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Exploring Diet within Treatment of Persons with Serious and Persistent Mental Illness

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Exploring Diet within Treatment of Persons with Serious and Persistent Mental Illness

by,
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MSW Clinical Research Paper

Presented to the Faculty of the
School of Social Work
St. Catherine University and the University of St. Thomas
St. Paul, Minnesota
in Partial fulfillment of the Requirements for the Degree of
Master of Social Work

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The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

Abstract

Studies suggest that persons diagnosed with serious and persistent mental illness (SPMI) die prematurely compared to the rest of the general U.S. population. Previous research implies that this is due to disproportionate rates of chronic medical conditions prevalent in the SPMI population. Contributing factors to the mortality of those with SPMI include poor diet, lifestyle, and mental illness. This research aimed to discover how providers incorporate dietary practices into their work with persons diagnosed with SPMI. To further explore this topic this researcher analyzed data from qualitative semi-structured, face-to-face interviews with licensed professionals, medical doctors, and certified practitioners ($n = 8$) in the mental health field. The findings of this research supported previous studies present in the literature review and ideas of best practice techniques slowly developed. This research was categorized using three major themes: 1) cause and effect; 2) prevalent medical conditions; and 3) best practice. The findings of this study provide valuable information about the impact of diet on the outcome of one's health. This research is important in social work in that it creates awareness to the growing public health problem of human disease and preventable deaths.

Acknowledgments

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Introduction

In recent years, the declining quality of life among persons diagnosed with serious and persistent mental illness (SPMI) has been of growing concern within the United States. While genetic and environmental influences are said to be indicators for adversity within this population (Johnson, Rhee, Whisman, Corley, & Hewitt, 2013), cumulative effects of chronic health conditions are said to contribute to the rising rates of mortality among those diagnosed with SPMI. This population experiences premature death at higher rates than the rest of the general population (Alison, Newcomer, Dunn, Blumenthal, & Fabricatore, 2009). Mental illness exacerbates morbidity from health conditions including cardiovascular disease, diabetes, obesity, asthma, epilepsy, and cancer (Centers for Disease Control and Prevention [CDC], 2011). Other contributors to the high rates of premature death and chronic disease of those with SPMI include discrimination of the mentally ill, harm caused by stigma, and limited use of medical and follow up care (CDC, 2011).

Poor health outcomes among Americans with severe mental illness are reflected in trends demonstrated by disability-, patient-care episode per capita-, and medication-related statistics. Disability among those with SPMI have increased fivefold since 1955 and the number of Americans disabled by mental illness has nearly doubled since 1987 (Whitaker, 2005). Six million are currently disabled by mental illness; more than 400 people with this diagnosis add to these numbers each day (Whitaker, 2005). Similarly, patient care episodes and yearly visits to psychiatric hospitals, residential treatment, and ambulatory care facilities have grown nearly fourfold per capita in a span of 50 years: In 1955 the numbers totaled 1,675,352 episodes or 1,028 episodes per 100,000 population.

In year 2000, visits totaled 10,741, 243, or 3,806 per 100,000 population. Furthermore, collective sales of antidepressants and antipsychotics rose from around \$500 million in 1986 to approximately \$20 billion in 2004 (Whitaker, 2005).

Several considerations undergird these statistics. Obesity, morbidity, chronic health problems, antipsychotic/neuroleptic medications, and lifestyle choices have proven to be the catalysts to the rising health concerns of those living with SPMI (Megna, Schwartz, Siddiqui, & Rojas, 2011). Obesity, a major concern that affects persons with mental illness, has been linked to use of prescription drugs, and lifestyle practices such as unhealthy diets (Megna et al., 2011). Prescription drugs can produce adverse effects on the human body, which, in turn, can result in metabolic damage and weight gain. Poor diet, tobacco smoking, and excessive alcohol use can also contribute to morbidity in not only those living with mental illnesses but to anyone who engages in such activities. Research suggests that food insecurity is another problem often faced by persons with SPMI. Lack of access to sufficient calories can ultimately lead to long-term health problems. Furthermore, lack of education in nutrition, access to quality food, and limited finances also appear to specifically affect individuals with SPMI as well as individuals and families living with low-income wages (Food Research and Action Center, 2011). One's diet has much to do with what one can afford, therefore, the purchase and consumption of cheap food products often becomes a daily practice for those living with limited income. This, in turn, can lead to poor health. More specifically, poor diets that include excess consumption of meat, dairy and processed foods have been linked to be leading contributors to the development of human diseases; diabetes, heart disease, obesity, cancer and hypertension being the most prevalent (Barnard, 2003, p. 62); persons

with SPMI suffer even more from these maladies (Nasrallah, Meyer, Goff, McEvoy, Davis, Stroup, & Leiberman, 2006).

Promoting food security for those with serious mental illness means addressing both diet as well as factors that may perpetuate food insecurity. As stated earlier, limited income often leads to purchase of cheap, substandard food products.

As stated earlier, disparities in the quality of care for people with SPMI has been reported to being a contributing factor to accumulating rates of disease within that population. Stigma related with mental illness, and lack of mental health and psychiatric education appear to exacerbate the problem. Stigma is defined as a “sign of disgrace or discredit, which sets a person apart from others (Byrne, 2000).” The stigma of mental disorders has existed for centuries and continues to endure. This, in turn, affects the quality of care for those living with SPMI. People with mental health conditions are more likely to receive substandard medical care for health conditions such as diabetes and cancer (Nasrallah et al., 2006). Studies suggest that diabetes patients with SPMI are less likely to receive standard diabetic care. People with mental illness are also less likely to receive routine cancer screening and adequate care for these conditions. Further exploration of such studies will be analyzed in the literature review. Lifestyle, poor diet, and adverse side effects of psychotropic medications often indicate the outcome of one’s health as well; this too, will be noted in the literature review.

Diet and certain lifestyle practices can be a source of healing but it can also contribute to chronic and fatal diseases. Diet is often used as a way to improve various health ailments. Alice H. Lichtenstein, Lawrence J. Appel, MD, Michael Brands et al., state that the American Heart Association’s (AHA’s) approach to prevent cardiovascular

disease has much to do with diet and lifestyle. Cardiovascular (CVD), is the foremost cause of death in America (Lichtenstein, Appel, Brands, Carnethon, Daniels, Franch, Franklin, & Karanja, 2006). Comprehensive health studies focused on correlations between health outcomes and diet have been conducted revealing a link between plant-based nutrition and substantially improved health. High consumption of plant foods is vital in addressing the public health issue of chronic disease.

The consumption of plant foods is often recommended as a dietetic treatment for multiple health conditions including type 2 diabetes, heart disease, hypertension, obesity, high cholesterol and even aids in the treatment of cancer.

This research aims to discover how providers incorporate dietary practices into their work with people diagnosed serious and persistent mental illness (SPMI). This research will provide literature from previous comprehensive health studies that provide objective facts about the correlation between poor diet and the development of human disease.

Literature Review

Throughout the literature review, key terms and definitions will be explained to enhance understanding of the information presented. Definitions for the following key terms will be addressed that relate to the prognosis of physical health, diet and mental illness. Then, the literature review will address empirical literature related to this topic in four specific areas: (1) mental illness in America; (2) obesity and its relation to food insecurity; and (3) health conditions associated with serious mental illness.

Definitions Relevant to the Study

In the United States, several terms are used to describe major mental illness. *Serious and persistent mental illness* (SPMI)—a term often used often within this literature refers to an individual, 18 years of age or older who meets the criteria for a psychiatric diagnosis by the diagnostic and statistical manual of mental disorders (DSM-IV) (Sullivan, 2011). The DSM-5 defines a mental disorder as a condition characterized by clinically substantial disturbance in one’s “cognition, emotion regulation, that reflects a dysfunction in the psychological or, biological, or developmental processes underlying mental functioning” (American Psychiatric Association, 2013).

In addition to defining how the term SPMI is used throughout this study, concepts related to diet such as, *Standard American Diet* (SAD), *plant-based*, and *food insecurity* are also included. *Standard American Diet* (SAD) is a term that describes a cultural dietary norm in the United States. *Plant-based* refers to a specific diet that minimizes or excludes the consumption of meat, and dairy products; making fruits, vegetables, and plant foods (e.g., rice, beans, pasta, legumes, nuts, seeds) the primary base of the diet (Tuso, Ismail, Ha, & Bartolotto, 2013). *Food insecurity* is defined as “the limited or

uncertain availability of nutritionally adequate and safe foods” (Adams, Grummer-Strawn, & Chavez, 2003).

The Prevalence of Mental Illness in America

Concern over the health of those diagnosed with SPMI is well supported by previous research studies over the past 50 years (Whitaker, 2005). Historically, empirical studies in this area have focused upon increasing rates of mental illness and psychiatric hospitalization. More contemporary studies have addressed the co-existence of mental illness and chronic medical conditions.

In one study, Megna and colleagues (2011) conducted a study that analyzed the effects of pharmacologic and non-pharmacologic variables that impact weight and metabolic reactions (Megna, Schwartz, & Siddiqui, 2011). Non-pharmacologic mechanisms referred to the patient’s mental health diagnosis, lifestyle, and other biologic or non-biologic factors. Pharmacologic factors referred to medical interventions such as prescription drugs, which have been directly linked to induce weight gain and obesity (Megna et al., 2011, p. 132). Megna goes on to state that individuals diagnosed with schizophrenia typically lead inactive lifestyles and often consume unhealthy food products. Allison and colleagues conducted a National Institute of Mental Health (NIMH) meeting report that involved thorough review of the literature on obesity, nutrition and physical activity among those with SPMI (Allison, Newcomer, Dunn, Blumenthal, & Fabricatore, 2009). They found that individuals living with schizophrenia and depression tend to have disproportionately higher rates of morbidity and mortality than the general public. The dietary health needs of persons living with mental illness are a crucial component to slowing down rates of premature death. Comprehensive health studies exist

that explain the importance of minimizing the consumption processed foods and excessive meat and dairy products in order to reverse and avoid medical conditions such as heart disease, diabetes, hypertension, stroke, and obesity. These health studies emphasize the importance to consuming plant-based diets the primary mechanism to heal and maintain both the body and mind. The Centers for Disease Control and Prevention (CDC) further supports the correlation between mental illness and human disease.

The Diet Industry in America

People go to great lengths to improve vitality, which can often cause financial setbacks and consequentially often leads to compromised health. Many depend on the diet industry to assist in achieving weight loss goals. As previously stated, food related health problems such as obesity and heart disease continues to be a growing problem in the United States. Colin T. Campbell states, “In 1999, medical care costs related to obesity alone were estimated to be \$70 billion” (Campbell, 2006, p.137). He goes on to state that, “in 2002, the American Obesity Association listed these costs at \$100 billion (Campbell, 2006, p.137).”

The diet and weight loss industry in America is a multibillion-dollar business (Campbell, 2006, p. 137). Between the plethora of weight loss programs, marketing, sales, and products, dieting has become a popular way of life within U.S. culture. Trendy diets such as the Atkins Diet, Jenny Craig, the South Beach Diet, Weight Watchers, high protein diets, Medifast, various ketogenic diets, Slimfast, Nutrisystem, The Zone Diet, and many more have been used by millions of Americans with hopes of shedding extra weight. Some could argue that many, if not all of these weight loss programs could be considered “fad” diets; meaning that these diets aim to produce significant weight loss

results (typically 10 to 20 pounds) in a short amount of time (e.g., two weeks, 10 days, one month) and are marketed to, and used by large numbers of people. All of these diets have two things in common, they often promote daily consumption of meat and/or dairy products (meat and dairy are often included in “low-carb” diets), and most encourage people to consume less than 2,100 calories a day to lose weight. This in fact, can lead to problematic weight loss challenges and can also adversely affect one’s health. The World Health Organization (WHO) provides objective and statistical facts about dietary consumption.

The WHO, established in 1948, is a specialized agency of the United Nations that serves as the leading authority for universal health matters and public health. The WHO’s purpose is to provide counsel and to deliver objective and reliable information in the field of human health (Delimaris, 2013). The WHO, reports that consuming any less than 2,100 a day for an adult man or woman equates to clinical starvation. For some, participating in calorie restrictive diets is simply a choice for battling weight gain. For others, hunger (or food insecurity) is reality lived daily resulting in chronic health problems and morbidity. The co-existence of food insecurity and obesity in low-income communities will now be reviewed.

The Co-Existence of Food Insecurity and Obesity in the U.S.

The food security concept was developed in the 1990’s by the American Institute of Nutrition (Cook, 2008). The method of measurement involved a scale consisting of 18 questions used to quantify food security in U.S. households (Cook, 2008). Food insecurity is often prevalent in low-income households. It has also been linked to obesity and various health conditions in people living below the poverty line (Adams et al.,

2003). This literature will later provide an empirical study on how food insecurity relates to the SPMI population. For now, a brief analysis of food insecurity in relation to low-income individuals will be reviewed.

In one study, Adams et al. evaluated patterns of food insecurity in a sample of 8,169 women aged 18 years or older using data from the 1998 and 1999 California Women’s Health Survey (Adams et al., 2003). Table 1 reveals the results of this study. Demographics such as race and ethnicity were included and considered in the findings. The study resulted in the conclusion that increased food insecurity increased rates of obesity (Adams et al., 2003). The SPMI population also experiences food insecurity and the prevalence of chronic health problems persists within their demographic.

Table 1

Prevalence of Obesity by Food Security Status and Race/Ethnicity Among California Women

	All	Food secure	FI, without hunger	FI, with hunger
Race/ethnicity				
Asian	9.1 (580)	6.6 (497)	17.4 (61)	38.5 (22)*
Black	29.9 (471)	27.0 (365)	36.2 (80)	52.1 (26)*
Hispanic	25.5 (2103)	20.7 (1339)	32.1 (615)	42.1 (149)*
White, non-Hispanic	17.0 (4810)	15.6 (4336)	28.1 (339)	26.5 (135)*
All	18.8 (7964)	16.2 (6537)	29.7 (1095)	35.2 (332)*

Note. FI = food insecure. Participants (n=7964) had complete data for all variables and were included in this analysis. Values were weighted percentages and unweighted n (n). *Chi-square test for linear trend within race/ethnicity, P < 0.05.

Previous research on food security within the SPMI population appears limited however, the statistics presented in the California Women’s Health study relate to the SPMI population in that food insecurity is also prevalent within that demographic.

An empirical study done in 2008 illustrated the severity of food insecurity within a small sample of persons living with serious mental illness.

In the 2008 study, a sample of 72 individuals with a diagnosed mental illness residing in Kansas was assessed for food security. Within the sample assessed, 45% were identified as food insecure and 29.2% were reported to have experienced the most severe level of food insecurity (e.g. limited access to quality food) (Goetz, 2008).

The Prevalence of Obesity Among Those Diagnosed with Mental Illness

The notion that there is a high prevalence of obesity is much higher in those diagnosed with a serious and persistent mental illness (SPMI) when compared to the rest of the general population is well supported by previous research.

In one study, Allison and colleagues conducted a study (2009) that used a sample of randomly selected people with serious mental illnesses and an individually matched group from the Third National Health and Nutrition Examination Survey (NHANES III) database (Allison et al., 2009). Allison's study found that 50 percent of women and forty-one percent of the men in the psychiatric sample were obese compared to twenty-seven percent of women and twenty percent of men in the matched comparison groups.

Furthermore, Allison and colleagues found that patients with schizophrenia had higher Body Mass Indexes (BMIs), than people without schizophrenia. The medical consequences of obesity are substantial clinical challenges in the treatment of persons with SPMI. Another contributor to chronic health problems within that demographic is the quality of care provided within the medical field.

Disparities in Provision of Care for SPMI Patients in the Medical Profession

As previously stated, studies suggest that inadequate provision of medical care for SPMI patients contribute to rising rates of chronic disease and mortality. Diabetes is a chronic disease that is highly prevalent in persons with mental illness (Llorente & Urrutia, 2006). The medical treatment given to SPMI patients with diabetes will now be reviewed. This study illustrates the implication of mistreatment of persons with mental illness seeking medical attention for chronic physical conditions.

In a study conducted by Nasrallah and colleagues (2006), the prevalence of chronic illness in people with an SPMI diagnoses was studied. Using data from the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) schizophrenia study, Nasrallah examined the prevalence of diabetes, hyperlipidemia and hypertension treatment at time of enrollment for an entire group of people and also for those with fasting laboratory values (obtained eight or more hours since last meal) (Nasrallah et al., 2006). The total sample size was 1,433 and the fasting sample size was 685. The results of Nasrallah's study found that the overall occurrence of hypertension was 33.2 percent of the 1,440 subjects. The prevalence of diabetes overall was 10.4 percent for the entire cohort and 10.9 percent within the fasting sample. Dyslipidemia was found in 47.3 percent of fasting subjects. In regard to hypertension, Hispanic CATIE subjects were less likely to be treated for hypertension (21 percent) compared to non-Hispanic persons, which resulted in 39 percent. In regard to treatment of diabetes this study found that 30.2 percent of the entire sample were left untreated and 69.8 percent received treatment for diabetes (Nasrallah et. al., 2006).

Leading Causes of Death in America

Statics regarding the leading cause of death by the medical profession is well supported by previous research. Studies suggest that the health care system plays a role in increasing mortality rates of the American public (Starfield, 2000).

According to the Journal of the American Medical Association (JAMA), the medical profession *contributes* to rates of mortality in the U.S., largely due to being the third leading cause of death. The data (shown below) equates to 250,000 deaths per year in the care of physicians (Starfield, 2000). Table 2 and Table 3 displays data from JAMA. Both tables are replicate charts from MD PhD, T. Colin Campbell's, *The China Study*; stated to be the most comprehensive study of nutrition ever conducted. These statistics do not reflect the SPMI population rather; they reflect the general American public.

Table 2

Number of Americans per Year Who Die via the Health Care System

Medication errors	7,000
Unnecessary surgery	12,000
Other preventable errors in hospital	20,000
Hospital bone infections	80,000
Adverse drug effects	106,000

Note. These numbers reflect the general American population. Data retrieved from the Journal of the American Medical Association (2000).

Table 3 (shown below) reveals the leading cause of death in America. Again these maladies are often diet and lifestyle related. The first leading cause of death in America is due to cardiovascular conditions such as heart disease. It is unclear how many individuals within this data are also mentally ill however, research suggests that people diagnosed with a serious mental illness die prematurely at higher rates compared to the general population.

Table 3

Leading Causes of Death in America

<i>Cause of Death</i>	<i>Deaths</i>
Diseases of the heart	710,760
Cancer (Malignant Neoplasms)	553,091
Medical Care	225,400
Stroke (Cerebrovascular Disease)	167,611
Chronic Lower Respiratory Disease	122,009
Accidents	97,900
Diabetes Mellitus	69,301
Influenza and Pneumonia	65,313
Alzheimer's Disease	49,558

Note. These numbers reflect the general American population. Data retrieved from the Journal of the American Medical Association (2000).

The Standard American Diet (SAD)

Most Americans eat what is known as the Standard American Diet (SAD), which is rich in red meat, dairy products, and often processed and refined foods. Studies suggest that excess consumption (eating more than the recommended amount to ensure positive health) of the SAD diet is the leading cause for chronic illness and morbidity in the United States. Collin T. Campbell's study of the SAD diet as well as nutrition and its impact on health will now be reviewed.

Dietary treatment of chronic illness. Dietary treatment of chronic illness is well supported by previous research. Biochemist Colin T. Campbell, PhD, performed the most comprehensive health study done on diet and human epidemiology. His study included 367 variables, 65 counties in China, and 6,500 adults; all of who completed questionnaires, blood tests and urine samples (Campbell, 2006). The study resulted in over 8,000 statistically significant associations amongst lifestyle, diet, and disease variables (Campbell, 2006) Campbell concluded by reporting, "people who ate the most animal-based foods (SAD diet) got the most chronic disease and people who ate the most

plant-based foods were the healthiest” (Campbell, 2006). Nicholson and Turner-McGrievy also performed studies centered around plant-based diets and its implications on human disease. A review of their work as well as various empirical health studies will now be reviewed. Diabetes, obesity and heart disease are often prevalent in persons with SPMI. Nicholson and colleagues conducted health studies solely centered around diet and its impact on the reversal of type-2 diabetes. Nicholson’s primary objective was to examine whether glycemic and lipid control in patients with non-insulin-dependent diabetes (NIDDM) could be drastically improved with the consumption of a low-fat, vegetarian diet without exercise (Nicholson, 1999).

Eleven participants with NIDDM were recruited from the Georgetown University Medical Center as well as the local community to participate in this study. Seven participants were randomly assigned to a low-fat vegan diet and four participants were randomly assigned a conventional low-fat diet (Nicholson, 1999). Nicholson stated “fasting serum glucose, body weight, medication use, and blood pressure were assessed at baseline and biweekly thereafter for 12 weeks. Serum lipids, glycosylated hemoglobin, urinary albumin, and dietary macronutrients were assessed at baseline and 12 weeks” (Nicholson, 1999). Their study concluded that consumption of a low-fat, vegetarian diet in participants with NIDDM were associated with a substantial drop in fasting serum glucose concentration and body weight; all of which was achieved with the absence of exercise (Nicholson, 1999). Turner-McGrievy and colleagues conducted a study that compared a low fat vegan diet to a conventional diabetes diet in regards to their impact on type 2 diabetes.

In Turner’s study (2008), 99 participants living with type-2 diabetes partook in

Turner-McGrievy's 22-week dietary study. Forty-nine of these individuals were randomly assigned to a low fat vegan diet and 50 were assigned the 2003 American Diabetes Association (ADA) recommended diet (Turner-McGrievy, Barnard et. al., 2008). The vegan diet comprised of the consumption of carbohydrates, fiber, potassium, and various micronutrients. Grains, fruit, vegetables and legumes were the base of the vegan diet. The ADA diet included consumption of meat and dairy products. Their outcome measures were based on Alternative Eating Index scores. Nutrient consumption and Alternative Healthy Eating Index (AHEI) scores were collected at the beginning and end of this study (Turner-McGrievy et al., 2008). As a result, the vegan diet group improved their AHEI scores, which also resulted in improvements in weight and hemoglobin A1c (Turner-McGrievy, Barnard et al., 2008). The AHEI diet group saw no improvement in their AHEI scores (Turner-McGrievy, Barnard et al., 2008).

Conceptual Framework

The conceptual framework of this study included two theories relating to the research. The Ecological systems theory was explained as well as the self-efficacy theory. These theories were applicable to this study because they addressed the responsibilities of a social work professional in regards to particular approaches toward dietary treatment of chronic illness in persons with serious mental illness. We will first examine the ecological systems theory.

Ecological Systems Theory

The conceptual framework of this study relates to Bronfenbrenner's ecological systems theory. This perspective is valuable to this particular study because it helps us understand the various impacts of poverty, discrimination, and systemic problems within public health on the development of chronic and fatal disease within the SPMI population. Furthermore, this framework involves how the professional is viewed in regards to their interactions between various ecological systems. These systems include micro-, meso-, exo-, and macro-systems. Each systems impacts how a professional provides service to an individual or community.

Microsystem. The *microsystem* is defined as “the complex of relations between the developing person and environment in an immediate setting containing that person (e.g. home, school, workplace) (Bronfrenbrenner, 1977, p. 514). One's environment is especially important to consider when providing dietary and clinical treatment. Homelessness, and environmental stressors can often exacerbate mental health symptoms, furthering the decline of wellbeing. The social work professional must be aware of the environment at which their client resides in order to provide appropriate

treatment and recommendations.

Mesosystem. The *mesosystem* is defined as: “Interactions among major settings containing the developing person at a particular point in their life” (e.g. peer group, work place etc.) (Bronfenbrenner, 1977, p. 514). When treating persons with SPMI it is important to learn about their community supports. When there is an absence of peer support, it is important to provide social resources aimed at improving social functioning.

Exosystem. The exosystem is defined as “an extension of the mesosystem that includes social institutions such as the workplace, neighborhood, mass media, local, state, and national government (Bronfenbrenner, 1977, p. 514).” Professionals often work with many economic and social challenges within exosystems. Stigma created by mass media regarding negative attitudes toward the mental health care system as well as perceptions of mental illness are concepts often dealt with by professionals in the mental health care system.

Macrosystem. The *macrosystem* is defined as “The overarching institutional patterns of the culture or subculture, such as the economic, social, educational, legal, and political systems, of which micro-, meso-, and exosystems are the concrete manifestations” (Bronfenbrenner, 1977, p. 514). An urban, suburban, or rural community could be considered under the macrosystem in that each community would more than likely have funds, services, and varying demographics (cultural differences) that could influence the clinical treatment provided by the social work professional. Access to quality food could be a challenge in one community but could be found in abundance in another. Integrative psychotherapy practices could be more socially accepted in one community than in another.

Self-Efficacy Theory

The self-efficacy theory is included in this research because it expresses a client-centered/strength based approach to the treatment of mental illness. According to Albert Bandura “perceived self-efficacy plays a pivotal role in this process of self-management. It affects actions not only directly but also through its impact on cognitive, motivational, decisional, and affective determinants” (Bandura, 2003). He goes on to state that attitudes of self-efficacy impact the self-regulative standards people embrace (Bandura, 2003). Self-efficacy is something that professionals in the social work and related fields attempt to model and teach. Stigma, negative attitudes toward mental illness and lack of support can often produce poor self-esteem in person’s living with mental illness. Positive self-efficacy allows for one to enhance their interpersonal functioning, which in turn could have a positive impact on how they care for their physical and mental health.

Professional Lens

My professional lens focuses on adult mental health treatment. Working in the mental health field has taught me that the state of one’s mental health can either improve or hinder their ability to function socially, emotionally, and for some, spiritually. Furthermore, health and wellness has been a passion of mine since I was young. Listening to stories of the grief and loss of loved ones due to chronic illness is always has always been devastating experience. Throughout the years, I have learned that healthy diet practices can improve, sustain and reverse disease, resulting in improved quality of life. Social work and adult mental health treatment is also a passion of mine. I currently have a bachelor’s degree in social work and have been employed at several mental health treatment facilities, programs, which all possessed the same mission; to assist persons

with mental illness toward recovery, sustainability, and independence.

Personal Lens

I was born in what is considered to be the poorest country in the western hemisphere, the island of Haiti. Proper nutrition is rarely met amongst millions of people resulting in mortality and preventable, premature death. Destitution, economic strife, displacement, and trauma are also experienced there often. The culture of poverty impacts one's mental health in ways that I know I could never fathom due to my adoption at a small age. I frequently visit my home country and to my surprise have noticed that even with the challenges of poverty comes joy, gratitude, and humbleness shared by the Haitian people. The sense of community there is astounding and I work toward practicing an attitude of gratitude (mindfulness) as much as possible with goals of becoming a better professional.

Methods

Research Design

The purpose of this study was to explore the impact of diet on individuals diagnosed with serious and persistent mental illness (SPMI). There appeared to be limited research on this topic in regards to how both variables specifically impacted the SPMI population. Therefore, this research study was exploratory in nature. In efforts to construct a systematically sound study that would explore correlations between diet and development of human disease, the following was addressed; sample, protection of human subjects, recruitment process, data collection, data analysis, and potential strength/limitations of the study.

Sample

For this study, the researcher located eight participants. Eligibility for participation in this study required potential respondents to be currently working with the SPMI population. Furthermore, licensure and/or professional experience in the social work, alternative medicine, and medical profession were included for eligibility. Work location was considered throughout this process. These interviews were conducted in urban and/or suburban setting surrounding the metropolitan area. This researcher did not directly interview persons with SPMI rather; interviewed of professionals working with the SPMI population were conducted.

Eligibility for this study included one's professional background and work experience in the mental and medical field of practice. Eight participants met the following inclusion criteria including, licensure, certifications and work location. The participants had two to three years of direct experience working with persons diagnosed

with a serious mental illness. Second, they were a licensed or certified professional.

Demographic Information

The Institutional Review Board (IRB) as well as my 682 clinical research (paper) committee reviewed this qualitative study to ensure that it complied with the Protection of Human Subjects guidelines. The respondent's name and most obvious identifiers were omitted from the transcription of the interviews to comply with confidentiality guidelines. The audiotaped interviews and transcriptions along with all other records of this study were kept confidential. The transcripts and recordings were kept in a locked file at the residence of the researcher to insure privacy. Identifying information of participants involved in the research was omitted. Findings from these interviews were used solely for academic purposes.

Work Experience

The participants were asked to share their professional experience in terms of time spent working with the SPMI population. Most of the participants had three or more years of experience working with the SPMI population. Many also had three to ten plus years of working in the medical field of practice. Two participants operated their own private practice in alternative medicine and five participants worked strictly in the mental health field and served only the SPMI population doing either targeted case management or intensive rehabilitation.

Recruitment

Convenience sampling was used for the recruitment of subjects for this study. The researcher contacted professionals in the alternative medicine, social work, and medical fields of practice. The venues were selected based on location (urban and suburban

settings surrounding Minneapolis, Minnesota's metropolitan area). Snowball sampling was the method used to recruit potential participants in this study. According to Berg (2009), snowball sampling allows the researcher to contact individuals to interview. Concluding each interview, the interviewee's were asked for referrals of other potential participants who possess similar attributes (Berg, 2009).

Protection of Human Subjects

Strict confidentiality was maintained throughout this research process as well as after it was completed. The respondents' name and most obvious identifiers were omitted from both the field notes, and transcription of the interviews to comply with confidentiality guidelines. This researcher explained the purpose of this study and allowed time for questions and/or concerns. All participants were asked and required to sign the consent form (see Appendix D). The consent form included an explanation of the research as well as procedures for an interview. Each form was signed and dated by the interviewer and interviewee before to the start of the interview.

There was minimal risk involved in this study. The interviews were semi-structured and voluntary in nature. This researcher verbally addressed the participants' rights as well as the voluntary nature of the study. Participants had the right to skip over questions asked by the researcher. The participants also had the right to end the interview at the time of their choosing.

Data Collection

In this study, qualitative data was collected using a semi-structured interview process. The interview questions were open-ended in nature and only pertained to the research topic. Questions regarding dietary components to treatment, as well as holistic

practices and their impact on persons with SPMI were asked. The setting of these interviews was in a private location to ensure the discretion of the information provided to this researcher. The research questions were influenced by the literature in the literature review and pertained to the research topic.

Data Analysis

The grounded theory method was used to structure the data in this qualitative research study, as it possessed the analysis of codes and themes derived from the data. Padgett (2008) states that grounded theory begins with open coding of interview transcripts, which later allows the researcher to weave in theoretical ideas and concepts (Padgett, 2008, p. 32). This researcher audiotaped and then transcribed all interviews in their entirety. Codes and themes were then developed from the transcription/information provided by the respondents. This researcher later applied theories to the themes discovered within the data as part of the data analysis process.

Findings

This chapter presents the findings from 8 interviews of professionals whom work with the SPMI population ($n = 8$). The findings resulted in the development of three distinct themes. These themes included: (1) Cause and effect; (2) Prevalent medical conditions; and finally, (3) Best practice. Within these three main themes, additional subthemes were to be found. Under the theme, cause and effect, two subthemes were identified: mental health symptoms, and lifestyle, within the second theme of prevalent medical conditions, one subtheme was developed which included rates of common ailments. The final theme, best practice, contained two subthemes: Education; and methods of treatment. The themes can be seen in Table 4.

Table 4

Themes/Subthemes and sample responses among professions working with the SPMI population

<i>Theme</i>	<i>Sample response</i>
<i>Theme 1: Cause and effect</i>	
C1: Mental health symptoms	<i>Sometimes the depression leads to not taking care of one's self and not making proper choices for food, or substance use, or you know...</i>
C2: Lifestyle	<i>My Clients who have schizophrenia, routine is one of the most important things for them ...to get up about the same time every day around, you know, between 6 and 8am ...have meals about the traditional meal times. Also go to bed at the same time.</i>
<i>Theme 2: Prevalent medical conditions</i>	
P1: Rates of common ailments	<i>I would guess probably 60-70% have some form of chronic pain or chronic health issues such as diabetes or hypertension</i>
<i>Theme 3: Best practice</i>	
B1: Education	<i>More education to the team. Just kind of bridging that gap of everyone's fear of the medical world. I see that a lot. People get really scared of medications or the medical conditions and stuff</i>
B2: Methods of treatment	<i>My rule of thumb is 70 percent fruits and vegetables.</i> <i>I'll tell clients to follow just like a regular diet as far as incorporated whole fruits and vegetables, less processed foods.</i>

Note. C = cause and effect: three subthemes; P = prevalent medical conditions two subthemes; B = best practice two subthemes.

Description of Agency Settings and Work Roles

Eligibility to participate in this research included professionals who worked with the SPMI population. Respondents were asked to provide a brief description of their profession. They were also asked to share the capacity of their work with persons

diagnosed with serious and persistent mental illness. Years of experience were also asked during the interview, which helped me gauge their professional experience. The types of work settings included professionals who worked in independent practice, hospitals, clinics, and nonprofit agencies. Several different professions within these work settings were included. Three categories of field of practice were involved in this study, which included medical, mental health, and alternative medicine. Professionals whom worked in the medical field ($n = 2$), professionals whom worked in the mental health field ($n = 4$) and professionals who worked in alternative medicine/private practice ($n = 2$) were included in the interviews. This is illustrated in table 5.

Table 5

Description of Participants Categorized in Fields of Practice

Category	n = 8 (%)
Feld of practice	
Medical field	2 (25%)
Mental health field	4 (50%)
Alternative medicine	2 (25%)

Note. This information reflects the number of participants whom work within a specific field of practice.

The respondents who participated in this study included medical doctors (n = 2), nurses and certified nurse practitioners (CNP) (n = 3), mental health practitioners (MHP) (n = 3). Further description of this can be seen in table 4.

Table 5

Description of Profession

	n = 8(%)
Type of profession	
Medical doctor	2 (25%)
Nurse/CNP	3 (37.5%)
MHP	3 (37.5%)

Note. CNP = Clinical Nurse Practitioner; MHP = Mental Health Practitioner.

Cause and Effect

Mental health symptoms. The status of one’s mental health was a subtheme that often surfaced throughout the interviews. One hundred percent of the respondents interviewed stated that they believed mental illness was a primary cause for medical maladies within the SPMI population. One respondent reflected this with the following statement:

I think that probably a lot of it just comes from their circumstances and not really able to manage their chronic medical problems especially with things like diabetes, or kind of complicated...or having to manage things that they have to take a lot of like high blood pressure medications.

Another respondent stated that she believed mental illness to have impacts on one's ability to make proper food and dietary choices. She stated how difficult it often was to decipher what condition caused the other. She explained this with the following statement:

...sometimes medical conditions leads to depression because there's inflammation or loss of functionality I've had prior.

The same respondent then stated that one condition can lead to another and she mentioned that comorbidity couldn't be separated. She later expressed the importance of treating conditions as whole. Her statement was as follows:

Sometimes the depression leads to not taking care of one's self and not making proper choices for food, or substance use, or you know...mental health and medical illness, I find it difficult to separate them.

Another respondent who solely works with the SPMI population expressed another example of how mental illness impacts one's ability to manage their physical health. Her statement reads as follows: *"I think their mental illness gets in the way of focusing on their physical health. They are encouraged to focus on their mental illness and not necessarily where they're at physically."*

Lifestyle. Lifestyle was another subtheme that often surfaced as the interviews progressed. More than half of respondents believed lifestyle to be another contributor to

the development of chronic disease in persons diagnosed with SPMI. The respondents believed lack of exercise, financial constraint, and homelessness to be factors in the development of chronic disease. One respondent illustrated this with the following statement:

Sedentary lifestyle and diet...when you get an SPMI client who is on high cortisol level of stress...fight or flight mechanisms kicks in and you're not worried about some of these second level albeit very important body processes you just go from one reactive crisis to the next typically and this other stuff takes a back seat..

Prevalent Medical Conditions

Rates of common ailments. Respondents were asked to give a rough estimate on how many patients/clients they treat also lived with medical conditions. The stats of those living with medical ailments ranged from 30 to 50 percent. High blood pressure and diabetes were found to be the two most common conditions experienced by the SPMI population; stated by 87.5% of the respondents. Other common ailments included chronic pain, gastro-intestinal problems, fatigue and migraines.

Best Practice

Education. As the interviews progressed, all respondents appeared to have similar ideas of how to improve the awareness to aid in a solution to this public health problem. Many said that they saw education to be a starting point in the movement of preventative care. One respondent reflected this sentiment, stating:

I would say probably more education to the team. Just kind of bridging that gap of everyone's fear of the medical world. I see that a lot. People get really scared of medications or the medical conditions and stuff and just say "oh you're a nurse take care of it."

Another respondent also expressed the importance of not only enhancing education on health and wellness, but modeling it as a way to create an environment that encourages self-care and healthy lifestyle habits

More education. I've been wanting to get rid of the vending machines [at some of the programs]. For instance it creates a culture of 'If we can't do a parallel process on our own...It doesn't mean we have to have the same diet.' It means we need to approach how we are taking care of our own brains. And through all sorts of means, diet is one of them.... how are we doing that?

Methods of treatment. When respondents were asked to share their opinions regarding plant based nutrition, 50% of them agreed that plant based nutrition could improve the physical and mental health of those living with SPMI. About 25% believed that eating a well balanced, healthy, whole foods diet (that included some animal products such as meat and dairy) would assist in the aid of improving the physical health of persons with SPMI. Lastly, 25% believed that eliminating a food group (in reference to meat and dairy products) was appropriate in maintaining a balanced diet. With this said, the subtheme of methods of treatment surfaced during the interview process. The respondents shared their dietary approach to the treatment of patients who live with chronic medical illness and SPMI. An MD from a local urban clinic illustrated her support of plant-based nutrition with the following statements.

I think that plant based diets should be used. I use those. My rule of thumb is 70 percent fruits and vegetables. Now if you choose to do that from vegetarian and vegan point of view that's ok. If you chose to use animal products that's okay, but that's kind of the break down.

A local mental health nurse supported the balanced diet approach that included use of animal products. She believed that eating a standard or “regular” diet with the incorporation of consuming increased amounts of fruits and vegetables would improve the overall health of persons with SPMI. She stated:

I'll tell clients to follow just like a regular diet as far as incorporating whole fruits and vegetables and less processed foods. Its hard when you have a food shelf to necessarily get fresh fruits and vegetables, you end up getting things that are high in sodium and sometimes that's just to maintain life, but if you're able to have access to those things, just incorporating more fruits and vegetables.

Another respondent believed plant based nutrition to have positive impacts on health. She shared her thoughts on how such diets impacted chronic illness. She responded by stating:

It improves it. I mean you're getting a lot more of the essential nutrients and you're getting a lot more vitamins and minerals into your diet, which in turn can just overall make your mood better and your disposition better.

Two of the respondents did not believe that eliminating a food group such as meat and dairy would be beneficial for optimal health. One of the respondents practiced Ayurveda medicine, which is a practice that focuses on diet holistically. This individual specifically worked in holistic nutrition counseling. She stated:

So, I was a vegetarian for [decades]. I would never recommend it. I believe in eating meat. That being said, I'm a huge believer in plant-based foods. But I don't believe in all animal or all plant. I think that when you remove a whole food group, you've got a problem...eat some bacon, have some chicken skin. Have beef short ribs. Eat fat; its incredibly nourishing for the body.

Summary

Participants in this study expressed a wide range of beliefs relating to plant based nutrition. Overall, they agreed that an increase of consumption of whole foods, fruits and vegetables aid in improved physical health of persons diagnosed with serious mental illness.

Discussion

This research involved the exploration of diet within treatment of persons with serious and persistent mental illness (SPMI). Plant-based dietary treatment of chronic illness was the primary focus. This researcher wanted to learn how providers incorporated nutrition in their treatment of chronic illness within the SPMI demographic. This was a qualitative research study that included interviews with eight professionals. These professionals came from various work settings with various backgrounds (all of which whom currently worked with the SPMI population). Their backgrounds varied from medical doctors to mental health practitioners. The information collected by the interviews correlated in several ways with past studies presented in the literature review. Themes and subthemes were then developed from the data. A brief review of previous research will now be discussed.

Previous research suggested persons with SPMI died prematurely compared to the rest of the American public due to chronic medical conditions (Alison, Newcomer, et al., 2009). There was limited research on the impact of plant-based diets on health outcomes of persons with SPMI however; dietary treatment of chronic illness was well supported by previous research. Biochemist Colin T. Campbell, PhD, performed the most comprehensive health study done on diet and human epidemiology. The study resulted in over 8,000 statistically significant associations amongst lifestyle, diet, and disease variables (Campbell, 2006). Campbell concluded the study by reporting, that people who ate the most animal-based foods developed higher rates of chronic disease and people who ate plant-based foods were healthiest (void of serious human diseases) (Campbell, 2006). Ultimately, plant-based nutrition has been proven to improve chronic illness and

high consumption of meat and dairy has been proven to be leading causes of ailments such as heart disease (Campbell, 2006). This section will connect both the similarities and differences between this research and research presented in the literature review. Three themes were developed from the findings and each theme correlates with past studies present in the literature review.

The literature review had research that suggested that medical institutions such as clinics and hospitals often performed inadequate or neglectful treatment to people diagnosed with SPMI and chronic medical conditions. The respondents had varying opinions about how responsive their work place was in working with SPMI patients who live with chronic physical ailments. Some of the participants who were MDs or worked in the medical field felt that their work place could improve their communication with psychiatric providers to develop a more cohesive treatment plan for patients. Others however, gave much praise to the system in which they worked by stating that their work place excelled in responding to patients with unique medical and mental health conditions.

Cause and Effect

Most notably with regard to the cause and effect theme, findings correlated with past studies found in the literature review in several ways. Causes of chronic medical illness in persons living with SPMI had much to do with dietary and lifestyle choices. Lack of exercise and poor diet were found to be most prevalent in the findings. Another cause included mental illness. The status of one's mental health was found prevalent in both the literature review and the findings of this study. The literature review suggested that mental illness increased the severity of health maladies (Megna et al., 2011). Indeed,

past research found mental illness to exacerbate morbidity from health conditions including cardiovascular disease, diabetes, obesity, asthma, epilepsy, and cancer (CDC, 2011). One study developed by Megna and colleagues, implied schizophrenia to have an adverse impact on lifestyle (Megna et al., 2011). Megna's study (a study present in the literature review) stated that individuals diagnosed with schizophrenia typically led inactive lifestyles and often consume unhealthy food products (Megna et al., 2011). The respondents who participated in this research supported this fact with their comments regarding mental illness and health outcomes. Several of the participants stated inactivity, poor diet and mental illness to be contributors to failing health. Ultimately, the findings that developed the cause and effect theme supported past research.

Prevalent Medical Conditions

The second theme of prevalent medical conditions supports previous studies presented in the literature review. There were, however, some disparities when comparing previous research to the findings in this study. The literature review suggested obesity to be highly prevalent within the SPMI population (Megna et al., 2011). When comparing this to the findings, obesity was not mentioned.

Past research implied obesity to be of major concern in persons diagnosed with serious mental illness. The cause of obesity in the SPMI population had been linked to use of prescription drugs and unhealthy lifestyle practices (Megna et al., 2011). Obesity was not mentioned when respondents were asked to share what chronic illnesses they found to be most prevalent in the SPMI population. Instead, high blood pressure, and diabetes were the conditions most frequently mentioned. Despite this discrepancy, each respondent was asked to give an estimate of how many people (their clients and patients)

diagnosed with SPMI also lived with medical conditions. The statistics ranged from 30 to 50 percent.

Best Practice

Findings that developed the best practice theme support previous research presented in the literature review. Even though not all of the respondents agreed with eliminating meat and dairy products from a standard American diet, all agreed that increased consumption of whole foods, fruits and vegetables would improve the physical health of persons with mental illness.

In regards to the subtheme of method of treatment, previous research suggested that the consumption of a plant-based diet would substantially improve chronic health outcomes (Turner-McGrievy, Barnard et al., 2008). Studies that compared dietary treatment recommended by the American Diabetes Association (ADA) and plant-based dietary treatment resulted in outcomes that favored the plant-based approach (Turner-McGrievy, et al., 2008). Education was another subtheme that coincided with best practice.

Education was another subtheme under best practice. When respondents were asked to share what improvements could be made within the programs, clinics and/or agencies of which they were employed, most of them stated education (particularly on health and lifestyle) to be of vital importance. Education for both providers and for persons diagnosed with SPMI was said to be a significant tool needed to learn about the coexistence of health problems and mental illness. This researcher did not find studies that reflected the importance of education in regards to working with coexisting

conditions that specifically pertained to mental and physical illness; therefore, the ability to correlate this subtheme to past research is a challenge.

Strengths and Limitations

Strengths. This qualitative study explored diet within treatment of persons diagnosed with a serious and persistent mental illness. There are two primary strengths of this study.

First, the open-ended nature of the interview questions allowed participants to freely share their knowledge on health, mental illness, and human disease. Furthermore, this researcher was allowed to clarify and expand the information given by the respondents, which often evoked candid and valuable information. This information helped to provide perspectives on health by professionals of varying fields of practice.

A second strength included the range of disciplines involved in the study. The professionals who participated in this study came from a variety of agencies and work settings. The variety of their work settings provided this researcher with three different perspectives. Again, some of the participants worked with the SPMI population in a medical capacity. Others had a mental health, rehabilitation and therapeutic perspective to their work with the SPMI population. Although the research has strengths, it also has limitations as well.

Limitations. The sample of the research was a convenience sample, which means that the results reflect a limited demographic. Three limitations of this study are noteworthy.

First, this type of sampling resulted in gender inequality; almost 90 percent of the participants were female. The viewpoint of both men and women (although one man was

indeed interviewed) could have enhanced the findings by providing more of a diverse perspective on health. Also, learning how both sexes approach mental illness could have enhanced findings.

Another limitation was that the convenience sample only reflected practice performed in an urban/metropolitan setting. Medical and mental health, as well as alternative medicine practiced in a suburban or rural setting could have provided a more comprehensive analysis of the findings. Health and wellness may be addressed differently in rural settings as apposed to urban settings; access to resources such as organic, quality food may be more accessible in one setting as apposed to another.

Finally, this study was based each respondent's previous experience in working with the mentioned/targeted population (SPMI). Therefore, some of the responses weighed heavily on their subjective experience at the time of the interview. Subjective information can be a hindrance with regard to providing accurate information.

Implications for Clinical Social Work

The literature review provided both qualitative and quantitative statistics on the prevalence of medical conditions with people diagnosed with SPMI. Implications for social work are noteworthy. Three implications will be briefly discussed. First, awareness on the matter, second, education; and third, communication with community partners/service providers.

The findings developed in this research reflected many of the implications found in past research. Again biochemist Colin T. Campbell's study illustrated the impact of poor diet on the outcomes of health (Campbell, 2006). The social work profession must be made aware of medical conditions plaguing communities and vulnerable individuals

often served within this field of practice. The ability to be attuned to and aware of public health issues is an essential element to creating social change. Furthermore, educating each other, as well as those living with mental illness will help provide awareness to the health problem. This, in turn, could be an integral part of prevention and early detection of medical ailments persons with mental illness could be experiencing. Social workers need to have an understanding of how to treat coexisting conditions within the SPMI population. This refers to skills in communication with service providers, as well as medical institutions. Enhancing the external support system of individuals with SPMI would also be instrumental in providing encouragement and maintenance of healthy lifestyle habits; especially in regards to follow through with follow up care.

Implications for Future Research

Little research exists on to how plant based diets can improve the lives of those living with serious mental illness. Two major implications for future research grew out of this study that can be considered as research with regard to dietary treatment of chronic illness within the SPMI population continues to evolve.

Before the interviews were performed, this researcher was aware of the fact that people living with serious and persistent mental illnesses were also people who died prematurely from chronic medical conditions. Treatment for this problem appeared to be unclear hence the desire to explore the topic further. This researcher wanted to enhance understanding of actions taken to improve the health of those living with SPMI.

Ultimately, this qualitative study shined light on the high prevalence of chronic health problems in persons with mental illness. In regards to the interviews conducted for this study, the responses of eight professionals proved invaluable. Each stressed the

importance of dietary implementation in the treatment of human disease. They also provided candid ideas on the causes of health maladies suffered by persons with mental illness. Further exploration of this topic could lead to heightened understanding of the contributing factors that lead to premature death and health maladies so many are suffering from.

Conclusion

In conclusion, this research adds valuable information in regards to the impact of medical conditions on the lives of persons diagnosed with serious mental illness. Much of the literature focuses on diet and it's impact on the general public but very few studies combine the two aspects. The findings add valuable information regarding the prevalence of medical maladies within the SPMI population. Similarly, this research confirms the importance of health education, methods of dietary treatment, and prevention when treating persons with mental illness.

The challenge of implementing dietary treatment can also be seen in this research. Persons with mental illness often struggle to obtain healthy lifestyles due to social or environmental circumstances; not to mention the challenge of living with a mental health diagnosis. Providers also appear to struggle with implanting dietary treatments for those with SPMI due to lack of education on the matter or due to lack of follow through by their patients. Nonetheless, the issue of public health, and mortality continues to be of major concern regarding the SPMI population. More research needs to be done to accelerate awareness on this issue. Then, providers and communities alike can develop a plan to reverse the prevalence of premature death and chronic diseases suffered by persons with serious and persistent mental illness.

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Agency CONSENT FORM

Researcher: Please provide your agency with the information about your project and have your agency contact complete this form.

Agency: Please read this form and ask any questions you may have before agreeing to allow this study to take place at your agency. Please keep a copy of this form for your records.

Project Name	Exploring Diet within Treatment of Persons with Serious and Persistent Mental Illness	IRB Tracking Number	
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General Information Statement about the study:

This research aims to explore how providers incorporate dietary practices into their work with clients diagnosed with serious and persistent mental illness (SPMI).

Your agency is invited to participate in this research.
The agency was selected as a host for this study because:

YOU HAVE BEEN SELECTED TO PARTICIPATE IN THIS STUDY BECAUSE YOU a) work with the serious and persistent mental illness population, b) have experience in alternative medicine (or related field) and possess knowledge on dietary treatment of chronic illness; and c) are licensed or certified as a social worker, alternative medicine practitioner, or provider within the medical field of practice.

Study is being conducted by:	Farah Lee
Research Advisor (if applicable):	Kari Fletcher
Department Affiliation:	Social Work

Background Information

The purpose of the study is:

Previous research states that in the U.S., persons diagnosed with serious and persistent mental illness (SPMI) are dying and average of 25 years earlier than the rest of the general population due to lifestyle and chronic health problems. Previous research suggests that dietary changes can have a positive impact on enhancing longevity and decreasing rates of human disease. The purpose of this research is to discover how providers incorporate dietary practices into their work with clients diagnosed with serious and persistent mental illness.

Procedures

Study participants will be asked to do the following:
State specifically what the subjects will be doing, including if they will be performing any tasks. Include any information about assignment to study groups, length of time for participation, frequency of procedures, audio taping, etc.

Each participant will be invited to partake in a semi-structured interview regarding health practices and work with the serious and persistent mental illness population. The participants will be asked to answer 12 questions and each interview will last a maximum of 60 minutes. The interviews will then be audio taped and transcribed. Prior to the interview, each participant will

<p>be asked to sign consent forms and will later be asked a series of questions to gauge their understanding of the research study. These questions include the following 1) What is the purpose of this study?; 2) What is this researcher aiming to explore?; 3) Why were you chosen to participate in this study?</p>	
<p>Risks and Benefits of being in the study</p>	
<p>The risks involved for subjects participating in the study are:</p>	
<p>Participation in the study is voluntary in nature. Participants can withdraw from this study at any time, up to one week after the interview. Participants can contact this researcher by phone or email to request their data not be used. Participants have the right to stop, withdraw or skip interview questions at anytime during the interview to reduce discomfort. Care will be taken to reduce risks, in ways such as, including sampling providers rather than clients.</p>	
<p>The direct benefits the agency will receive for allowing the study are:</p>	
<p>There are no direct benefits to participating in this study. Participants will not receive compensation for their efforts.</p>	
<p>Compensation</p>	
<p>Details of compensation (if and when disbursement will occur and conditions of compensation) include:</p>	
<p>There is no compensation for participating in this study.</p>	
<p>Confidentiality</p>	
<p>The records of this study will be kept confidential. The types of records, who will have access to records and when they will be destroyed as a result of this study include:</p>	
<p>Confidentiality will be strictly maintained. Special care will be taken to ensure that all research participants are fully aware of how their information will be protected. Their information and their interviews will be kept on a password protected flash drive that will be locked in a file box at this researcher's place of residence. The research chair, Kari Fletcher, as well as the University of St. Thomas school officials will have access to the data for purposes of supervision, guidance and policy procedures.</p>	
<p>Voluntary Nature</p>	
<p>Allowing the study to be conducted at your agency is entirely voluntary. By agreeing to allow the study, you confirm that you understand the nature of the study and who the participants will be and their roles. You understand the study methods and that the researcher will not proceed with the study until receiving approval from the UST Institutional Review Board. If this study is intended to be published, you agree to that. You understand the risks and benefits to your organization.</p>	
<p>Participation in the study is voluntary in nature. Participants can withdraw from this study at any time, up to one week after the interview. Participants can contact this researcher by phone or email to request their data not be used. Participants have the right to stop, withdraw or skip interview questions at anytime during the interview to reduce discomfort.</p>	
<p>Should you decide to withdraw, data collected about</p>	<p>will be used in the study</p>

you	
Contacts and Questions	
You may contact any of the resources listed below with questions or concerns about the study.	
Researcher name	Farah Lee
Researcher email	lee67430@stthomas.edu
Researcher phone	(555) 555-5555
Research Advisor name	Kari Fletcher
Research Advisor email	kari.fletcher@stthomas.edu
Research Advisor phone	651.962.5807
UST IRB Office	651.962.5341
Statement of Consent	
I have read the above information. My questions have been answered to my satisfaction and I consent to allow the study to be conducted at the agency I represent. By checking the electronic signature box, I am stating that I understand what is being asked of me and I give my full consent.	
Signature of Agency Representative <input checked="" type="checkbox"/> <i>Electronic signature</i>	Date
Print Name of Agency Representative	
Signature of Researcher <input checked="" type="checkbox"/> <i>Electronic signature*</i>	Date
Print Name of Researcher	Farah Lee

*Electronic signatures certify that::

The signatory agrees that he or she is aware of the polities on research involving participants of the University of St. Thomas and will safeguard the rights, dignity and privacy of all participants.

- The information provided in this form is true and accurate.
- The principal investigator will seek and obtain prior approval from the UST IRB office for any substantive modification in the proposal, including but not limited to changes in cooperating investigators/agencies as well as changes in procedures.
- Unexpected or otherwise significant adverse events in the course of this study which may affect the risks and benefits to participation will be reported in writing to the UST IRB office and to the subjects.
- The research will not be initiated and subjects cannot be recruited until final approval is granted.

Appendix B: Letter to Potential Participants

Dear (name),

My name is Farah Lee and I am a graduate social work student at the University of St. Thomas. I am currently conducting a research study on how providers incorporate dietary practices in the treatment of those diagnosed with a serious and persistent mental illness (SPMI). I am reaching out to you because you a) work with the serious and persistent mental illness population; b) have experience in alternative medicine (or related field) and possess knowledge on dietary treatment of chronic illness; and c) are licensed or certified as a social worker, alternative medicine practitioner, or provider within the medical field of practice.

The purpose of this study is to explore how providers incorporate dietary practices when working with persons diagnosed with serious and persistent mental illness (SPMI). Previous research states that those diagnosed with a serious and persistent mental illness are dying an average of 25 years earlier compared to the general US population due to lifestyle and chronic health conditions. An exploration of how chronic illness is treated is the primary focus of this study. I invite you to participate in this study due to your knowledge of dietary practices as well your work and experience in working with the mentally ill population.

Your participation in this study is entirely voluntary and confidential. The interview will take approximately 60 minutes and will include twelve primary questions. While care has been taken to reduce risks, it is possible that participation may cause some mild discomfort. To address this, you have the right to stop the interview at any time or skip any questions. A list of free counseling and support resources will be provided. There are no direct benefits, such as compensation, to participating in this study. Participating will provide you with a chance to share your experience working with this population, and will lend a platform to give voice to those who are often under-represented. If you are interested in being part of this study, I will send you an informed consent form as well as further details to what is asked of you as a participant. Please know that interviews can be arranged at your convenience, either face to face or over the phone.

If there are any questions or concerns about this interview or the study, please feel free to contact my supervising research advisor, Dr. Kari Fletcher, at 651-962-5807, or myself at 555-555-5555.

Lastly, the Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation. I thank you for both your time and participation in my research study.

With best regards,

Farah Lee, LSW, BSW

Appendix C: Resource List for Mental Health Services in Minneapolis, Minnesota

Social Service Organizations

Cornerstone

1000 East 80th St. Bloomington, MN 55420

(952) 884-0376

East Minneapolis Exchange Club

1700 Second St. N.E. Minneapolis, MN 55413

(612) 599-363

East Side Neighborhood Services

1700 Second St. N.E. Minneapolis, MN 55413

(612) 781-6011

EMERGE Community Development

1101 West Broadway, Ste. 200

Minneapolis, MN 55411

(612) 529-9267

FINNEGANS/ FINNEGANS Community Fund

609 South 10th St., Ste. 102

Minneapolis, MN 55404

(612) 454-0615

Girls on the Run Twin Cities

P.O. Box 6927

Minneapolis, MN 55406

(651) 699-4305

Good in the Hood

1630 East 90th St. Bloomington, MN 55425

(612) 217-4003

Greater Twin Cities United Way

404 South Eighth St. Minneapolis, MN 55404

(612) 340-7400

Guild Incorporated

130 South Wabasha, Ste. 90 St. Paul, MN 55107

(651) 450-2220

CONSENT FORM UNIVERSITY OF ST. THOMAS

Exploring Diet Within Treatment of Persons with Serious and Persistent Mental Illness

I am conducting a study about how providers incorporate dietary practices in the treatment of those diagnosed with serious and persistent mental illness (SPMI). I invite you to participate in this research. You were selected as a possible participant because of your current employment as licensed social worker, certified alternative medicine practitioner, registered dietician, and/or medical doctor. Please read this form and ask any questions you may have before agreeing to participate in this study.

This study is being conducted by: Farah Lee, a graduate student at the School of Social Work, Catherine University/University of St. Thomas and supervised by Kari Fletcher, Ph.D., LICSW, from the St. Catherine/University of St. Thomas School of Social Work.

Background Information:

The purpose of this study is to explore how providers use dietary practices in the treatment of those diagnosed with serious and persistent mental illness (SPMI). The goal of the study is further explore the leading contributors to chronic health problems in those diagnosed with serious and persistent mental illness and how providers are treating chronic illness.

Procedures:

If you agree to be in this study, I will ask you to do the following things: Participate in a semi- structured, interview, approximately 60 minutes long, which will include twelve primary questions pertaining to the research question. Interviews will take place in a private location determined with the researcher and the interviewee; this could be a private work office or pre- reserved room at a private location, such as a library, or over the phone. Phone interviews will need to be in private office or spaces and will be digitally recorded by the researcher. This interview will be digitally recorded, transcribed, and coded for the purpose of a qualitative research study.

Risks and Benefits of Being in the Study:

While care has been taken to reduce risks, it is possible that participation may cause some mild discomfort. To address this, you have the right to stop the interview at any time or skip any questions. There are no direct benefits, such as compensation, to participating in this study. The sole purpose of this study is to gather information related to the research question, providing you an opportunity to lend your voice and stories to inform the research.

Confidentiality:

The records of this study will be kept confidential. In any report I publish, I will not include any identifiable information. The types of records I will create include digital recordings, handwritten field notes, and typed transcriptions of the interview. Research records will be kept in a locked file cabinet at my place of residence. I will also keep the electronic copy of the transcript in a password-protected file on my computer. Any data

with identifying information will be destroyed before June 1, 2018. I will delete any identifying information from the transcript. Data without identifying information will be kept indefinitely. Signed consent forms will be created as a result of this study. Again, all data will be retained for three years per federal regulation and then destroyed June 1, 2018.

Voluntary Nature of the Study:

Your participation in this study is entirely voluntary. You may skip any questions you do not wish to answer and may stop the interview at any time. Your decision whether or not to participate will not affect your current or future relations with St. Catherine University, the University of St. Thomas, or the School of Social Work. If you decide to participate, you are free to withdraw at any time up to and until one week following the interview. Should you decide to withdraw, data collected about you will not be used. Please contact me at (763) 614-7050 if you chose to withdraw your interview.

Contacts and Questions

My name is Farah Lee. You may ask any questions you have now. If you have questions later, you may contact me at (763) 614-7050. You may also contact Dr. Kari Fletcher, research advisor, at 651-962-5807. You may also contact the University of St. Thomas Institutional Review Board at (651) 962-6038 with any questions or concerns.

You will be given a copy of this form to keep for your records.

Statement of Consent:

I have read the above information. My questions have been answered to my satisfaction. I consent to participate in the study and to be audiotaped.

Signature of Study Participant

Print Name of Study Participant

Signature of Researcher

Date

Date

Qualitative Research: Interview Questions

Research Question: How do providers incorporate dietary practices into their work with clients diagnosed with serious and persistent mental illness (SPMI)?

1. What is your role as a (name of profession)?
2. How long have you worked as a (name of profession)?
3. How often do you work with patients who are diagnosed with serious and persistent mental illness?
4. Of the patients diagnosed with a serious and persistent mental illness, how many also live with chronic medical conditions?
5. What are some common medical conditions that your patients suffer from?
6. From your perspective, what do you think is contributing to medical problems in patients diagnosed with serious and persistent mental illness?
7. What are the challenges of treating patients diagnosed with serious and persistent mental illness?
8. What dietary practices do you recommend to patients to address their physical ailments?
9. How are plant-based diets used in the treatment of those living with serious and persistent mental illness?
10. How does plant-based nutrition impact chronic illness?
11. How responsive is your workplace setting in terms of working with patients who are mentally ill and who also have serious medical problems?
 - If improvements could be made what would you suggest?
12. Is there anything else that you would like to add that I might have not asked you?