

CLEARINGHOUSE FOR MILITARY FAMILY READINESS

Food Insecurity and Military Families: Rapid Literature Review

Clearinghouse Technical Assistance Team

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Executive Summary

The United States Department of Agriculture (USDA) defines food security as “access by all people at all times to enough food for an active, healthy life” (United States Department of Agriculture [USDA], 2021). Food insecurity has been associated with quality-of-life issues as a risk factor for creating poor health. For instance, food insecurity is a risk factor for one’s health because an individual may not receive the proper nutrients in his or her diet, thus leading to or exacerbating poor health. However, food insecurity can also be the result of poor health (Narain et al., 2018). An example of food insecurity as a result of poor health may be an individual who suffers from a disability, so he or she can no longer work and, thus, may find it difficult to pay bills and buy food.

Food insecurity is associated with several health conditions (Cohen et al., 2020; Flores & Amiri, 2019; Gundersen & Ziliak, 2015; Narain et al., 2018; Pooler et al., 2018). Researchers have developed screeners to help healthcare and social work professionals identify food insecurity, such as the USDA Food Security Scale and The Hunger Vital Sign (Flores & Amiri, 2019; Makelarski, 2017). These screeners are used to determine the state of food security in households or with individuals. Resource awareness serves as one of the most cost-effective treatments for food insecurity (Flores & Amiri, 2019).

This report provides the following elements:

- a synthesis of the literature that includes a definition of food security, overview of food insecurity in the United States, overview of food insecurity in military families, overview of food insecurity in veterans, overview of risk factors for food insecurity, overview of prevalence of food insecurity, food insecurity and COVID-19, and identifying and addressing food insecurity, and
- additional resources focused on food assistance programing for families facing food insecurity and tools/screeners for practitioners to identify vulnerable families.

Note, this rapid literature review provides a preliminary examination of the research. This review is not intended to serve as a comprehensive review of the literature, nor are the resources provided endorsed by the Clearinghouse for Military Family Readiness at Penn State. Further, the material contained in this review is for informational purposes only, as such it be used to diagnose or treat food insecurity.

Introduction

The Technical Assistance (TA) team at the Clearinghouse for Military Family Readiness at Penn State (Clearinghouse) conducted a brief, rapid literature review on the topic of food security in the military. This rapid literature review was conducted on behalf of the Defense’s Office of Military Community and Family Policy (MC&FP). Research that examined food security in the military was identified by searching peer-reviewed journal articles with an emphasis placed on research published between 2011 and 2021. Search queries included various combinations of the following terms: food insecurity, military, military families, statistics, and veteran.

Defining Food Insecurity

Food Security (USDA, 2021)

- “The ready availability of nutritionally adequate and safe foods.”
- “Assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).”

Food Insecurity (USDA, 2021)

- “Food insecurity is the limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.”

Food security exists on a continuum consisting of the following:

1. High food security
2. Marginal food security
3. Low food security
4. Very low food security

The following table illustrates how food security is described through two descriptive domains (i.e., food security and food insecurity) with each domain containing two sub domains:

Table 1

Continuum of Food Security and Insecurity

Food Security	High food security: Households that do not encounter any challenges in accessing food.
	Marginal food security: Households in which members may face anxiety about obtaining food; however, no current threats exist.
Food Insecurity	Low food security: Food consumption needs are met; however, diet quality has been compromised (e.g., no/low access to nutrient dense foods; options are of low quality).
	Very low food security: Food consumption needs are not being met, and household members have insufficient access to consistent food.

Food insecurity has been shown to be a risk factor for several adverse health conditions (Gundersen & Ziliak, 2015). The health impacts from food insecurity may arise from the stress of not being able to access food and/or the nutritional limitations caused by the lack of food or types of available food. The following is a list of common negative health outcomes associated with food insecurity:

- Asthma (Gundersen & Ziliak, 2015)
- Behavioral problems in children (Flores & Amiri, 2019; Gundersen & Ziliak, 2015)
- Heart disease (Cohen et al., 2020; Pooler et al., 2018)
- Depression (Cohen et al., 2020; Flores & Amiri, 2019; Gundersen & Ziliak, 2015; Narain et al., 2018; Pooler et al., 2018)
- Obesity (Flores & Amiri, 2019)
- Sleep disorders (Cohen et al., 2020)
- Decline in cognitive functioning (Cohen et al., 2020)
- Increased falls (Cohen et al., 2020)
- Oral health (Gundersen & Ziliak, 2015)
- Pregnancy complications (Flores & Amiri, 2019)

Food insecurity is not the same as hunger. Hunger is the biological response to sustained food insecurity (Forman et al., 2018; USDA, 2021). When measuring food insecurity, items in screeners are directed at a moment in time with a specific measure threshold (e.g., “Within the past 12 months, we worried whether our food would run out before we got money to buy more” [Hager et al., 2010]). Hunger, on the other hand, is harder to define, and thresholds vary depending on the source examined (USDA, 2021).

Food insecurity likely plays a role in exacerbating existing medical conditions. For example, an individual who suffers from an ailment that is treated by diet

modifications (e.g., diabetes, heart disease) may lack the ability to adhere to dietary guidelines due to the inability to access the needed foods.

Scope of the Problem

Food Insecurity in the United States

The USDA reports that, during 2019, 10.5% of all (13.7 million) households experienced food insecurity at least once (USDA, 2021). The USDA (2021) reports that these 13.7 million households are comprised of 35.2 million people.

Food Insecurity in Military Families

- According to Blue Star Families' 2020 Military Family Lifestyle Survey Comprehensive Report 14% of active-duty family respondents reported food insecurity at some point during 2020 (Blue Star Families, 2021).
- Wax and Stankorb (2016) found that almost one in seven military families experienced food insecurity at some point. In a 2015 study, over 14% of military families with children reported food insecurity (Flores & Amiri, 2019).
- Wax and Stankorb's (2016) study found that, of the respondents who were food insecure, only 20% had enrolled in Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Practitioners should ensure that clients are aware of the food insecurity resources available to them (Flores & Amiri, 2019).
- Military families whose Service member is junior enlisted, or a non-commissioned officer (E1-E9) are more likely to experience food insecurity than households with higher ranking Service members (Wax & Stankorb, 2016).
- Families with deployed Service members, as a group, experience less food insecurity than their non-deployed counter parts (Hosek & Wadsworth, 2013). The reduced food insecurity with this group is likely due to increased pay during deployments, especially for those who are deployed to combat zones (Hosek & Wadsworth).

Food Insecurity Among Veterans

Around 3.9 million veterans are living paycheck-to-paycheck or below the poverty level (Cohen et al., 2020). Cohen and colleagues (2020) argue that veterans at this low-income level are at a high risk for food insecurity.

Data collected by the Veteran's Health Administration (VHA) and other research data indicate that certain subgroups of veterans may be more susceptible to food insecurity (Pooler et al., 2018). A meta-analysis conducted by Cohen and colleagues (2020) found that the largest concentration of food insecurity was found among four subgroups of veterans:

- Veterans who served in Iraq and Afghanistan (post-/911 veterans) (27%);

- Female veterans (28%);
- Homeless and formerly homeless veterans (49%); and
- Veterans who have serious mental illness (35%).

Veterans Who Served Post 9/11

There may be several reasons why post-9/11 veterans face food security challenges:

- The U.S. current Armed Forces are made up entirely of volunteers; thus, a higher number of veterans may come from challenging socioeconomic situations. When veterans return to their communities following separation, they may encounter these same socioeconomic environments (Miller, et al., 2016).
- Veterans who returned to civilian life in the 1970s and 1980s were supported by an abundance of job opportunities and a growing economy (Miller, et al., 2016, Rabbitt & Smith, 2021). Veterans recently returning to civilian life have returned to idle wage growth and a smaller share of middle-class wealth. Further study may be needed to measure the impact Covid-19 will have on these groups.
- Veterans from 1970-1990 have had decades to leverage post military benefits (e.g., GI Bill, health care). More recent veterans are only beginning to engage in civilian life (e.g., still in school, entry level career positions) leaving them in a position of financial insecurity (Miller, et al., 2016).
- Following separation 44% of junior enlisted (i.e., E1-E4) veterans report an at-risk financial status, with many reporting this persistent problematic financial status (Perkins, et al., 2021).

Female Veterans

Female veterans report food insecurity at a higher rate than their male counterparts (Pooler, 2018). In research conducted by Narain and colleagues (2018), the cohort of female veterans examined found food insecurity at a rate of 27.6%.

Homeless and Formerly Homeless Veterans

As may be expected, O'Toole and colleagues (2017) found a high rate of food insecurity is identified at the United States Department of Veterans Affairs (VA) clinics in areas with high rates of homelessness. Of the 270 patients screened, 48.5% reported food insecurity in the previous 3 months (O'Toole, et al., 2017).

Risk Factors for Food Insecurity

There are many circumstances that can lead to food insecurity. Anytime household resources (e.g., time, money) become stressed, the food security of a household may change. The following are some groups that tend to be most at risk for food insecurity (Wax & Stankorb, 2016):

- Low-income groups
- Low-educational attainment of adult family members
- Racial or ethnic minorities
- Families who rent a home
- Single parent families
- Families who have a disabled household member
- Families who experience maternal depression

Prevalence of Food Insecurity by Selected Household Characteristics, 2019 (USDA, 2021)

- Single-parent households, when compared to married-couple households, are about two to three times more likely to report food insecurity.
- Over 25 percent of households with incomes below 185 percent (approximately \$48,000 annual household income) face food insecurity.
- Households in which the primary income earner is Black non-Hispanic are more than twice as likely to encounter food insecurity than households in which White non-Hispanic individuals are the primary income earners.
- The percentage of those individuals who face food insecurity in metropolitan areas are comparable to those individuals in rural areas.
- When compared, single men and women experience food insecurity at the same rate.

Food Insecurity During Covid-19

Due to a stable food supply chain, in the United States, during the COVID-19 pandemic, food prices remained consistent throughout the first year of the pandemic (Gundersen et al., 2020). The cost of food is one of the most impactful risk factors for food insecurity; thus, because food prices did not increase during the pandemic, one can reason that the pandemic did not create a food insecurity situation for most households. More data will need to be analyzed in the future to ensure this postulate is accurate (Gunderson, 2020).

However, during COVID-19, job loss and lack of income may have had an impact on food security in families, especially families with children. Using statistically calibrated data that have been proven to mimic USDA data, Ahn & Norwood (2021) predict that job loss during the pandemic increased food insecurity in homes with children by 3%. This increase is likely lower than it may have been had governments and nonprofits not intervened with policies and resources (Ahn & Norwood, 2021). In addition, job loss due to an economic downturn may impact military families' food security levels if these families depend on income from working civilian household members.

Identifying Food Insecurity

There are two screeners commonly used by professionals that have been shown to be predictive of food insecurity (Flores & Amiri, 2019; Makelarski, 2017). These measures are the USDA Food Security Scale and The Hunger Vital Sign.

The USDA scale contains six items that are used to determine food insecurity. Respondents who answer in agreement with two or more of the items may live in a household that is experiencing, or has experienced, food insecurity. If five or more items are answered in the affirmative, the household is experiencing hunger.

Another screener, The Hunger Vital Sign, is a two-item screener based on the USDA's Food Security Scale. The Hunger Vital Sign screener has been validated by research efforts and appears to be just as effective as, or more effective than, the USDA's scale (Flores & Amiri, 2019; Makelarski, 2017). This screener consists of these two statements; responses that agree with (i.e., "often true" or "sometimes true") these statements could indicate that the household is at risk for food insecurity (Hager et al, 2010):

- "Within the past 12 months, we worried whether our food would run out before we got money to buy more."
- "Within the past 12 months, the food we bought just didn't last[,] and we didn't have money to get more."

Addressing Food Insecurity

Cohen and colleagues (2020) discussed the success that the VA has had with incorporating a version of The Hunger Vital Sign screener into all non-institutionalized consultations with patients. The VA began this practice in 2017, and, by late 2019, approximately 5 million veterans had been screened, and 74,000 cases of food insecurity were identified (Cohen et al., 2020). Currently, upon food insecurity identification, the patient is referred to a social worker and/or other appropriate medical personnel (e.g., dietician) for consultation. A follow-up with the patient is also performed to increase participation and follow through.

Several federal programs exist to ease food insecurity in households. Service members and their families are eligible for many of these programs. The largest federal program is the Supplemental Nutrition Assistance Program (SNAP). Gundersen & Ziliak (2015) indicated that SNAP has had one of the largest impacts on food security in the United States. Using data from the National Health Interview Survey, Pooler and colleagues (2018) found that fewer than 4 in 10 food insecure veterans participate in SNAP. Encouraging food insecure veterans and Service members to participate in SNAP, and/or other food assistance programs, may help to alleviate some food insecurity situations.

The following are some of the federal food insecurity relief programs that are available to American families:

- SNAP
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
- The Emergency Food Assistance Program (TEFAP)
- Child and Adult Care Food Program (CACFP)

Recommendations

- Conduct needs assessments of food banks near installations to assess and support needs among local military families.
- Include one of the screeners, USDA Food Security Scale or The Hunger Vital Sign, into healthcare and social service interactions with military families to help identify instances of food insecurity (Cohen et al., 2020; Flores & Amiri, 2019; Gundersen & Ziliak, 2015; Makelarski, 2017; Narain et al., 2018; O'Toole et al., 2017; Pooler et al., 2018).
- Ensure military families are aware of food insecurity resources (e.g., local food pantries, SNAP) that are available to them (Flores & Amiri, 2019) by increasing promotion and visibility of resources and assistance on Military OneSource.
- Consider establishing, or strengthening existing, partnerships with the USDA in order to leverage the data they have on Service member usage of federal food insecurity resources (Farell et al., 2016).
- Target interventions towards military-connected groups that show a propensity towards food insecurity (e.g., junior enlisted families with multiple children, more recent junior enlisted veterans, female veterans, homeless veterans, veterans with documented mental illness) (Miller et al., 2016; Cohen et al., 2020).
- Identify military families who have suffered job loss during the COVID-19 pandemic. Use screeners to assess food security in these families, so recommendations can be made to alleviate their situations.
- Develop a military-specific task force comprised of stakeholders in food security organizations to address food insecurity in military families (Blue Star Families, 2021).

Additional Online Resources

Websites

Supplemental Nutrition Assistance Program (SNAP)

<https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>

- SNAP provides nutritional assistance to families who face dramatic financial hardships. The federal program “improves food security, reduces poverty, and is associated with improved health for millions of Americans” (Keith-Jennings et al., 2019).

Meals for Kids When Schools are Closed

<https://www.fns.usda.gov/meals4kids>

- The National School Lunch Program is a federally funded initiative that provides free or reduced lunch to students whose families are in financial duress. The program provides these students with a dependable meal source. During times of school closures, such as summer break, these meals may not be readily available through the student’s school. Meals for Kids When Schools are Closed may be able to help locate alternative services.

Mazon 50- State Hunger Resource Guide

<https://mazon.org/covid-19-response/50-state-hunger-guide/>

- Mazon has curated a food assistance resource list that includes programing that exists at the national level, as well as state specific lists. This robust list of resources was put together in response to Covid- 19; however, many are not specific to the pandemic.

Screeners and Toolkits

U.S.D.A. Household Food Security Survey Module: Six-Item Short Form

<https://www.ers.usda.gov/media/8282/short2012.pdf>

- U.S.D.A. Household Food Security Survey Module is a screening tool developed by the USDA to identify household food insecurity. The screener has rigorously been shown to be an accurate predictor of food insecurity (Flores & Amiri, 2019; Makelarski, 2017).

Hunger Vital Sign Screener

<https://childrenshealthwatch.org/public-policy/hunger-vital-sign/>

- The Hunger Vital Sign Screener, developed by Children’s Healthwatch, consists of two items that are used to identify food security status. The screener has been shown to be as predicative, if not more so, than the USDA screener (Flores & Amiri, 2019; Makelarski, 2017). Because the screener is brief, practitioners, in any field, can easily incorporate it into consultations with parents and children.

Screen and Intervene: A Toolkit for Pediatricians to Address Food Insecurity

<https://frac.org/aaptoolkit>

- The Food Research & Action Center has developed this evidence-based toolkit for administrators who wish to incorporate food security screening in their organizations. The toolkit covers background and theoretical information, staff training, screening, intervention, and advocacy strategies.

Conclusion

Food insecurity continues to be an issue that impacts many individuals in at-risk communities, and there is a high prevalence of food insecurity in lower socioeconomic demographic tiers. In the military, food insecurity tends to impact households of lower ranking Service members. Practitioners may be a pivotal point for food insecurity interventions. The use of brief screeners to identify food security concerns, and ensuring clients/patients are aware of resources could increase many families' well-being. Food insecurity fluctuates with economic upturns and downturns. During times of economic hardship, increased attention to food security should be practiced.

Additional Assistance

The TA specialists at the Clearinghouse provide support to professionals as they examine and make informed decisions about which programs fit specific situations and are worth the investment. Whether connecting one with the resources and tools to conduct a needs assessment in a specific community, suggesting the best evidence-based program or practice for a certain situation, or developing an evaluation plan, the TA team of experts is a call or email away.

Please visit our website at www.militaryfamilies.psu.edu or call 1-877-382-9185 to speak with a TA specialist.

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