

RESEARCH REVIEW

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FOOD INSECURITY: EFFECTS ON HEALTH AND FAMILY STRESS

Food insecurity is a significant stressor to individuals and families, which commonly stems from financial difficulties. It is further compounded when other circumstances, such as frequent transitions and family conflicts, are present. In this edition of *Research Review (RR)*, we define food insecurity and describe methods of measuring it, discuss the association between food insecurity and family stress, and suggest how to provide assistance to families who are struggling with securing adequate food. This information will be helpful to the Army Family Advocacy Program (FAP) in two ways: (1) by providing information about food insecurity that can be integrated into the assessment of a victim or family that has had a violent incident and been referred to FAP, and (2) by integrating information about food insecurity and its effect on family stress into classes conducted for FAP personnel to prevent family violence. The information presented here may also be useful to health care providers in family practice, pediatrics, and for other clinicians who treat patients with illnesses and perform health and wellness checks.

Definition of food security and insecurity. According to the U.S. Department of Agriculture (USDA), food security is defined as “access by all people at all times to enough food for an active, healthy life” (Economic Research Service, 2021b). The USDA identifies four levels of food security, with *low* and *very low food security* constituting being *food insecure*. (Of note, the Office of the Secretary of Defense (OSD) classifies food security into three categories: food secure, low food security, and very low food security.)

- **High food security**—Households had no problems, or

anxiety about, consistently accessing adequate food.

- **Marginal food security**—Households had problems at times and anxiety about accessing adequate food, but the quality, variety, and quantity of their food intake were not substantially reduced.
- **Low food security**—Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.
- **Very low food security**—At times during the year, eating patterns of one or more household members were disrupted and food intake was reduced because the household lacked money and other resources for food. Self-reported food intake was below levels considered adequate.

The extent of food insecurity in the US and in the military. In 2021, 89.8% of U.S. households were continuously food secure throughout the year. However, 10.2% of U.S. households reported being food insecure at some times during that year. Of the 10.2%, 6.4% had low food security and 3.8% had very low food security at some time during 2021 (see ers.usda.gov for publications of a variety of topics related to food security). **In a 2018 report, 25.8% of active duty military personnel were food insecure: and of those, 15.4% had low food security and 10.3% had very low food security** (Asch et al., 2023).

Stressors associated with food insecurity. Food insecurity is associated with multiple forms of psychological distress including depression and anxiety, sleep impairment (Myers, 2020). It has also been associated with children’s negative academic performance and cogni-

tive distress (Gallegos, Eivers, Sondergeld, & Pattinson, 2021). Food insecurity can result from financial stress, the high cost of food, inadequate nutritional knowledge, inadequate skills for food preparation, and preferences for poor-quality food and cultural food habits (van der Velde et al., 2019). Food insecurity has been linked to ill health in adults, as well as developmental, behavioral, and mental health problems in children and adolescents. It has also been associated with risk for interpersonal and self-directed violence by adults such as suicidal behavior (attempted or completed), peer violence and bullying, youth dating violence, and child maltreatment (Frank et al., 2023).

Very low food security in households with children.

In 2021, the USDA noted that 6.2% of households with children were affected by food insecurity: 5.5% of families with children were *low food secure*, and 0.7% were *very low food secure*. In most cases, when children are food insecure, so are adults. Parents often protect their children from food insecurity even when they are struggling with reduced dietary quality and intake (ers.usda).

Measures of food security/insecurity. The USDA measures food insecurity using an 18-item survey with 10 items for adults and an additional eight items for families with children (see Appendix). A shorter, six-item version of the longer USDA 18-item survey is also available (<https://www.ers.usda.gov/media/8282/short2012.pdf>). A two-item version based on the USDA 18-item survey (Radandt et al., 2018) has also been used. These two latter forms have been employed in research and can be practi-

cally incorporated into the clinical setting and introduced in a class providing information on food insecurity as a form of family stress.

The six-item survey consists of the following statements. Response options include “often, sometimes, never or don’t know/refused” or “yes/no”.

1. “The food that we bought just didn’t last and we didn’t have money to get more.” (often, sometimes, never or don’t know/refused”)
2. “We couldn’t afford to eat balanced meals.” (often, sometimes, never or don’t know/refused”)
3. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? (Yes/No)
4. (If yes to question 3) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
5. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (Yes/No)
6. In the last 12 months, were you ever hungry, but didn’t eat, because there wasn’t enough money for food? (Yes/No)

Scoring of the six-item module is based on the respondent’s positive endorsement of each item by

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indicating either “often” or “sometimes,” or “yes”. *High or marginal food security* is assessed by an endorsement of 0-1 items; 2-4 suggests *low food security*; and 5-6 suggests *very low food security* (see U.S. Household Food Security Survey Module: Six-Item Short Form). Note that these classifications may differ from the 18-item survey that includes items relevant to households with children, whereas the six-item survey does not (see the Appendix for the full 18-item questionnaire).

A two-item survey was developed for pediatric practice (Hager et al., 2010) and has been used in dental practice (Radandt et al., 2018). These items are:

1. “Within the past 12 months we worried whether our food would run out before we got money to buy more”
2. “Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”

These can be endorsed as “often true”, “sometimes true”, or “never true” in the last 12 months. A positive endorsement (i.e., “sometimes true” or “often true”) on either question is considered positive for food insecurity .

While most families in the Army are food secure, food insecurity is an important issue for the FAP and medical communities to be aware of because it is a significant family stressor, and can also be associated with other stressors, such as financial stress and mental health. In this section, we suggest some methods of inquiry that could be used in a FAP assessment of clients and as a topic for teaching FAP personnel about the issues.

Inquiring about food insecurity in a FAP setting. In the context of a FAP assessment, an inquiry could determine if a service member or service member’s family has experienced food insecurity and if it occurred in the context of other family stressors.

The inquiry could be started with “I need to ask you about some family stressors that might have affected your relationships. Have there been financial pressures that have affected whether you have been able to buy enough food to feed your family in the way you like?” If the answer is “Yes”, the follow-up question could be “How often did/does this occur? Is it often or just sometimes?”

Discussing food insecurity. Food insecurity is an important topic to discuss in a variety of venues. For example, FAP personnel should be made aware of the potential for food insecurity to negatively affect family functioning. Food insecurity can also be an indicator that a family is struggling in multiple domains. The goal would be to provide the audience with a broad understanding of the topic

and how it can be assessed. When there is food insecurity in a household, this is most likely associated with other family stressors. Thus it is an indicator of a family at risk for other stressors.

Barriers to accessing food assistance in the military.

Stigma about asking for assistance is a common barrier for Service members. They may be afraid that asking for assistance will negatively impact their career and be concerned that their command may assume they are financially irresponsible. Additional barriers include the military culture of self-sufficiency and the lack of knowledge of resources available to assist with finances and obtaining food assistance (Asch et al., 2023).

Resources for military families. There are many federal, state, and local programs to assist families. Federal programs are listed at (<https://www.feedingamerica.org/take-action/advocate/federal-hunger-relief-programs>). These include Supplemental Nutrition Assistance Program (SNAP), the National School Lunch Program (NSLP), the Women, Infants, and Children (WIC) program and others. The Army Community Services can provide a list of food assistance programs that is specific for the installation. There is also the Military OneSource Army Economic Security Toolkit (<https://www.militaryonesource.mil/leaders-service-providers>).

APPENDIX: SURVEY QUESTIONS USED BY USDA TO ASSESS HOUSEHOLD FOOD SECURITY (18-ITEM)

1. “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
2. “The food that we bought just didn’t last and we didn’t have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?
3. “We couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn’t enough money for food? (Yes/No)
5. (If yes to question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

6. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn't eat, because there wasn't enough money for food? (Yes/No)
8. In the last 12 months, did you lose weight because there wasn't enough money for food? (Yes/No)
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food? (Yes/No)
10. (If yes to question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

(Questions 11–18 were asked only if the household included children age 0-17)

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn't feed our children a balanced meal, because we couldn't afford that.” Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because we just couldn't afford enough food.” Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children's meals because there wasn't enough money for food? (Yes/No)
15. In the last 12 months, were the children ever hungry but you just couldn't afford more food? (Yes/No)
16. In the last 12 months, did any of the children ever skip a meal because there wasn't enough money for food? (Yes/No)
17. (If yes to question 16) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
18. In the last 12 months did any of the children ever not eat for a whole day because there wasn't enough money for food? (Yes/No)

REFERENCES

Asch, B. J., Rennane, S., Trail, T. E., Berdie, L., Ward, J. M., Troyanker, D., ... Kempf, J. (2023). *Food Insecurity Among Members of the Armed Forces and Their Families*. Retrieved from Santa Monica, CA:

- Frank, M., Daniel, L., Hays, C. N., Shanahan, M. E., Naumann, R. B., McNaughton Reyes, H. L., & Austin, A. E. (2023). Association of food insecurity with multiple forms of interpersonal and self-directed violence: A systematic review. *Trauma, Violence, & Abuse*, 15248380231165689. doi:10.1177/15248380231165689
- Gallegos, D., Eivers, A., Sondergeld, P., & Pattison, C. (2021). Food insecurity and child development: A state-of-the-art review. *Int. J. Environ. Res. Public Health.*, 18, 8990. doi:10.3390/ijerph18178990
- Hager, E. R., Quigg, A. M., Black, M. M., Coleman, S. M., Heeren, T., Rose-Jacobs, R., ... Frank, D. A. (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*, 126(1), e26-32. doi:10.1542/peds.2009-3146
- Myers, C. (2020). Food insecurity and psychological distress: A review of the recent literature. *Curr. Nutr. Rep.*, 9, 107-118. doi:10.1007/s13668-020-00309-1
- Radandt, N. E., Corbridge, T., Johnson, D. B., Kim, A. S., Scott, J. M., & Coldwell, S. E. (2018). Validation of a two-item food security screening tool in a dental setting. *Journal of Dentistry for Children*, 85(3), 114-119.
- van der Velde, L. A., Schuilenburg, L. A., Thriuvikraman, J. K., Numans, M. E., & Kiefte-de Jong, J. C. (2019). Needs and perceptions regarding healthy eating among people at risk of food insecurity: a qualitative analysis. *Int J Equity Health*, 18(1), 184. doi:10.1186/s12939-019-1077-0
- Economic Research Service, “U.S. Household Food Security Survey Module: Six-Item Short Form,” U.S. Department of Agriculture, 2012.
- Economic Research Service, “Documentation Overview of Surveys,” U.S. Department of Agriculture, webpage, September 8, 2021a. <https://www.ers.usda.gov/data-products/food-security-in-the-united-states/documentation.aspx>
- Economic Research Service, “Food Security in the U.S.: Measurement,” webpage, September 8, 2021b. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/measurement/>
- Economic Research Service, “Survey Tools,” U.S. Department of Agriculture, webpage, September 8, 2021c. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/>