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Understanding the Barriers to Optimal Nutrition in Uninsured and Underserved Adults at the CommunityCare Free Medical Clinic in Toledo, Ohio

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Abstract

Background: Healthful eating habits are crucial for obesity prevention and are often lacking among the underserved and uninsured. The CommunityCare Free Medical Clinic (CCFMC) exists to serve the primary and preventive health care needs of uninsured and underserved residents of greater Toledo. The goal this study was to better understand the barriers to achieving optimal nutrition in the CCFMC patient population.
Methods: A series of five focus groups of CCFMC patients was conducted in July and August 2015 to better understand the underlying factors resulting in poor nutrition in this population. Participants (n=50) were between ages 18 – 65 and racially diverse. Focus group discussions were recorded, transcribed, and analyzed using the long-table approach. Participants responded to 8 questions pertaining to food insecurity and ranked four factors by level of influence on their food purchasing decisions: cost, taste, nutritional value, and ease of preparation.
Results: Several themes emerged, such as shame and embarrassment about not being able to afford nutritious food and the reliance on television personalities for nutritional guidance. Participants shared numerous insights on how to improve nutrition-related interventions at CCFMC. The ranking activity revealed that cost and ease of preparation influenced purchasing decisions more than taste or nutritional value.
Conclusions: Based on the focus group findings, we suggest student-run free clinics provide a dedicated website for announcing nutrition programs and events, include clinicians in nutrition conversations with patients, and broadcast informational videos in the clinic lobby to promote nutrition awareness and discourse.

Introduction

Over one-third of adults in the United States are estimated to be obese.[1] The alarming increase in prevalence of obesity is a major health burden on the nation. Obesity is associated with increased all-cause mortality[2] and is an independent risk factor for leading causes of preventable death, including cardiovascular disease, stroke, type 2 diabetes, and certain types of cancer.[3-7] Moreover, obesity contributes to increased healthcare use and expenditure, as well as productivity loss due to illness and disability.[8]

Like many United States cities, the city of Toledo is burdened by high levels of adult obesity. Toledo is located in northwest Ohio and is home to the majority of the total population in Lucas County. The median income for residents of Toledo, Ohio is $33,687 with 23% living below federal poverty level.[9] Most residents (85%) have earned a high school diploma and 17% a bachelor's degree or higher.[9] The racial makeup of Toledo is 64% White,

27% Black, and 1% Asian.[9] Most residents (92%) report being non-Hispanic.[9] According to the 2013-2014 Lucas County Health Assessment (LCHA), 70% of adults were overweight or obese and nearly half (48%) were trying to lose weight.[10]

Evidence has shown an association between obesity and food insecurity.[11-13] Food insecure families have limited access to affordable and nutritionally adequate foods. In the United States, approximately 14% of households were food insecure at some point during the year 2013.[14] An estimated 18% of Toledo adults are food insecure.[10] Food insecure families commonly seek low-cost, calorie-dense, nutrition poor foods that drive obesity. In addition, food insecurity is believed to disrupt eating behavior. Among those most vulnerable to food insecurity are low-income families who lack health insurance or are underinsured.[15]

Nutritious eating habits and improved food security can affect positive change in obesity rates. Presently, only 6% of Lucas County adults eat the recommended five or more fruits and vegetable servings per day while nearly half (48%) report poor understanding of nutrition-related diabetes management.[10] Previous research suggests that eating habits and nutrition knowledge are generally poor in populations without health insurance and among those living below the federal poverty line.[15]

The CommunityCare Free Medical Clinic (CCFMC) is an inter-professional, student-run free clinic established in 2011 by students of the University of Toledo College of Medicine and Life Sciences. CCFMC is an evening walk-in clinic that operates weekly to provide primary care services to low-income families lacking health insurance in the greater Toledo area. Additional services include pharmacy, women's health, social work, physical and occupational therapy, HIV testing, and influenza vaccination. CCFMC is in a unique position to help address food insecurity, obesity, and diet-related disease among the underserved.

CCFMC has trialed cooking workshops and group classes in diabetes and weight management facilitated by registered dietitians. However, these nutrition education initiatives were hindered by low participation. Similarly, a volunteer dietitian is available to meet with patients one-on-one by request, but it has been difficult to arrange adequate follow up to create a significant impact. Prior to introducing a new program, it was decided that conducting focus groups to collect primary data would be a more effective initial approach to identify and address the specific needs of CCFMC patients.

The purpose of this study was to better understand optimal nutrition and food insecurity risk through the perspective of the CCFMC patients. This information will be used to design a nutrition education program aimed at increasing consumption of nutritious foods in this population.

Methods

This study used a phenomenological approach to gather first-hand experiences of underserved individuals through focus group discussions. The research protocol was approved by the Bowling Green State University Human Subjects Review Board.

A series of five focus groups was conducted in July and August 2015. Focus groups were conducted at the CCFMC which is housed within a local church. In conjunction with CCFMC, the church provided a free meal to all patients in a large dining room. The meal provided a natural environment to hold a group discussion and introduce the discussion topic of food.

Fliers were posted in CCFMC waiting areas two weeks prior to the beginning of the focus groups to raise awareness of the study and explain the purpose. Participants were offered $10 gift cards to a local grocery store as an incentive for their participation. Active recruitment of participants was conducted for five consecutive Thursday evenings in July and August 2015. Patients were notified of the focus groups upon their arrival to CCFMC and announcements were also made for patients sitting in the waiting room.

Patients interested in participating were asked to meet inside CCFMC for additional information. There, participants were told the purpose, goals, and risks and benefits of the study. Participant confidentiality and rights to withdraw from the discussion were clarified. After acquiring consent, participants received an optional free hot meal provided by the church and met in a private section of the dining room. Participants were then able to eat and participate in the focus group.

Focus group discussions were semi-structured. Focus group questions were formulated after consultation with three experts in food insecurity and nutrition and two experts in qualitative research design. All group sessions were moderated by a registered dietitian experienced in working with

the CCFMC patient population. Focus group participants were asked the following questions:

1. What does the word "nutrition" mean to you?
2. Do you go grocery shopping? If so, where do you go and how do you choose which foods to purchase?
3. Where do you get information on food and nutrition?
4. Many people have had times when their food money has not lasted as long as they need. If this has happened to you, can you describe any of these situations?
5. Have you ever tried to change the way you and your family eats? If so, can you tell me a little about that?
6. If you had all the resources to eat healthy, would you? Why or why not?
7. Do you feel as though you would benefit from information about food or nutrition?
8. If there was a dietitian here at the clinic, what would you want to see them do?

Each focus group lasted approximately 30-45 minutes. The moderator sought clarification from participants as needed. Each of the five focus group sessions had 10 participants for a total of 50 contributors. Focus group discussions were recorded electronically and then transcribed. Transcriptions were analyzed using the long-table approach to identify themes. This involves examining each of the eight questions separately across the five focus group sessions and grouping similar participant quotes together[16]. Two researchers analyzed the transcripts and compared results. Discrepancies in interpretation were rare and were resolved through careful discussion of themes and further analysis of grouped quotes.

Participants were also asked to rank the following four factors according to level of influence on their food purchasing decisions: cost, taste, nutritional value, and ease of preparation. Participants ranked each factor from 1 – 4 with a ranking of 1 being the most important factor and 4 the least important factor. Individual responses were aggregated within each group and averaged to arrive at a group-specific ranking. Once the focus group was over, participants received their $10 gift card incentive for participation and returned to the waiting room until they were ready to be seen by the physician. Participants were asked to refrain from talking about what was said during the focus group to other CCFMC patients.

Results

Participants were between 18 - 65 years old. The focus group sessions had positive dynamics. Participants frequently used supportive statements, accepted different points of view, and used the words "we" and "us" often.

The following themes emerged after analysis of the transcriptions: concern over diabetes or "bad sugar," cost of purchasing healthful foods, and shame/embarrassment in not being able to eat healthfully. One comment in particular stood out to represent a participant's feeling, "It's just embarrassing that I don't have no food to feed my kids. I feel like a bad person." Many of the participants expressed the importance of cost in their grocery shopping decisions, as evidenced by the statements: "I just buy the cheap stuff, ramen and macaroni, just something to make me feel full," and "I pick foods that have more in the package for the least price." Some participants discussed the trouble with nutrition education without resources as evidenced by the following quotes:

- "I know what I need to eat healthy, I just don't have the stuff to do it…I don't have time to go to the store all the time and that stuff adds up."
- "More information is confusing. One person says this and you go to somebody else and they say the exact opposite."
- "[the knowledge] isn't going to make a big difference in what they eat or not. It's going to be what's available."

Participants consistently ranked cost as the most influential factor impacting their food purchasing decisions. Ease of preparation was also seen as important (Table 1).

Table 1. Participant rankings of factors influencing food-purchasing decisions

	Cost	Ease of Preparation	Taste	Healthfulness
Group 1	1	2	3	4
Group 2	1	2	3	4
Group 3*	1	2	3	3
Group 4	1	3	2	4
Group 5	1	3	2	4

**Note: Group 3 rankings resulted in a tie between taste and healthfulness.*

Overall, there was a basic level of nutrition knowledge present in most participants, as they were able to distinguish between whole-wheat and white bread and verbalize the importance of eating adequate fruits and vegetables. Television personalities such as Dr. Oz and Oprah Winfrey were commonly cited sources of nutrition education.

Participants shared insights on how to improve nutrition-related interventions at CCFMC. Suggestions included creating a dedicated website for announcing nutrition programs and events, including clinicians in nutrition conversations with patients, and broadcasting nutrition-related videos in the CCFMC lobby. Participants were also interested in maps depicting the locations of emergency food assistance programs and free community meals in the area.

Discussion

There is a demonstrated link between food insecurity and obesity.[17] Improvements in food security may have the potential to reduce the prevalence of obesity-related illnesses. Increasing access to healthy, easy to prepare foods is necessary to improve nutrition habits and food security of patients at student-run clinics. The findings from the present study support previous literature that suggests cost, taste, and ease of preparation influence the nutrition habits and food purchasing decisions of underserved populations.[18,19] Contrary to previous findings,[15] the majority of these focus group participants displayed a good understanding of basic nutrition knowledge. This is a reminder that underserved patients vary in familiarity with healthy foods and eating recommendations. We advise student-run clinic personnel interested in designing nutrition interventions begin by ascertaining the nutritional literacy of their patient population.

The emergent theme of shame and embarrassment in not being able to afford to eat well and provide for family members' nutritional needs is an intriguing result. Many patients at the CCFMC have diet-related disease, and without the resources to eat healthfully, their health and wellbeing continue to suffer. Negative feelings such as shame and embarrassment can lead to patients withholding information about food insecurity, hindering providers' ability to treat and provide resources. Future research is needed to better understand how feelings of shame, embarrassment, and guilt affect food insecurity status in the underserved.

Several tangible products resulted from this study. In response to the suggestions expressed by the focus group participants, we are creating a comprehensive list of emergency food programs to hang on a poster in the waiting room at CCFMC as well as add to the clinic website. An education-level appropriate 30-minute nutrition video (the average waiting time of a patient who visits the clinic) was purchased and is aired periodically during clinic hours so that all patients in the waiting room have the opportunity to learn basic food and nutrition principles. Health education materials in a health care waiting room have been shown to be effective in increasing health-related knowledge.[20]

Underserved populations have special needs in regards to maintaining food secure status. To meet these needs, the following activities are in progress at CCFMC and are provided below as recommendations for all student-run clinics:

1. Assist patients in applying for the Supplemental Nutrition Assistance Program (SNAP).
2. Create a calendar displaying dates and times of free meals available in the community.
3. Provide a map of area locations with affordable produce.
4. Develop a seasonal produce distribution program.
5. Create a "Grocery Store" within the clinic with fresh produce donated through a local community garden.

Student-run clinics need sustained commitment and effort to improve food insecurity and positively impact nutrition-related diseases like obesity and diabetes in at-risk populations. One-time cooking classes at CCFMC proved unpopular due to the walk-in, as-needed nature of the clinic. Offering on-going nutrition initiatives that require minimal time commitment from patients, such as the recommendations listed above, can improve participation.

This study encountered potential limitations. Participants self-selected into the focus groups. While gift cards were used to incentivize broader participation, we cannot guarantee that our sample was large enough to reach data saturation. Second, focus group discussions can be influenced by the presence of certain individuals. It is

plausible that some participants may have felt uncomfortable disclosing information in the presence of a group or certain individuals. Third, focus groups are generally not as effective as in-depth interviews in revealing more sensitive and detailed information that participants may not have been willing to share in a group setting.

Despite these limitations, this study lends understanding of nutrition and food insecurity through the personal experiences of people struggling with these issues. Because of the focus group findings, interventions are being designed to address the food security needs of CCFMC patients. We anticipate that these new interventions will be more effective because of the knowledge gained from the present project. Ultimately, through collaboration with community health organizations, patients at the CCFMC will enjoy increased access to healthy, low-priced, and easy to prepare foods.

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Disclaimer

The views expressed in this manuscript are those of the authors and are not an official position of the University of Toledo, Bowling Green State University, The Renfrew Center of Pittsburgh or The CommunityCare Free Medical Clinic.

Disclosures

The authors have no conflicts of interest to disclose.

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