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DTN 752- Dr. Roberts

Community Needs Assessment: Part 1

Step 1: Set the parameters of the assessment.

The community of interest that we have chosen to assess is Springfield, Missouri, a city located within Greene County. The target audience within this community are individuals who have mental and behavioral health disorders.

Our target population involves adolescents above the age of 12 to adults with the following mental and behavioral health disorders:

- Adults with major depressive disorder (MDD)
- Adults with serious mental illness
- Opioid overdose death rate
- Substance abuse disorder among adolescents and adults (age 12+)
- Drug overdose death rate
- Excessive drinking

The overall goal for conducting this assignment is to identify the prevalence of mental and behavioral health disorders in Springfield, Missouri, and determine how nutrition interventions can appropriately reach this population to improve their health, nutrition status, and overall quality of life.

Objectives for our needs assessment are:

- Determine the number of individuals with behavioral health disorders in Springfield.
- Determine an estimated percentage of individuals with behavioral health disorders who are receiving nutritional care from a dietitian.
- Determine how frequently behavioral health disorders are not being addressed from a nutrition standpoint.
- Determine the area of nutrition that needs the most attention for those with behavioral health disorders.

Step 2: Develop a data collection plan.

Table S-1 portrays existing and new data needs for three categories of data: community data, community environment and background conditions, and target population data. Included in the community data column are factors that influence or increase the risk for developing mental and behavioral health disorders. Included in the community environment and background conditions column are resources that influence the severity of mental and behavioral health disorders. Target population data addresses the percentage of individuals who have that specific mental or behavioral health disorder.

Table S-1 Needs Assessment Data Needs

Type of Data	Existing or New Data	Source of Data or How to Collect
COMMUNITY DATA		
Demographic data	Existing data	US Census Bureau
Chronically homeless data	Existing data	Data USA
Food insecurity prevalence data	Existing data	Data USA
COMMUNITY ENVIRONMENT AND BACKGROUND CONDITIONS		
Mental and behavioral health resources in the community	New data	Google search
Food stores in the area	Existing data	USDA
Access to exercise opportunities data	Existing data	Data USA
Patient to mental health provider ratio	Existing data	Data USA
TARGET POPULATION DATA		
Adults with MDD	Existing data	Data USA
Adults with serious mental illness	Existing data	Data USA
Opioid overdose death rate	Existing data	Data USA
Substance abuse disorder among adolescents and adults 12+	Existing data	Data USA
Drug overdose death rate	Existing data	Data USA
Excessive drinking	Existing data	Data USA
Mental Health Service Use Among Adults with Mental Illness	Existing data	Data USA
Habits/eating behaviors	New data	Survey
Nutrition/health concerns	New data	Survey
Barriers to and motivators of eating healthy	New data	Survey
Other nutritional needs	New data	Survey
Other co-morbidities that may affect nutrition and health status	New data	Survey

Literature

The process of providing nutrition related health care to individuals with mental and behavioral health disorders (MBHD) is a growing field of study and practice. In recent years, collaborative health care models have been developed with the desire to provide a more comprehensive form of care for individuals with MBHD.[3] Within this process, nutrition counseling for MBHD has increased and positive outcomes are being seen. Suboptimal nutrition has been seen to contribute to increased risk and effects of MBHD. Specifically, adequate nutrition has been seen

to benefit treatment of depression and anxiety disorders. [1] An individual's nutrition environment influences both the pathology and incidence of diseases. This has been looked at in numerous ways, one of which includes neurological development after malnutrition in childhood.[2] Providing adequate nutrition interventions to communities with MBHD is something that needs continued research and development.

1. Kris-Etherton PM, Petersen KS, Hibbeln JR, et al. Nutrition and behavioral health disorders: depression and anxiety. *Nutrition Reviews*. 2021;79(3):247-260. Accessed November 7, 2022. https://search.ebscohost.com/login.aspx?direct=true&AuthType=sso&db=sph&AN=148718045&site=eds-live&scope=site

2. Marko Kerac, Melissa Gladstone, Samantha Lissauer, et al. Neurodevelopmental, cognitive, behavioural and mental health impairments following childhood malnutrition: a systematic review. *BMJ Global Health*. 2022;7(7). Doi:10.1136/bmjgh-2022-009330

3. Muse AR, Lamson AL, Didericksen KW, Hodgson JL, Schoemann AM. Clinical, operational, and financial evaluation practices in integrated behavioral health care. *Families, Systems, & Health*. 2022;40(3):312-321. Doi: 10.1037/fsh0000683.supp (Supplemental)

Step 3: Collect data.

Below are tables illustrating the data collected regarding the community, the community environment and background conditions, and the target population. **Table S-2** displays data regarding the community, **Table S-3** displays data regarding the community environment and background conditions, and **Table S-4** displays data regarding the target population. Part of the information for **Table S-4** was gathered through a survey sent out to dietitians in the Springfield area. Survey questions are listed on page 5-8.

Table S-2 Community Data

Community Data	Rate/Prevalence (city/county/state)
DEMOGRAPHIC	
Population	169, 724
Age	
Persons under 18	17.5%
Persons 65 years and over	15.8%
Race and Hispanic Origin	
White	87.6%
Black or African American	4.3%
American Indian and Alaska Native	0.7%
Asian	1.8%

Native Hawaiian and Other Pacific Islander	0%
Two or More Races	4.4%
Hispanic or Latino	4.3%
White alone, not Hispanic or Latino	84.9%
Education	
High school graduate or higher, age 25 years+	91.1%
Bachelor's degree or higher, age 25 years+	28.7%
Income and Poverty	
Median household income	$37,491
Persons in poverty	21.7%
CHRONIC HOMELESSNESS	883 (in Missouri)
PREVALENCE OF FOOD INSECURITY	13.8% (in Greene County-2021)

Table S-3 Community Environment and Background Conditions

Community Environment and Background Conditions	Rate/Prevalence (city/county/state)
MENTAL AND BEHAVIORAL HEALTH RESOURCES IN THE COMMUNITY	5 local clinical resources; 4 children and adolescent resources
FOOD STORES IN THE AREA	41 (in Greene County-2016)
FOOD PANTRIES	12 (in Greene County- 2021)
ACCESS TO EXERCISE OPPORTUNITIES DATA	83.2% (in Greene County-2021)
PATIENT TO MENTAL HEALTH PROVIDER RATIO	1,039 to 1 (in Greene County-2021)

Table S-4 Target Population Data

Target Population Data	Rate/Prevalence (city/county/state)
ADULTS WITH MDD	Not listed on data USA
ADULTS WITH SERIOUS MENTAL ILLNESS	4.17% (in Missouri-2016)
OPOID OVERDOSE DEATH RATE	16 per 100,000 (in Missouri-2016)
SUBSTANCE USE DISORDER AMONG ADOLESCENTS AND ADULTS (AGE 12+)	7.66% (in Missouri)
DRUG OVERDOSE DEATH RATE	24 per 100,000 (in Missouri-2016)
EXCESSIVE DRINKING	18.4% (in Greene County-2021)
OTHER	
MBHD in poverty	25% of those with MBHD live in poverty (SAMHSA-2016)
Mental Health Service Use Among Adults with Mental Illness	13.4% (in Missouri-2016)
Habits/eating behaviors	Waiting for data from survey

Nutrition/health concerns	Waiting for data from survey
Barriers to and motivators of eating healthy	Waiting for data from survey
Other nutritional needs	Waiting for data from survey
Other co-morbidities that may affect nutrition and health status	Waiting for data from survey

The data from the charts above will be analyzed, interpreted, and discussed in part 2 of the assignment. Findings from the assessment, priorities, and a plan of action will also be discussed in part 2 of the assignment.

Survey:

We have sent out the following questions in a survey to local dietitians. We will include the data from the survey in part 2 of the community needs assessment.

Problem with identifying questions: If a patient is referred to a dietitian, they will generally have a nutrition-related need. We are looking for nutrition needs-related data and its prevalence in this population. For a broader scope of nutrition needs, the doctors who refer their patients to dietitians should be surveyed.

Addressing the prevalence of different nutrition related needs and how well MBHD patients respond to change, and different forms of MNT will benefit our goals as stated in the purpose of our study.

1. Where do you work and do you work inpatient, outpatient, or both?	Outpatient: 50% Inpatient: 50%
2. When interviewing patients, how often do you utilize motivational interviewing? ○ Never ○ Rarely ○ Sometimes ○ Usually ○ Always	Rarely: 12.5% Sometimes: 25% Usually: 37.5% Always: 25% Never: 0%
3. When interviewing patients, how often do you utilize collaboration between different health care workers? ○ Never ○ Rarely ○ Sometimes ○ Usually ○ Always	Sometimes: 25% Usually: 62.5% Always: 12.5% Rarely: 0% Never: 0%

4. As a dietitian, how many patients do you see in a month? ○ <10 ○ 10-20 ○ 20-40 ○ 40-60 ○ 60-80 ○ 80-100 ○ >100	<10: 0% 10-20:12.5% 20-40: 12.5% 40-60: 12.5% 60-80: 12.5% 80-100:12.5% >100: 37.5%
5. Of those patients, approximately how many would you personally identify as having mental or behavioral health disorder as identified above? ○ <10 ○ 10-20 ○ 20-40 ○ 40-60 ○ 60-80 ○ 80-100 ○ >100	<10: 12.5% 10-20: 37.5% 20-40: 37.5% 40-60: 0% 60-80: 12.5% 80-100: 0% >100: 0%
6. Of those patients with a behavioral health disorder, how many do you believe have adequate access to food preparation materials? ○ 10-20% ○ 20-50% ○ 50-70% ○ 70-90% ○ 100%	10-20%: 25% 20-50%: 12.5% 50-70%: 37.5% 70-90%: 12.5% 100%: 12.5%
7. Of those patients with a behavioral health disorder, how often do you identify and address under-weight status? ○ <10% of the time ○ 10-30% of the time ○ 30-50% of the time ○ 50-80% of the time ○ 80-90% of the time ○ >90% of the time	<10% of the time: 25% 10-30% of the time: 37.5% 30-50% of the time: 12.5% 50-80% of the time: 25% 80-90% of the time: 0% >90% of the time: 0%

8. Of those patients with a behavioral health disorder, how often do you identify and address over-weight status? o <10% of the time o 10-30% of the time o 30-50% of the time o 50-80% of the time o 80-90% of the time o >90% of the time	<10% of the time: 50% 10-30% of the time: 12.5% 30-50% of the time: 0% 50-80% of the time: 25% 80-90% of the time: 0% >90% of the time: 12.5%
9. Of those patients with a behavioral health disorder, how often do you identify and address a nutrition need other than the ones above? o <10% of the time o 10-30% of the time o 30-50% of the time o 50-80% of the time o 80-90% of the time o >90% of the time	<10% of the time: 37.5% 10-30% of the time: 25% 30-50% of the time: 12.5% 50-80% of the time: 12.5% 80-90% of the time: 0% >90% of the time: 12.5%
10. Of those patients with a behavioral health disorder, in general how receptive are they to nutrition interventions? o Extremely resistant o Resistant o Neutral o Open o Eager o Depends on the patient.	Extremely resistant: 0% Resistant: 25% Neutral: 25% Open: 12.5% Eager: 0% Depends on the patient: 37.5%
11. If you have any additional comments related to your care of those with behavioral health disorders, please leave them here.	N/A

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Community Needs Assessment: Part 2

Step 4: Analyze and interpret the data.

Below are bullet points highlighting data about our target population:

- This community has a population of 169,724 individuals. 66.6% of the population is between 18-65 years old. This community is predominantly white (87.6%) with 4.3% black individuals and 4.3% Hispanic individuals. The medium income is $37,491 with 21% of individuals living in poverty.
- 13.8 % of individuals are food insecure. There are 41 food stores in the county, 12 food pantries, 5 local clinical resources, and 4 children and adolescent mental and behavioral health facilities. 91.1% of the population has a high school diploma or higher, and 28.7% of population has a bachelor's degree or higher.
- 4.17% of the Greene County population fits into our target population of those with MBHD. In that population, 13.4% utilize mental health services. According to the data we collected, 50% of those with MBHD who see a health care provider with nutrition interventions are neutral or resistant to nutrition interventions. Roughly 50% have adequate access to food preparation materials. In the United States, 25% of those with MBHD live in poverty.
- The literature we reviewed indicated a need for those with MBHD to receive nutrition support. Improvements have been observed in those who struggle with a MBHD when they receive nutrition interventions.

The literature and research findings, along with our survey, indicate a need for Nutrition interventions in our target population. Those in our target population who have been seen by a nutrition professional are often found to need nutrition intervention. There is information indicating that a large part of those with MBHD do not have access to a nutrition professional of any kind. Because of the prevalence of disorders and the percentage of those seen by health professionals, it can be assumed that there is still a need for better availability of Nutrition interventions in the population. Individuals experiencing poverty and food insecurity are not as likely to receive nutrition support. Educating those who run the facilities that serve this population, such as food pantries, primary care providers and behavioral health clinics in the need for nutrition support could aid in addressing this issue. The financial barriers and lack of availability prevent those who need nutrition support in this population from receiving correct interventions.

Step 5: Share the findings of the assessment.

We will share the findings from this study with:

- Those nutrition professionals who completed our survey
- The professor of DTN 752, Dr. Hillary Roberts
- The 2022-2023 Missouri State dietetic interns.

Step 6: Set priorities.

Nutrition priorities to be addressed: (1) improving access to food preparation materials, (2) using nutrition education to encourage patients to participate in nutrition interventions, and (3) using motivational interviewing to encourage patients to participate in nutrition interventions.

Justification: Survey results indicate that some patients with a behavioral or mental health disorder have less access to adequate food preparation materials compared to others. Dietitians who partook in the survey also indicated that some patients who have a behavioral or mental health disorder are generally not as receptive to receiving nutrition interventions compared to others. Furthermore, research shows that adequate nutrition can benefit individuals with depression and anxiety disorders; therefore, improving access to food preparation materials may motivate the individual to prepare more healthy food choices, and educating and counseling on the benefits of adequate nutrition to improve mental and behavioral health may also motivate the individual to make better food choices and participate in nutrition interventions.

Set 7: Choose a plan of action.

In response to the findings of the needs assessment, a social worker will be present during patient sessions to identify resources that can help aid or provide food preparation materials.

Nutrition education will also be utilized to encourage patients to participate in nutrition interventions. There will be five, 30-minute nutrition education sessions related to nutrition and mental or behavioral health and are summarized in **Table S-5**. Participants will be provided with notes and recipes in English and Spanish after the session, if they have agreed to receiving nutrition education. The goal of performing nutrition education sessions is to make patients feel less resistant to participating in nutrition interventions.

Table S-5 Nutrition Education Sessions

Lesson Number	Lesson Title	Topic(s)	Activity
1	Omega-3 FAs	What they are, how it helps condition, food sources	Identify food sources
2	Folic acid	What they are, how it helps condition, food sources	Identify food sources
3	Selenium	What they are, how it helps condition, food sources	Identify food sources
4	Calcium	What they are, how it helps condition, food sources	Identify food sources

5	Recipes and questions	Discuss recipes with nutrients of discussion	None

It is also important to encourage motivational interviewing to be utilized during patient sessions to push patients to participate in nutrition interventions. Not many dietitians identified with "always" using motivational interviewing with their patients, so it's imperative that we are relaying messages to dietitians to push the use of those skills, whether it be through:

- Weekly e-mails
- Webinars on the benefits of motivational interviewing (which can also count for CEUs)
- Incentives for meeting motivational interviewing goals
- Friendly reminders from other dietitians or healthcare professionals