ACTA SCIENTIFIC NUTRITIONAL HEALTH

Volume 2 Issue 11 November 2018

Research Article

A Grassroots Approach to Mobilizing Nutrition Resources in a Midwestern Community

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Received: September 26, 2018; **Published**: October 26, 2018

Abstract

According to the United States Department of Agriculture, approximately 49 million people in the United States suffer from food insecurity. Food insecurity has been associated with poor cognitive development, poor academic performance, and poor emotional development in children. Food insecurity has also been associated with depression, anxiety, and some chronic diseases in adults. A survey was created to learn about the nutrition-related behaviors of a congregate meal site's participants, source of transportation to the meal site, other known community nutrition assistance programs, and any purpose(s) other than food for attending the meal site. Most individuals participating in the congregate meal program lacked adequate food supply, and some lacked functional appliances, and/or homes to store or cook food. Only 41.3% of participants reported consuming three meals a day; 16% reported lack of consistency in consuming any particular meal on a daily basis. Only 45.7% of survey participants were aware of other food assistance programs in the community. Community nutrition resources were compiled and verified. Additional community nutrition resources were identified through further research. The list of resources was compiled into a brochure, and a map displaying the locations created and placed in the brochure. The brochure was provided and reviewed with the participants at the congregate meal site and posters of the brochure displayed for future reference. The brochure was shared and requested throughout the community including other community service organizations and the public school district. Collaboration and education are vital to identifying and mobilizing resources aimed toward promoting overall health.

Keywords: Nutrition Resources; Midwestern; Food Insecurity

Introduction

According to the United States Department of Agriculture, approximately 49 million people in the United States suffer from food insecurity.1 Rates of food insecurity have been found to be higher in certain households including households with children (20%), single parent households (female 35.4% and male 23.6%), Black Non-Hispanic households (24.6%) and Hispanic households (23.3%) [1]. Food insecurity has been associated with poor cognitive development, poor academic performance, and poor emotional development in children. Food insecurity has also been associated with depression, anxiety, and lack of productivity in adults.2 Food insecure households have to make adjustments in purchasing habits in an attempt to feed their families resulting in less variety, poorer quality, more refined, energy-dense foods [2,3] These dietary changes push families further away from the recommended dietary guidelines including inadequate fruit and vegetable consumption, lack of dietary fiber and whole grains, lack of essential vitamins and minerals, skipping of meals, and increased consumption of foods rich in fat, sugar, and sodium [4]. Food insecurity has been linked to a multitude of health concerns including cardiovascular disease, hypertension, obesity, and type 2 diabetes [3].

Education and empowerment toward positive behavior change is vital to the overall health and wellness of our communities. In the presence of high unemployment rates, clinical and community health professionals need to collaborate to an even greater degree

to meet the nutrition needs of communities. Health professionals must make a conscientious effort to identify and mobilize community nutrition resources; and, to subsequently promote awareness and education of existing community nutrition resources. The purpose of this project included

1. To assess nutrition resources in a Midwestern community,
2. To promote awareness of existing nutrition resources to individuals participating in a lunch congregate meal program,
3. To provide basic recommendations related to choosing a balanced plate at a congregate meal site and at other sites providing supplementary food packages to promote overall health, immune function and general feelings of well-being among low income individuals.

Materials and Methods

The principle investigator and two student assistants (undergraduate students) collaborated with the director and supervisory board of the lunch-only congregate meal site to design a survey conducive to learning more about the nutrition-related behaviors of the congregate meal program participants, participant satisfaction with the site food and service, source of transportation to the congregate meal site, other known community nutrition assistance programs, and any purpose(s) other than food for attending the congregate meal site. Three tables were set up with a combination of the principle faculty investigator and/or two student assistants. Students were trained on how to greet the site participants, how to explain the purpose of the survey, how to begin the survey, how to ask the survey questions, and how to ask questions in a different format in the event of participant uncertainty in how to respond to a question or any confusion related to the purpose of the survey. Six students accompanied the principle investigator on the two pre- established high attendance days. Survey participation was anonymous therefore the project was considered exempt by the university's institutional review board. Names were not collected or documented. Participants had to be 18 years of age or older to participate in the survey (Table 1).

Supervisory board members were present on both days of the survey and assisted the process in informing the congregate meal participants of the survey as the congregate meal participants finished their meal and directing the congregate meal participants to the survey tables located at the rear of the room by the exit door.

Anonymous: No Name required

1. How many meals do you eat a day during the week?

_____Only one, lunch here at the Inn
_____Two, including lunch here at the Inn
_____Three, including lunch here at the Inn

2. How many meals do you eat each day on the weekend?

_____None
_____Only one, lunch here at the Inn
_____Two, including lunch here at the Inn
_____Three, including lunch here at the Inn

3. Which meals or snacks do you eat almost every day?

_____Breakfast
_____Lunch
_____Supper
_____Morning Snack
_____Afternoon Snack
_____Evening Snack

4. How many times a week do you eat at the Good Samaritan Inn?

_____One
_____Two
_____Three
_____Four
_____Five
_____Six

5. Do you know of any other places in town that you can get other meals or food packages?

_____No
_____Yes,

Please list _____

6. If you get any meals from other places in town, please list which meals and whereyou receive them from (examples: churches, food banks, shelters, etc.)?

7. Breakfast:_____ Lunch:_____ Supper: _

8. How do you get to the Good Samaritan Inn (Mark any that apply)?

_____Walk
_____By Car
_____By Bus
_____By Taxi

_____By Bicycle
_____Get a ride from someone
_____Other
9. How far do you travel to get to the Inn?
About_____miles or_____minutes
10. Would you say the amount of food provided at the Good Samaritan Inn is:
_____Too much
_____Not enough
_____Just right
11. What are your favorite main dishes at the Good Samaritan Inn?
12. What are your least favorite main dishes at the Good Samaritan Inn?
13. Do you come to the Inn for anything besides food?
_____hang out with friends
_____get out of the bad weather
Other (please list) _____
14. Are you treated with respect while you are at the Inn?
_____Always
_____Most of the time
_____Never
_____Prefer not answer
I am: Male_____or Female _____ I am:___years old

Table 1: Good Samaritan Inn Survey Anonymous: No Name required.

Participation was voluntary however the majority of participants completed the survey. Participants were allowed to complete the survey on their own upon request. Surveys were reviewed for completeness prior the participant leaving the congregate meal site.

Results

Two hundred and thirty two surveys were completed. One hundred and twenty nine or 55.6% of the participants were male. Age of participant varied as follows: Aged 18-20 years 3%; aged 21- 30 years 16.4%; aged 31-40 years 18.5%; aged 41 - 50 years 25.4%; aged 51 - 60 years 26.7%; aged 61 - 70 years 6.9%; aged 71 - 80 years 1%; aged 81 - 90 and 91 - 100 less than 1% respectively.

Among the findings, 3.4% commented that they did not visit the congregate meal program on a weekly basis; 11.2% of participants reported visiting the congregate meal program once each week; 12% reported visiting the congregate meal program twice each week; 14.6% reported visiting the congregate meal program three times each week; 7.3% reported visiting the congregate meal program four times a week; 9.5% reported visiting the congregate meal program five days a week; 13.8% reported visiting the congregate meal program six days a week; and, 13.4% reported attending the congregate meal program seven days a week.

Of note, only 41.3% of participants reported consuming three meals a day; 34% reported consuming two meals a day; and, 16.4% reported consuming only one meal per day. Rates of meal consumption dropped on the weekend with only 36.2% reported consuming three meals a day on the weekend; 36.6% reported consuming two meals a day on the weekend; and, 15.9% reported consuming one meal per day on the weekend.

Among the findings, 16% of participants reported lack of consistency in consuming any particular meal on a daily basis; 16% reported consuming breakfast on a regular basis; 37% reported consuming lunch on a daily basis; and 18% reported consuming dinner on a daily basis.

Only 45.7% of survey participants were aware of other food assistance programs in the community. Among the participants, 49.6% walked to the congregate meal site, 36.2% drove to the congregate meal site, 6% accessed public transportation (i.e. city bus), 3.8% rode a bicycle, and 2.5% received a ride from someone, while the remaining 1.7% reported walking or driving to the congregate meal site. Individuals who walked to the congregate meal site averaged 14.5 minutes or 1-15 blocks, while individuals driving reported an average of 7.5 minutes or 5-20 miles, and those riding by bus averaged 9.5 minutes.

When asked about the portion sizes served at the congregate meal site, 84% of participants reported that portion sizes were "Just right," 11.2% reported the portion sizes were "Not enough," and the remaining 1.3% reported that the adequacy in portion size "Varies" with the type of food served. When asked "What is your favorite entrée or main dish served?" or "What is your least favorite entrée or main dish served?" participants were reluctant to cite

any undesirable foods with 52.5% citing "None." Approximately 20% reported "None" for favorite entrée/main dish as well.

When asked if the participants attend the congregate meal site for anything besides food, 29.3% reported yes (15.5% to hang out with friends, 6.9% to get out of the bad weather, 3.4% to hang out with friends and get out of the bad weather, <1% to pray, have a place to go, or to volunteer).

Discussion

Findings of this research study were shared with the site director and board. Only 45.7% of the congregate meal site participants knew of any other existing community resources for hot meals and/or food packages, while some participants knew as many as four community nutrition resources including the site of the survey. Survey data revealed that collectively meal participants knew of a total of nine community nutrition resources. The principle investigator and one student researched the various sites reported by the survey participants. Once each site was confirmed, other data were collected including: Site name, site address, site telephone number, type of food provided (i.e. hot meals and/or food packages), services, information required to participate in the program, and hours of operation. Upon calling the sites, site personnel were asked if they were aware of any other organizations in the community that provided free hot meals and/or food packages. Local telephone books and community "Answer Books" were searched for additional sites. All sites mentioned by organization personnel or found in the telephone/answer books were contacted to verify services. A total of 13 organizations that provide free hot meals and/or food packages were identified (Figure 1).

Figure 1: Community Nutrition Resources Identified.

A list of the organizations with associated information was compiled into a brochure. A map of the various organizations was created and placed on the reverse side of the brochure. Thumbtack images were utilized on the map to demonstrate the location of each of the organizations in the community as well as relative proximity between locations. The letters A through M were used to reference the thumbtacks to the name of the organization on the reverse side of the brochure (Figure 2).

Figure 2: Community Nutrition Resource Locator Map.

A local print company agreed to print 300 brochures at no charge. The brochure consisted of tables 2 and 3. The principle investigator and students distributed and educated participants at the congregate meal site on the content of the brochure and how to use the map in the brochure. Posters of the brochure were also printed and hung in the congregate meal site for reference for current and future participants at the congregate meal site. The brochures were also provided to some of the other agencies listed

in table 2. The director of the congregate meal site asked if more brochures were available. The local school district was interested in providing the brochures to their students and families, homeless and/or in need of assistance. Unfortunately, due to the printing expense, further printing was not feasible. However, the brochure was sent electronically to any requesting agencies/organizations for printing and/or electronic dissemination as needed.

Conclusion

While the original discussions with the congregate meal site personnel revolved around concern that the participants were eating too many carbohydrates at the congregate meal site, the results of the survey suggested that more basic physiological needs of patrons were not being met. The survey revealed that a significant portion of the participants did not have access to or consume three meals a day. Abraham Maslow introduced his theory of Hierarchy of Needs in 1943 in an attempt to explain patterns of motivation related to human behavior.1 The theory is based on the premise that lower levels or basic physiological needs such as food, shelter, safety, love and belongingness must be met, and serve as a foundation for higher levels of self-fulfillment including self-growth, self-esteem and self-actualization [4].

Most individuals participating in the congregate meal program lacked adequate food supply, and some were found to lack functional appliances, and/or homes to store or cook food. Without having met basic physiological needs including access to adequate food supply and/or shelter, it would seem impractical to center health education interventions on eating five servings of fruit and vegetables a day and/or consuming a diet rich in fiber, nutraceuticals, and omega 3 fatty acids to reduce long-term risk of chronic disease when preservation (i.e. nutrition and safety) of the individual and family are distressing immediate concerns. Therefore, the education message was centered on the role of choosing balance when at the congregate meal sites or when choosing commodities for their food packages from other sites. This message was chosen to promote overall health, immune function (fight viruses and infections) and general feelings of well-being (energy to do daily activities) among the participants, concerns that the participants were more likely to identify with versus chronic disease prevention. It is prudent that nutrition recommendations and/or interventions be consistent with the immediate needs of individuals and communities with the understanding that some recommendations may be premature as well as inappropriate given prevailing socioeconomic circumstances. Community interventions aimed at reducing rates of food insecurity may also reduce rates of chronic disease and mental health issues associated with food insecurity.4 This project had a significant impact in the community as a result of the collaboration of various community leaders and members including site directors' volunteers, and school district professionals. Collaboration and education are vital to identifying and mobilizing resources aimed toward promoting health and wellness as well as disease prevention and management.

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Volume 2 Issue 11 November 2018