



2016 Midland County Food Security Survey Results Summary

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Introduction:

The following is a summary of the results of an analysis of a food security survey conducted by the United Way of Midland County, Michigan in collaboration with 40 community non-profit organizations. The survey was the result of a series of meetings which took place in 2015 and 2016 among non-profit organizations working in the area of emergency food services. The goal of the survey was to gain a better understanding of barriers that may exist to access to emergency food sources in the area. Faculty from Saginaw Valley State University provided input in the development of the survey, which was delivered by the United Way of Midland County, through both paper and digital distributions to non-profit organizations that were involved in the initial meetings. The survey consisted of 19 questions, including the 5 question food security measure used by the United States Department of Agriculture (USDA) Guide to Measuring Food Security¹. The unit of analysis was the household level and survey respondents were asked questions related to their entire household. Surveys were collected in April 2016 and by the end of the month 599 total responses had been received. This report summarizes the results of this survey.

Analysis:

It is important to note that these surveys were collected from a convenience sample and therefore generalizability is limited. In order to analyze the data, it was imported into the IBM SPSS Statistics software package. For most comparisons, chi-square and ANOVA tests were used to identify statistical significance.

Food security status was determined utilizing the 5 question short-form questionnaire utilized by the USDA. Since income was collected in brackets, some variables were generated based on estimates. Asset limited, income constrained, employed (ALICE) populations have been the focus of recent work by the United Way and

¹ Bickel, Gary, Mark Nord, Cristofer Price, William Hamilton, and John Cook: Guide to Measuring Household Food Security, Revised 2000. U.S. Department of Agriculture, Food and Nutrition Service, Alexandria VA. March, 2000

analysis drew from this work in making estimates.² The 2014 Michigan ALICE Report, provides thresholds to estimate poverty level and ALICE inclusion by county. For Midland County, Michigan, these levels were \$15,000 per year for poverty, regardless of age or household size, \$25,000 per year ALICE threshold for households with individuals 65 years old or older, and \$40,000 per year ALICE threshold for households with individuals less than 65 years old. In this study, the same thresholds were used for poverty and 65 years old and older households. However, since income brackets on the survey did not include \$40,000, households with individuals less than 65 years old were determined to be an ALICE household if they were above poverty, but below \$45,000 in income (Table 1.)

Table 1. Income thresholds used as estimates for poverty and ALICE

	United Way thresholds	Thresholds used in this report
Poverty level	\$15,000 or less	\$15,000 or less
ALICE (65 years or older)	\$25,000	\$25,000
ALICE (younger than 65)	\$40,000	\$45,000

Overview of respondents:

The median age of respondents to the survey was 46 years old and 79.8% of the respondents were female. The median household income for the respondents was between \$15,000 and \$25,000 per year (Figure 1.) 35% of the respondents appeared to be below the poverty line while an estimated 30% were ALICE (Table 2.) The average household size was 2.78 with an average of 1.51 working automobiles per household. 35% of the households in the survey had one or more people with physical disabilities while 60.2% indicated that they own their own homes.

² 2014 Michigan ALICE Report obtained from <http://www.uwmich.org/alice/>

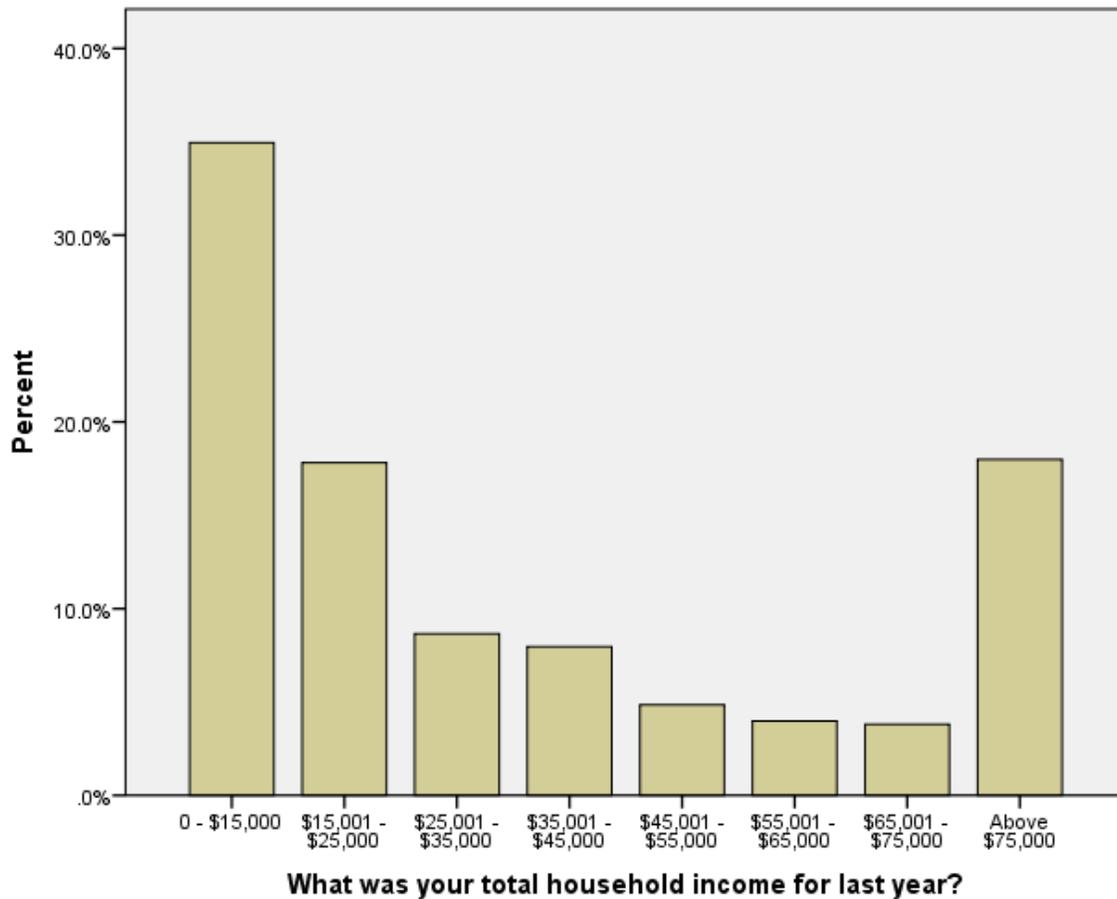


Figure 1: Total household income last year for survey respondents

Table 2. Percent of respondents below poverty and below ALICE threshold

	f	%
Below poverty line	191	35%
ALICE	162	30%
Above ALICE	195	36%
N	548	100%

Food Security Status and Use of Emergency Food Sources

The USDA uses a standard set of measures to determine food security status and the same questions were used to assess survey respondents. 51.9% of respondents had either low or very low food security status (Figure 2.) Essentially, this represented the respondents who are constrained in their access to food, most of often for financial reasons. Interestingly, only 39.8% of the survey respondents indicated that either they or someone else from their household had obtained food from an emergency food source such as a food pantry, food giveaway, soup kitchen, or similar source.

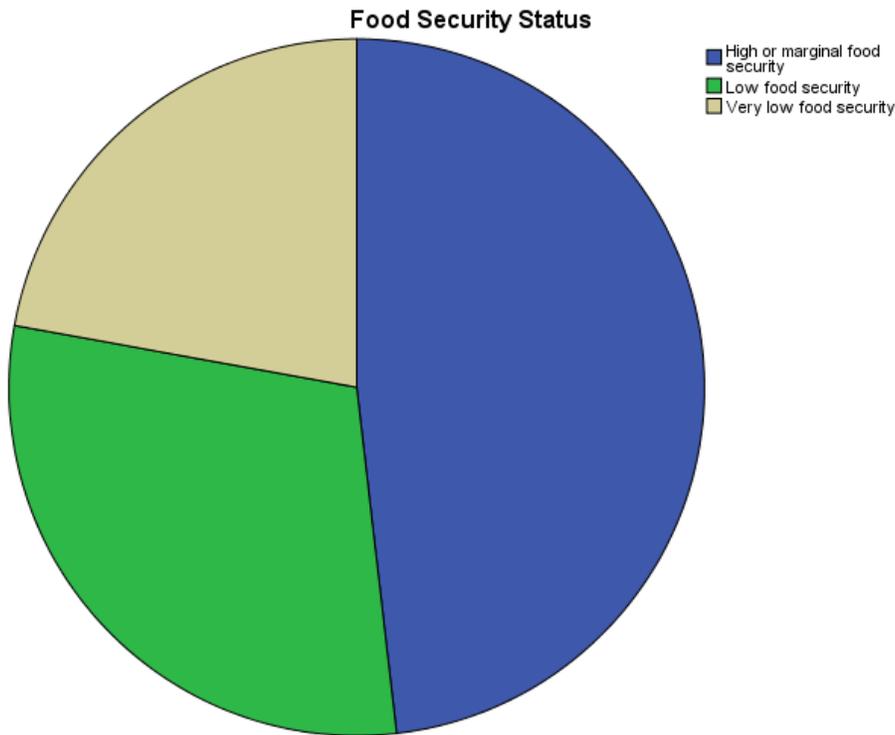


Figure 2: Food Security Status for survey respondents

There was a statistically significant relationship between food security status and utilization of emergency food sources ($p < .05$) with households with low and very low food security much more likely to obtain emergency food (Table 3). Notably, however, 24.3% of those with very low food security and 39% of those with low food security had not utilized an emergency food source in the last 12 months. This suggests that, even for survey respondents associated with one of the nonprofit organizations associated with this survey, emergency food sources are still being underutilized.

Table 3: Crosstabulation of Food Security Status and Utilization of Emergency Food Sources

In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food? * Food Security Status Crosstabulation

			Food Security Status			Total
			High or marginal food security	Low food security	Very low food security	
In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food?	Yes	Count	20	89	84	193
		% within Food Security Status	8.3%	61.0%	75.7%	38.8%
	No	Count	220	57	27	304
		% within Food Security Status	91.7%	39.0%	24.3%	61.2%
Total	Count	240	146	111	497	
	% within Food Security Status	100.0%	100.0%	100.0%	100.0%	

Food insecure households

In order to identify demographic differences among food secure households and households with either low or very low food security, the demographic characteristics of households in these three groups were compared. There was no statistically significant difference among groups in terms of age, household size, number of children, and working household. Not surprisingly, there was a statistically significant relationship between income and food security status ($p < .05$) with higher income households less likely to have low or very low levels of food security (Figure 3.)

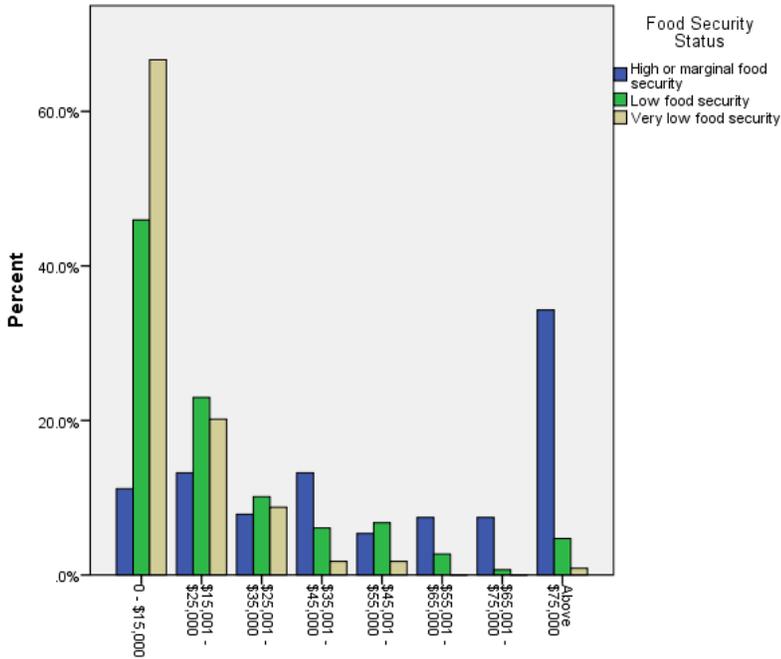


Figure 3. Percent of respondents within each food security status by income bracket

Similarly, low and very low food security households were more likely to be rentals (Figure 4) and more likely to have one or more people with physical disabilities in the household (Figure 5).

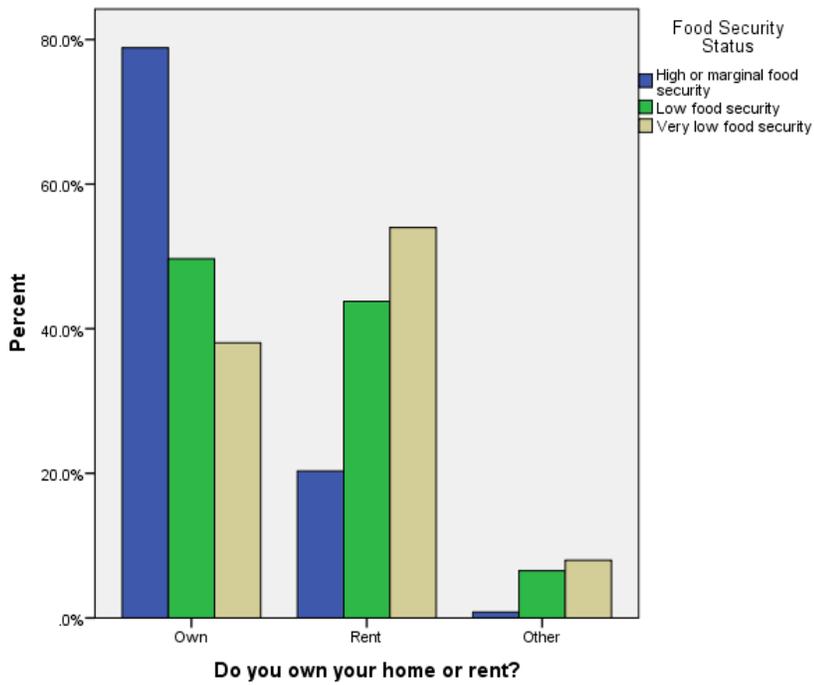


Figure 4. Percent of respondents within each food security status by home ownership

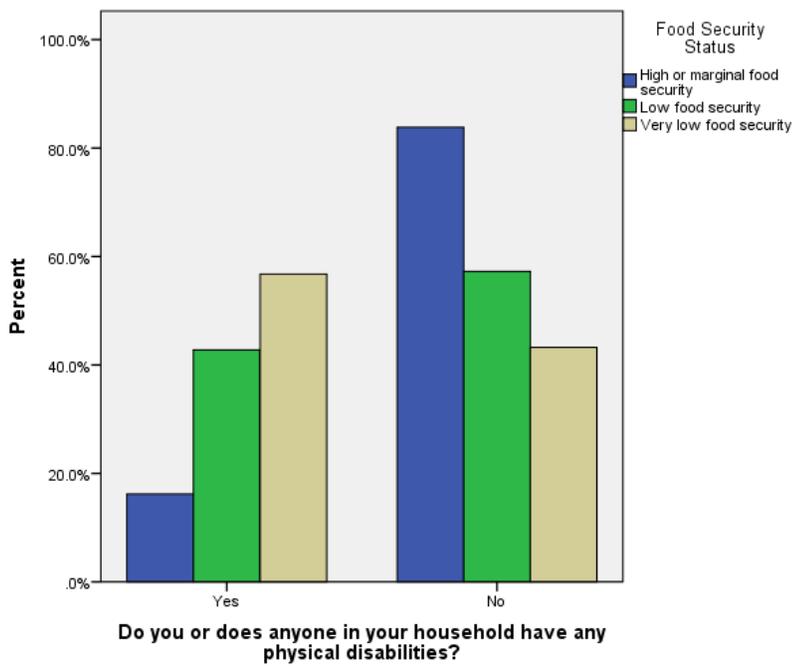


Figure 5. Physical disabilities within households of survey respondents

An ANOVA test also indicated a statistically significant relationship between food security status and car ownership ($p < .05$). Households with very low food security had an average of 1.12 working automobiles, compared with an average of 1.86 automobiles for households that have either high or marginal food security status.

Food Insecure Households and Emergency Food Source Utilization

Give then interest in the nonprofit organization collaborative in ensuring that those in need were accessing emergency food sources, specific analysis was conducted of households that had either low or very low food security and had not utilized emergency food sources in the past 12 months. In other words, these were households that could potentially benefit from emergency food sources, but were not using them. A comparison was conducted of food insecure households who had not utilized emergency food sources and food insecure households had utilized emergency food sources. There were 257 respondents who from either low or very low food security households, 84 of whom (33%) indicated that they had not used an emergency food source in the past year.

Not surprisingly, food insecure households with lower incomes were more likely to seek help (Figure 6.) Over 60% of those who had used an emergency food source had incomes less than \$15,000 per year. Notably, almost 40% of those who had not utilized emergency food sources had very low income levels as well (less than \$15,000 per year.) Interestingly, utilization rates were similar in the \$15,001 to \$35,000 range.

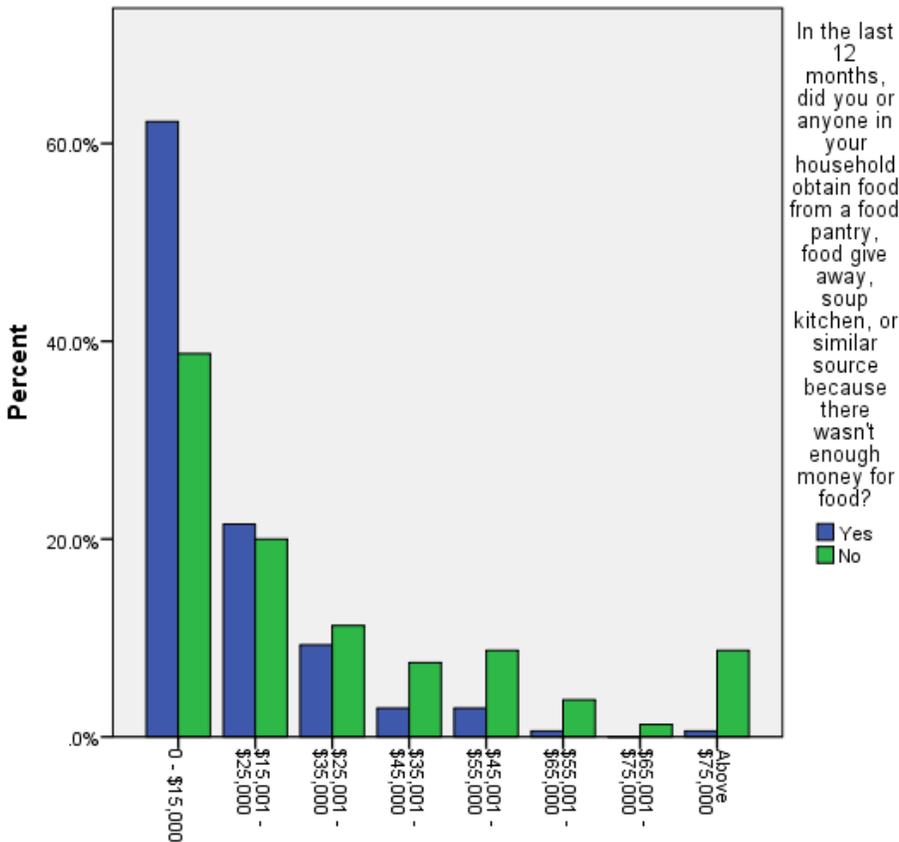


Figure 6. Percent of food insecure households obtaining emergency food by income

Households with a person with a disability were also more likely to have utilized emergency food sources in the last 12 months (Figure 7.)

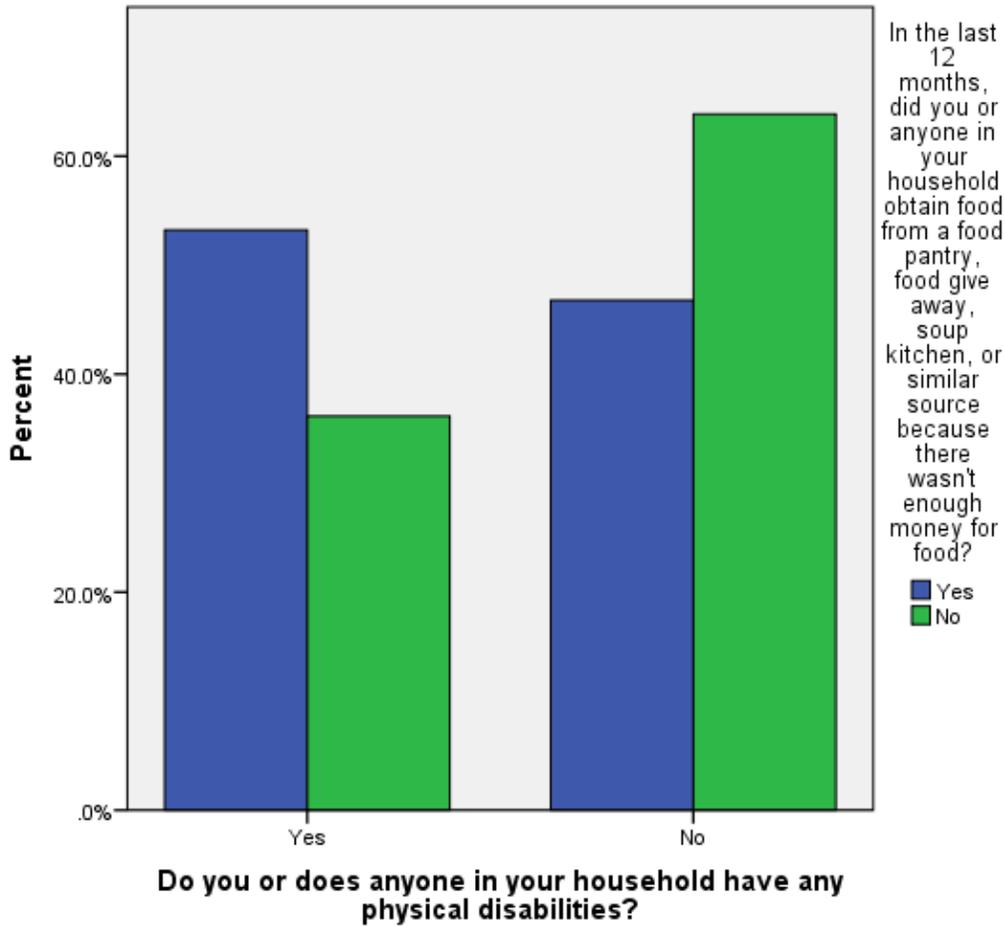


Figure 7. Percent of food insecure household utilizing emergency food sources by physical disability status

There were three questions on the survey related to perceived barriers to food access. These questions related to income, transportation to a store, and having enough time to get food. There were statistically significant differences in perceived barriers related to income and transportation ($p < .05$.) In particular, food insecure households who did not access emergency food appeared more likely to disagree that transportation was a problem (Figure 8.) Over half of food insecure households who had not utilized emergency food sources, indicated that they disagreed or strongly disagreed that transportation was a barrier to food access.

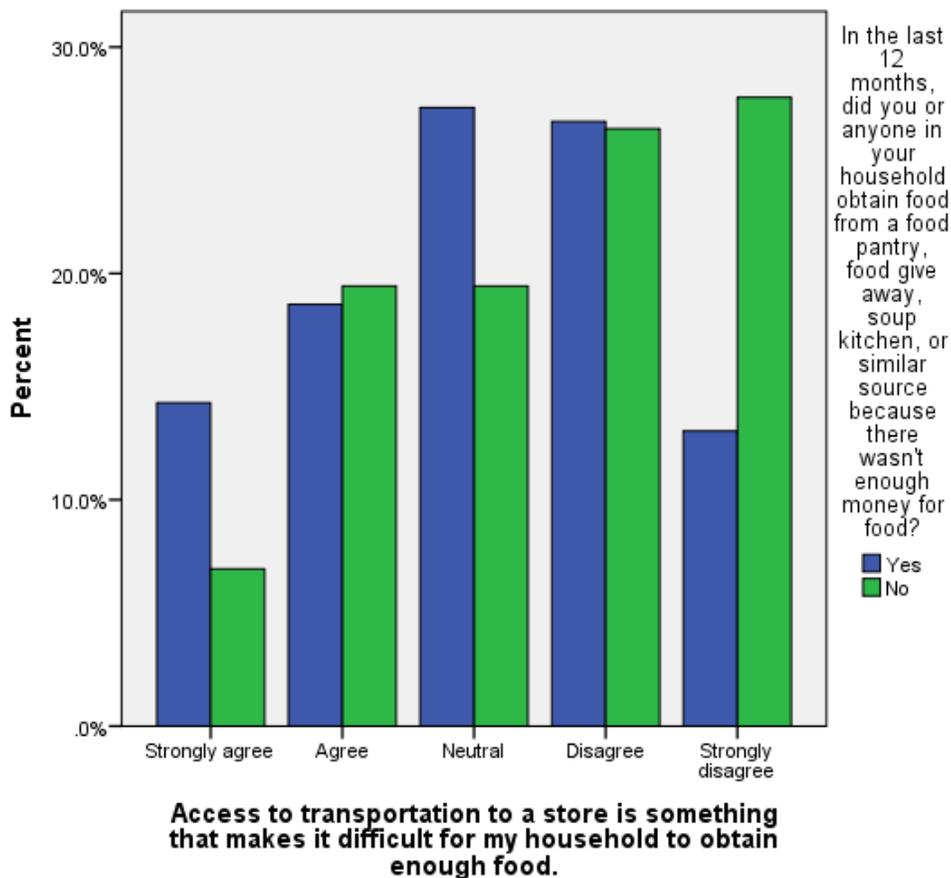


Figure 8. Perception of transportation as a barrier to food access by food insecure households utilizing and not utilizing emergency food sources

As with previous comparisons, income was also perceived to be a barrier differentially by those utilizing and not utilizing emergency food sources and again the relationship was statistically significant ($p < 0.05$). While both groups (utilizing and not utilizing) perceived that income was a barrier, utilizers were more likely to either agree or strongly agree that it is a barrier (Figure 9.) There was no statistically significant relationship between groups in terms of perception of time required to obtain food as a barrier.

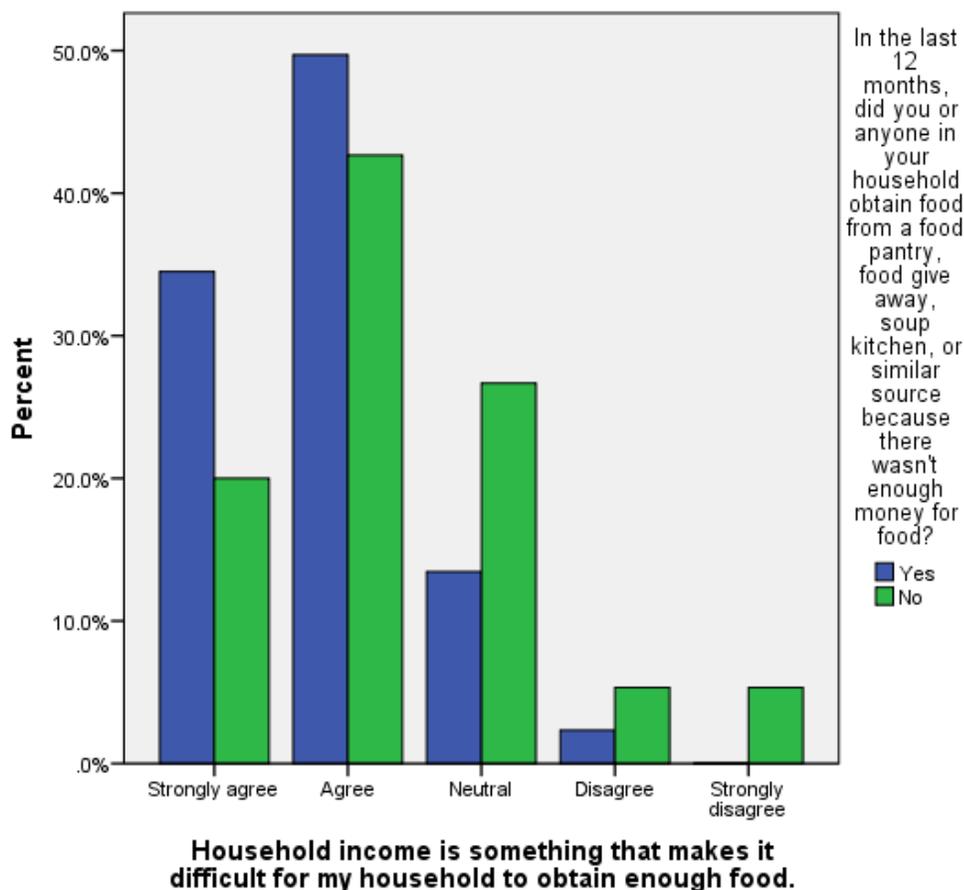


Figure 9. Perception of income as a barrier to food access by food insecure households utilizing and not utilizing emergency food sources

It is important to keep in mind that food insecure households all saw income and transportation as barriers to food access with income being the most significant barrier for most households. However, those utilizing emergency food sources tended to see income as a more significant barrier. 84.2% of emergency food source utilizers strongly agreed or agreed that income was a barrier while only 62.7% of non-utilizers strongly agreed or agreed that income was a barrier. Similar patterns were apparent in terms of transportation as a barrier, with 32.9% of utilizers compared to 26.3% of non-utilizers indicating that they strongly agreed or agreed that transportation was a barrier.

ALICE Populations and Emergency Food Source Utilization

There was a difference between emergency food source utilization of ALICE respondents and food security status ($p < .05$) with respondents living below the poverty line more likely to have low or very low food security. Notably, however, food security was still a significant issue for ALICE respondents with 59.2% of ALICE respondents also having low or very low food security (Table 4).

Table 4. Crosstabulation of respondents in poverty and below the ALICE threshold and food security status

Food Security Status * ALICE population Crosstabulation

			ALICE population			Total
			Below the poverty line	ALICE	Above ALICE threshold	
Food Security Status	High or marginal food security	Count % within ALICE population	26 16.0%	60 40.8%	143 84.1%	229 47.8%
	Low food security	Count % within ALICE population	63 38.9%	53 36.1%	24 14.1%	140 29.2%
	Very low food security	Count % within ALICE population	73 45.1%	34 23.1%	3 1.8%	110 23.0%
Total		Count % within ALICE population	162 100.0%	147 100.0%	170 100.0%	479 100.0%

There was also significant relationship between emergency food source utilization rates the income thresholds ($p < .05$.) 73.7% of those living in poverty indicated that they had used an emergency food source in the past year compared to only 46.4% of ALICE respondents (Table 5.) However, given that 40.8% of the ALICE population is food secure (Table 4) it is possible that ALICE respondents who are food secure may be the same ones not utilizing emergency food sources, so we also controlled for food security status when assessing emergency food source utilization rates.

Table 5. Crosstabulation of respondents in poverty and below the ALICE threshold and emergency food source utilization

In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food? * ALICE population Crosstabulation

			ALICE population			Total
			Below the poverty line	ALICE	Above ALICE threshold	
In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food?	Yes	Count % within ALICE population	137 73.7%	71 46.4%	10 5.2%	218 41.1%
	No	Count % within ALICE population	49 26.3%	82 53.6%	182 94.8%	313 58.9%
Total		Count % within ALICE population	186 100.0%	153 100.0%	192 100.0%	531 100.0%

In order to account for smaller expected cell counts, respondents who had either low food security or very low food security were collapsed into a single category of food insecure. This new category was controlled for when examining emergency food source utilization for the three income categories. When looking at only at food insecure households (low or very low food security), there was a relationship between income category and emergency food source utilization. 22.6% of those living in poverty and food insecure were not using

emergency food sources while 32.5% of the food of the food insecure ALICE population was not getting food from an emergency food source (Table 6.)

Table 6: Crosstabulation of food insecure households by income category and emergency food source utilization

In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food? ^ ALICE population Crosstabulation

			ALICE population			Total
			Below the poverty line	ALICE	Above ALICE threshold	
In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food?	Yes	Count	103	56	8	167
		% within ALICE population	77.4%	67.5%	29.6%	68.7%
	No	Count	30	27	19	76
		% within ALICE population	22.6%	32.5%	70.4%	31.3%
Total	Count	133	83	27	243	
	% within ALICE population	100.0%	100.0%	100.0%	100.0%	

Since data was available regarding perceived barriers, we also examined whether there were differences between food insecure ALICE households who utilized emergency food sources and food insecure ALICE households that do not. There was no statistically significant association between emergency food source utilization and perception of barriers in income, transportation, or time. There was also no statistically significant association with home ownership, having household members with a physical disability, or car ownership. Interestingly, the only statistically significant difference ($p < .05$) between food insecure ALICE households that have and have not utilized emergency food sources was age. The average age of food insecure ALICE respondents who utilize emergency food sources was 49.5 years old ($s=14.8$) compared to 40.2 ($s=15.4$) years old for those who do not.

Conclusions

While the convenience sample methodology used in this survey limits generalizability, the data does provide some insight into factors influencing emergency food source utilization. The fact that the survey was distributed by local nonprofit organizations working in the area of emergency food provisioning suggests that the survey respondents are a reflection of those who are in contact with these organizations. It also seems likely that the survey contains a disproportionately high number of respondents who are utilizing, or at the very least are aware of, community emergency food sources. Actual utilization rates among the local population are likely lower than appear in this survey.

Nonetheless, the survey allows us to make some comparisons between food secure and insecure populations. This is important because food insecure has very real impacts on the health and wellbeing of adults and children in a household and has been correlated with a wide variety of health and wellbeing issues including childhood

health³, asthma⁴, behavior problems, and anxiety and depression⁵. In particular, this survey allows us to learn more about food insecure households who are not currently utilizing emergency food sources. Furthermore, it also allows us to examine populations of high interest, namely the ALICE population. There are a number of important points that are worth highlighting.

- 1) Many people who would benefit from emergency food sources are not utilizing them. In the case of households with low food security, 39% of the households are not using them while nearly 1 in 4 households with very low food security are not utilizing them.
- 2) Food insecure households tend to be low income, renters, and contain one or more people with a physical disability.
- 3) Households with low incomes and containing one or more people with a physical disability were more likely to utilize emergency food sources. ALICE households were less likely than households in poverty to utilize emergency food sources.
- 4) Household utilizing emergency food sources tended to see income and transportation as larger barriers to access to food.
- 5) Food security is a problem for 59.2% of the ALICE households and 32.5% of food insecure ALICE households were not using emergency food sources.

In summary, it is clear that the more challenges that a household faces, in particular in terms of actual barriers of income as well as perceived barriers, the more likely they are to have utilized emergency food sources. At the same time, however, it appears that food insecure households, which would definitely benefit from access to emergency food sources, are not utilizing these sources. This suggests that, despite evidence that food security status can have major impacts on health and wellbeing of household members, many households in the area are not pursuing emergency food sources as a way of alleviating these problems.

³ Ryu, Jeong-Hee and Judith S. Bartfeld. 2012. "Household Food Insecurity During Childhood and Subsequent Health Status: The Early Childhood Longitudinal Study–Kindergarten Cohort," *American Journal of Public Health* 102(11):e50-e55.

⁴ Mangini, Lauren D., Mark D. Hayward, Yong Quan Dong, and Michele R. Forman. 2015. "Household Food Insecurity Is Associated with Childhood Asthma." *Journal of Nutrition* 145 (12): 2756–64.

⁵ Whitaker, Robert C., Shannon M. Phillips, and Sean M. Orzol. 2006. "Food Insecurity and the Risks of Depression and Anxiety in Mothers and Behavior Problems in Their Preschool-Aged Children." *Pediatrics* 118 (3): e859–e868.

COMMUNITY FOOD SURVEY

Our community wants to ensure everyone has enough to eat!

Please complete this short survey to help us better understand the needs in Midland County and how we can work together to make it better. ***PARTICIPATION IS OPTIONAL AND CONFIDENTIAL.***

1. "The food that I bought just didn't last, and I didn't have money to get more."
Was that often, sometimes, or never true for (you/your household) in the last 12 months?
 - Often true
 - Sometimes true
 - Never true
 - Don't know / Not applicable

2. "(I/we) couldn't afford to eat balanced meals."
Was that often, sometimes, or never true for (you/your household) in the last 12 months?
 - Often true
 - Sometimes true
 - Never true
 - Don't know / Not applicable

3. In the last 12 months, since last February, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?
 - Yes, almost every month
 - Yes, some months but not every month
 - Yes, only 1 or 2 months
 - No

4. 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
 - Don't know

5. In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?
 - Yes
 - No
 - Don't know

6. What was your total household income for the last year?
 - 0 - \$15,000
 - \$15,001 - \$25,000
 - \$25,001 - \$35,000
 - \$35,001 - \$45,000
 - \$45,001 - \$55,000
 - \$55,001 - \$65,000
 - \$65,001 - \$75,000
 - Above \$75,000

PLEASE TURN OVER. ADDITION QUESTIONS ARE ON THE OTHER SIDE.



7. Do you own your home or rent? Own Rent Other _____
8. Do you or does anyone in your household have any physical disabilities? Yes No
9. How many working automobiles are owned by you or members of your household? _____
10. What year were you born? _____
11. What is your gender? Male Female
12. How many adults age 18 or older live in your household? _____
13. How many children under the age of 18 live in your household? _____
14. How many members of your household are employed full time? _____
15. How many members of your household are employed part time? _____
16. In the last 12 months, did you or anyone in your household obtain food from a food pantry, food give away, soup kitchen, or similar source because there wasn't enough money for food?
- Yes
 - No
 - Don't know
17. Access to transportation to a store is something that makes it difficult for my household to obtain enough food.
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
 - Don't know / Not applicable
18. Household income is something that makes it difficult for my household to obtain enough food.
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
 - Don't know / Not applicable
19. Having time to go to the store makes it difficult for my household to obtain enough food.
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
 - Don't know / Not applicable

This survey is a collaborative effort of over 40 community non-profit organizations and is supported by the staff of Saginaw Valley State University.

