemic inadequacies which could affect other basic needs areas like housing concerns, debt levels, and medical expenses.

### **Practice**

This study provides institutional staff with knowledge of FI and how it can affect MSSVs over the course of their academic endeavors. There are many efforts in place to help combat FI; but students are still food insecure. The results from this study can help practitioners plan and implement food security and financial programming, create and strengthening campus food pantries (Goldrick-Rab et al., 2018), partner with organizations like *Swipe Out Hunger*, provide MSSV-specific student success seminars, and advocate for healthy food options on campus. Instructors could also provide campus food pantry and SNAP information in their syllabi. Institutions need to be more proactive at identifying students at risk of FI, especially those from minoritized student populations as many MSSVs are part of these populations.

### **Limitations**

Like many studies, this one has its limitations. The HFSSM instrument we used has strengths and weaknesses. It examines levels of household food security but does not investigate whether households are taking actions to combat FI, nor does it ask about the lack of nutritious food and its effect on household members. The HFSSM was created for the U.S. population and was not designed to capture specific subpopulations. As we added in questions to capture the FI level of MSSV households, there may be some effect on the reliability and validity of the survey. We also examined MSSVs and their families: some MSSVs may have no other family member, and some may have several. The data only highlighted descriptive results from 404 surveyed participants. The survey was only available for six weeks. The dataset did not examine levels of FI among non-veterans, which could be used to highlight disparities between civilian populations and MSSVs. We did not ask where and how participants were spending their money or if they had had financial literacy training.

## Future Directions and Final Thoughts

This study has shown that MSSVs are affected by FI despite having access to G.I. Bill benefits in addition to the other funding sources available to non-veterans as well. It did not examine in any further detail how FI affects other non-MSSV populations. In addition to the quantitative findings regarding MSSVs and FI, the qualitative findings paint a bleak image of how MSSVs with FI are coping with stress levels regarding veteran funding and support. How FI may affect veterans (or their families) who are also working full-time or part-time remains to be studied. Further research on disability status based on time of period of service (e.g., OEF/OIF veterans versus other combat veterans, or age) could yield noteworthy findings as could comparing veteran to civilian disability levels and types. A further statistical analysis of variables compared to FI levels would be of interest. Finally, an examination of the effects of FI on academic self-efficacy will further inform researchers, practitioners, and policymakers about how to better serve these populations.

No one should have to experience FI, including those who were promised access to a higher education as part of their military service and commitment. We hope this study lays a foundation to begin to examine, understand, and address the extra burdens being experienced by this unique group of postsecondary and often underrepresented and minority students.

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