CLINICAL PERSPECTIVES ON FOOD CHOICES AND MENTAL HEALTH

Mia R. Shepherd
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CLINICAL PERSPECTIVES ON FOOD CHOICES AND MENTAL HEALTH

A Project

by

Mia R. Shepherd

Approved by:

_________________________________, Committee Chair
Teiansha Bankhead, Ph.D., LCSW

______________________________
Date
Student: Mia R. Shepherd

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________________________, Department Chair               _________________
Robin Kennedy, Ph.D.                                                              Date

Division of Social Work
Abstract

of

CLINICAL PERSPECTIVES ON FOOD CHOICES AND MENTAL HEALTH

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Mia R. Shepherd

Mental illness currently affects 1 in 4 adults in America, which totals 58 million people who are affected by a mental illness (Kessler, Chiu, Demler, Walters, 2005). Emerging evidence suggests a connection between food choices and a person’s mental health although research is limited. This study explored how Licensed Clinical Social Workers (LCSW), Marriage and Family Therapists (MFT), and Doctors of Psychology (PH.D or Psy.D) perceive the impact of food choices on mental health and how these perceptions influence their assessments and/or interventions with clients. Participants believe food choices have an impact on a person’s mental health, regularly incorporating food choices into their assessments and interventions with mentally ill clients. The continued exploration of this topic is necessary for providing a comprehensive study to the causes of mental illness.

Teiansha Bankhead, Ph.D., LCSW

Date
DEDICATION

I dedicate this project to my family and friends who have made this journey possible.
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Chapter 1

THE PROBLEM

Introduction

Does the food we eat influence our mental health? It is easy for us to associate diet with our physical health but what about our mental health. On a regular basis, I see advertisements suggesting better physical health by making particular food choices. The magazine racks at the grocery stores bombard us with suggestions for warding off cancer and heart disease by addressing food choices. So, does it seem so impossible that food choices could play a significant role in our mental health much like it does in our physical health?

Regardless of what we see and hear about making healthy food choices, we are likely overwhelmed by the temptations all around us, from the fast food joint on the corner to the quick snack of chips at the gas station. The healthy choices of fresh fruits and vegetables seem inconvenient for our fast-paced culture. The price for fresh fruits and vegetables is another barrier for many people, especially for those on a restricted budget. The USDA diet analysis for food stamp recipients showed no difference in the consumption of milk and grains products when compared to other socioeconomic groups but did find a large reduction in the consumption of fruits, lettuce-based salads, and berries and melons, among the food stamp recipients (Kupillas & Nies, 2007). The costs of these products may be the barrier to increased consumption.

My long time interests in healthy food choices began as a teenager. My family has always eaten healthy foods, consuming many servings of fruits, vegetable and whole
grains daily. Today, I am intrigued by the rise in mental illness and the rise in eating more refined foods and less fruits and vegetables. The diet that is consumed today is very different from the one that was consumed a hundred years ago and our mental health interventions do not typically look at diet when assessing a client or when planning an intervention. The connection between food choices and mental health should not be overlooked, considering the continuous rise in mental illness.

The main purpose of this project is to evaluate the perspective mental health practitioners have on food choices and mental health. The project will evaluate the level of concern clinicians have on the subject and how it influences their assessments and/or interventions with clients. Additionally, I will identify any relationship that clinicians have between the food choices of their family of origin and their current food choices.

What evidence is there to support that the food we eat influences our mental health? According to Harbottle and Schonfelder (2008) that while there has been considerable research on understanding the biochemistry and the effectiveness of pharmaceutical interventions for mental illness, it is only recently that a greater focus on the impact of diet has occurred. Gomez-Pinilla (2008) has recently identified supporting evidence for the influence of dietary factors on specific molecular systems and mechanisms for maintaining mental functioning.

It is important to identify any variables that may be influencing the rise in mental illness. According to the U.S. Department of Health and Human Services (2002), the number of people treated each year for mental illness, has risen fourfold per capita since 1955. The statistics for those who are among the disabled mentally ill has risen nearly
six fold over the last fifty years (U.S. Department of Health and Human Services, 2002). During this period of time psychiatric drugs were being introduced and were thought to be responsible for the decline in hospitalizations among the severally mentally ill, when in actuality severe mental illness has shown to be rising during this period (Whitaker, 2005). Since the year Prozac was introduced in 1987 there has been a dramatic increase of the disabled mentally ill (Whitaker, 2005). The rise in mental illnesses despite pharmaceutical interventions may indicate the need to investigate additional interventions.

The impact of mental illness on individuals and the health care system is evidence for the need to identify all variables that may contribute to mental illness.

**Background**

Mental illness currently affects 1 in 4 adults in America, which totals 58 million people who are affected by a mental illness (Kessler, Chiu, Demler, Walters, 2005). Mental illness is the leading cause for disability in the US, with the four most common disorders being major depression, bipolar disorder, schizophrenia, and obsessive compulsive disorder (Lakhan and Vieira, 2008). According to statistics from The Global Burden of Disease (2004), Major Depressive Disorder is the third leading cause of death in high-income countries but eighth place in low-income countries. Specifically by region, in North and South America, the number one cause of death is from Major Depressive Disorders (The Global Burden of Disease, 2004).

Those who suffer from mental illness are more likely to suffer from diabetes and heart disease than the general population (Isenring, 2008). According to a review of
numerous studies, people with mental illnesses are more likely to die from cardiovascular
disease while schizophrenics are three times as likely (Davidson, Judd, Jolley, Hocking,
Thompson, Hyland, 2001). When looking at the burden of mental illness, the disability of
depression has been found to be equal to that of blindness or paraplegia, while the
disability of active psychosis is equal to what one might experience with paraplegia and
quadriplegia (Ustun, 1999). Mental illness is associated with a reduction in social
functioning and a loss of years of human productivity (Ustun, 1999).

Sadly, treatment options for people who have a mental illness are limited. Among
those who suffer from depression about 30% do not respond to the initial treatment of
anti-depressants (Hardbottle & Schonfelder, 2008). Additionally, prescription drugs used
to treat mental illness can have severe side effects that might lead to noncompliance
(Lakhan & Viera (2008). Even the National Institute for Clinical Excellence recommends
that anti-depressants should not be the first step in treating mild depression (Hardbottle &
Schonfelder, 2008). Identifying different treatment modalities will broaden the chances
of having effective interventions.

While mental illness has been on the rise, significant changes in our diets have
occurred. Researchers are suggesting that the deterioration of the Western diet correlates
with the rise in mental health disorders (Lakhan and Vieira, 2008). The daily diet in
America has changed dramatically during the last 200 years. According to Cordain et al
(2005) the evolution of the Western diet since the Industrial Revolution introduced foods
that fundamentally altered 7 crucial nutrient characteristics from our ancestral diets: (1)
glycemic load, (2) fatty acid compostition, (3) macronutrient composition, (4)
micronutrient density, (5) acid-base balance, (6) sodium-potassium ratio, and (7) fiber content. These nutrient characteristics “underlie or exacerbate virtually all chronic diseases of civilization” today (Cordain et al, 2005). Cordain et al (2005) contends that our human genome is responsible, which contains all of our genetic history and has not been able to adapt to these dramatic dietary changes. For instance, a dramatic increase in refined sugar consumption in England during 1815 was 6.8kg and rose to 54.5 kg in 1970, in 2000 we consumed 69.1kg of refined sugar (Cordain et al, 2005).

There are numerous nutritional deficiencies that have been identified in people who have a mental illness, the most common being omega-3 fatty acids, B vitamins, minerals and amino acids (Lakhan and Vieira, 2008). These deficiencies are relatively common among people who consume a Western diet (Bodnar and Wisner, 2005). The “western” diet is associated with eating foods that are highly processed such meat pies, processed meats, pizza, chips, hamburgers, white bread, sugar, and flavored milk drinks (Jacka et al. 2010). Evidence supports that following a western diet increases your chances of having major depression or dysthymia when compared to people who consume a diet of mostly fruits, vegetables, beef, lamb, fish and whole grains (Jacka et al. 2010).

Research Problem

There is great importance to continue research on how food choices affect mental health because of the epidemic proportions of people affected by mental illness. Ignoring the possible implications that food choices have on our mental health may be associated with the continued increase of mental illnesses despite current interventions. Current
interventions such as prescription drugs and clinical therapy are an important part to managing mental illness yet the rise in mental illness suggests that we need to identify additional interventions to combat the epidemic proportions mental illness has risen to.  

**Purpose of Study**

The purpose of this study is to explore clinician perspectives on the possible affect food choices may have on a person’s mental health. This study will attempt to explore the level of concern clinicians have on the subject and how it influences their interventions with clients. Specifically, the study will look at how clinicians approach food choices in their own lives, comparing it with family of origin food choices and their clinical approach with clients and food choices. The purpose of this study is to evaluate similarities among the clinicians and their approaches to food choices.

The data will be collected using a needs assessments and will identify any possible interventions clinicians are currently using. The data will identify if clinicians believe there is a need for a food choice intervention with clients who have a mental illness. Also, the data will be used to identify any current interventions relating to food choices clinicians are using to help managed mental illness. 

**Theoretical Framework**

The theoretical framework for this project will use a systems theory approach. According to Kirst-Ashman & Hull (2009) a systems theory approach focuses on how a set of elements or systems interact with each other in their environments, a systems unique intersection with other elements or systems in life. A system can consist of individuals, families, groups, communities and institutions (Kirst-Ashman & Hull, 2009).
Each system interacts and works together to make a whole that functions. This theory assumes that all systems in life are interrelated (Kirst-Ashman & Hull, 2009). Thus, each part of the system is affected if another part of the system changes. In order for a set of elements to have a relationship with one another they need to have a regular interaction with each other in order to fulfill a function (Kirst-Ashman & Hull, 2009). This theory has been known to be useful when seeking appropriate interventions for a system (Kirst-Ashman & Hull, 2009).

This project is looking at the system of mental illness and how food choices affect that system. In congruence with the theory, the food choices that people make, creates an interaction with a person’s mental health, essentially influencing it on some level. Food can be identified with causing changes in the physical health of our bodies (Sathyanarayana, Asha, Ramesh & Jagannatha, 2008), suggesting there could be a relationship with our mental health as well. Food is regularly interacting with our bodies further supporting the relationship to our mental health. A system is effected when other parts of the system change thus when dramatic changes were made in our diet composition it would suggest changes in our mental health.

**Definition of Terms**

The term the author uses to describe food choices are diet composition and dietary patterns. Diet composition and dietary pattern are defined by Hu (2002) as a person’s overall food and nutrient consumption. For example the Mediterranean dietary pattern consists of a high intake of fruits, vegetables, and fish, and a low intake of meat and dairy products (Akbaraly, Brunner, Ferrie, Marmot, Kivimaki, Singh-Manoux, 2009).
The author used the term cognitive functioning to refer to a person’s ability to perceive, evaluate, store, manipulate, and use information from external sources (i.e. our environment) and internal sources (experience, memory, concepts, thoughts) and to respond to this information (Schmitt, Benton, & Kallus, 2005).

The author uses nutrition in regards to the adequate amounts of specific nutrients needed to affect brain functioning. Bodnar & Wisner (2005) state that many nutrients are necessary for maintaining normal brain functioning and identify that deficiency is a major public health concern. Nutrients is used as a broad term to include vitamins, macroelements, trace elements, copper, zinc, manganese, 8 essential amino acids, and 2 essential fatty acids, these are all termed essential to brain functioning (Bourre, 2006).

The author uses the term mental health to describe people who have participated in studies evaluating their cognitive functioning that would include a person’s mood, arousal, motivation and physical well being (Schmitt, Benton, & Kallus, 2005). The term mental illness is used with populations meeting symptom criteria for a mental health disorder, in accordance with the Diagnostic and Statistical Manual of Mental Disorders.

Assumptions

The basic assumption of this study is that the clinicians who are participating in the study will answer the questionnaire thoroughly and reflectively. The second assumption of this study is that a person be considered as a system, and that the food we intake represents a relationship with that system.


**Justification**

This project is justified in that it addresses the fundamental ideology of the NASW Code of Ethics for Social Workers. The preamble identifies six core values, two of which pertain to this project. The first core value describes the importance of providing resources and benefits so that people can reach their full potential (Kirst-Ashram & Hull, 2009, pp. 373). Secondly, the belief that social workers are competent in their practice and strive to contribute to the knowledge base of the profession (Kirst-Ashram & Hull, 2009, pp. 373). The first value speaks directly to those who suffer from mental illness and a social worker belief for them to reach their full potential. The second core value I have mentioned establishes our duty as social workers to be competent in our professional activities and take the opportunity to contribute to the knowledge of the field.

**Limitations**

This project will not explore all potential contributing factors for mental illness; nor will it address mental illnesses that contribute to poor food choices.
Chapter 2

REVIEW OF LITERATURE

Introduction

Food choices and diet attitudes continually change, creating new trends and diet ideologies that promise to increase longevity and health (Pollan, 2009). While new books on diet, as seen on the shelves of local bookstores, continue to come out about the optimal diet for our physical health, the effects of diet on mental health is just now gaining evidence that warrants further study (Akbaraly et al., 2009; Gesch, Hammond, Hampson, Eves & Crowder, 2002; Noaghiul & Hibbeln, 2003; Well, Read, Laughharne, & Ahluwalia, 1997). The randomized controlled studies to date have shown that eating healthfully is effective in dealing with mental illness (Akbaraly et al., 2009; Gesch, Hammond, Hampson, Eves & Crowder, 2002; Noaghiul & Hibbeln, 2003; Well, Read, Laughharne, & Ahluwalia, 1997). Yet, more is needed in the form of comprehensive studies that confirm and validate the connection between how diet might be offered as a treatment and preventive measure against mental illnesses, similar to the way a healthy diet is linked to physical health.

In this literature review, I will present current research on how food can influence a person’s mental health. I will first present information on how food has played a part in our cognitive evolution. I will look at certain nutrients, essentially the breakdown of food, and how it supports or inhibits cognitive functioning. Next, I will detail how specific nutrients are found to be deficient in people who are suffering from mental illnesses, and include the clinical trials that use nutritional supplements as interventions.
I will then look at how nutrition is associated with depression and the clinical trials that have made this association. Essential Fatty Acids such as Omega-3’s will be identified as an important component of nutritional intake both as a preventive and supplemental intervention for mental illness. I will look at the physical health of people who are suffering with mental illnesses, and identify food choices and diets that are gaining attention for supporting mental and physical well being. Finally, I will mention the importance for guidelines in further studies and the few interventions that have been successful in improving mental health outcomes.

**Cognitive functioning and nutrition**

In order to understand the possible effects of nutrition on a person’s mental health we need to identify the basic concepts of cognitive functioning. Cognitive functions are responsible for our ability to perceive, evaluate, store, manipulate, and use information from external sources (i.e. our environment) and internal sources (experience, memory, concepts, thoughts), and to respond to this information (Schmitt, Benton, & Kallus, 2005). In a large dynamic system, each part of that system can influence the ability of the whole to function optimally. In cognitive functioning, the processes are interwoven, and the inefficiency of one processing ability can affect other individual processes or the system as a whole (Schmitt et al., 2005).

Our cognitive ability has been developed and enhanced during human evolution and is directly related to our food consumption (Gibbons, 2007). Richard Wrangham, a Harvard University primatologist, while studying chimpanzees in Africa has theorized that larger brain size in humans is associated with the increase of cooking skills, access to
food, energy savings, and upright walking and running (Gibbons, 2007) all of these features require additional levels of cognitive ability. Changes in the way we eat food, primarily by being able to cook it, is the basis for the most dramatic changes in human evolution, our growing cognitive abilities and the additional energy required for a larger brain (Gibbons, 2007). Gibbons (2007) concluded that energy saving benefits from cooking food has allowed us to increase our energy requirements for our human brains to 25% compared with 8% of an ape brain since a reduced amount of energy is needed to digest cooked foods.

According to Gomez-Pinilla (2008), food sends signals that influence energy metabolism and synaptic plasticity which then affects cognitive functioning. Patterns and behavior around eating, even before the act itself, shows synchronicity with brain centers by releasing hormones that increase synaptic activity and contribute to learning and memory (Gomez-Pinilia, 2008). Gomez-Pinilia argues this causes different hormones to be released when food is lacking which influences memory and learning (Gomez-Pinilia, 2008). Neural circuits connecting to the digestive system and brain, and through the release of digestive system peptides into the blood stream can compromise synaptic plasticity and cognitive functioning (Gomez-Pinilia, 2008). This happens when a person ingests a high amount of calories or participates in strenuous exercise, in an amount that would create an excess of energy production (Gomez-Pinilia, 2008). This connection and interaction between food and cognitive functioning, on a biological level, appears evident.
High-fat diets and insulin resistance is being linked to a decline in cognitive functioning, and dementia during the aging process (Greenwood & Winocur, 2005). Greenwood and Winocur (1996) used 40 experimental naïve, male Long-Evans rats were assigned to one of five diets varying in fat composition. Greenwood and Winocur (1996) concluded that the subjects who consumed the highest level of fat, in particular saturated fatty acids (SFAs) were shown to be directly associated with cognitive impairment. Human epidemiologic studies on older adults use cognitive performance tests following glucose testing to determine cognitive performance in adults (Greenwood & Winocur, 2005). The study that Greenwood and Winocur (2005) refer to had twenty-two healthy participants who were tested in the morning and evening on their memory retention after consuming glucose drinks. The participants, after showing a reduction in glucose tolerance, had reduced cognitive performance based on cognitive based task (Greenwood & Winocur, 2005).

Nutrition has been tested and is showing to have a connection to a person’s cognitive functioning; looking at nutrients provides the same support.

**Nutrients**

Certain nutrients have been shown to play a specific role in the different types of cells in our bodies. Bourre (2006), illustrates that deficiencies in diet can alter cognitive functioning because our bodies require certain dietary nutrients such as vitamins, macroelements (i.e. carbon oxygen, hydrogen, calcium, and magnesium), trace elements (i.e. iron, magnesium, selenium, iodine), copper, zinc, manganese, 8 essential amino acids, and 2 essential fatty acids, all of which are integral to healthy living. Bourre has
compiled data, mostly through animal experimentation, showing deficiencies in these vital nutrients can cause disease (Bourre, 2006). For instance, deficiency in folic acid during pregnancy has been shown to cause birth defects in newborns but deficiencies are also showing decreases in intellectual capacity and memory impairment in the elderly, natural sources of folic acid can be found in many green vegetables, liver and eggs (Bourre, 2006).

A trial has been conducted to identify the influence that supplementary vitamins and minerals have in controlling antisocial behavior in the UK (Gesch, Hammond, Hampson, Eves, & Crowder, 2002). A randomized, placebo-controlled trial was conducted with 231 recruited young adult prisoners who were given a vitamin/mineral supplement or a placebo for an average of 142 days. Gesch, Hammond, Hampson, Eves, and Crowder (2002) found dramatic results in participants who took the vitamin/mineral supplement. Participant’s had a 26.3% reduction in minor incidences and a 37% reduction in major incidences that included violence, while the placebo group results were not significant (Gesch et al., 2002). In addition, participants were asked to keep a food diary to detail their food choices. Gesch et al., (2002) did find that some prisoners lacked basic knowledge about necessary vitamins/minerals and that poor food choices were made regardless of availability, leading to deficient nutrient intake.

**Nutrition and Depression**

Much of the interest in how biochemistry affects mental health has been in the form of pharmaceutical interventions and only recently has there been emerging evidence to support that certain nutrients are responsible for causing and developing
disease as well as being a treatment for it (Bourre, 2006; Horrobin, 2002; & Sathyanarayana, Asha, Ramesh, Jagannatha Rao, 2008). Currently, anti-depressant drug therapies have been shown to have numerous drawbacks, with a 30% non-responsive rate and numerous unwanted side effects, even the National Institute for Clinical Excellence has recommended that anti-depressants not be prescribed as a first choice when seeing a person with mild depression (Harbottle and Schonfelder, 2008).

Several nutrients have been identified to assist in maintaining normal brain functioning while deficiencies in these nutrients have been related to increased chances of depression. For instance, folate deficiencies and low folate levels have been indicated in clinical trials to have a relationship in the general population to symptoms of major depression or dysthymia (Morris, Fava, Jacques, Selhub & Rosenberg, 2003). A study conducted by Martha Morris of Tufts University used a diagnostic interview schedule to determine if 3,000 ethnically diverse people aged 15-39 years had no depression, major depression or dysthymia (Morris et al., 2003). Participants displaying depressive symptoms showed lower folate concentration than people without depressive symptoms (Morris et al., 2003). Folate supplementation has proven to be modestly effective in a small clinical trial with 22 adults with Major Depressive Disorder during a four week trial. Sixteen of the completers showed reduced scores in their responses to the Hamilton Depression Rating Scale with scores starting at 19.1 ± 3.9 and decreasing to 12.8 ± 7.0 (Alpert, Mischoulon, Rubernstein, Bottonari, Nierenberg, & Fava, 2002). Eighteen percent of the intent to treat sample experienced remission of symptoms (Alpert, Mischoulon, Rubernstein, Bottonari, Nierenberg, & Fava, 2002).
In addition to folate deficiencies in people suffering from depression, they tend to have low levels of B12. Harbottle and Schonfelder (2008) explain that folate and B12 are important for the synthesis of dopamine and noradrenaline in our bodies. A review of the evidence from studies conducted on folate treatment supports that folate supplementation may improve depression outcomes, while B12 lacks any real evidence, more research is needed to understand supplemental B12 and its possible impact on depressive symptoms (Harbottle and Schonfelder, 2008). There is evidence that supports the importance of being vitamin sufficient with research showing cognitive changes in people who are B12 deficient (Bourre, 2006; Bryan & Calvaresi, 2004; Louwman et al., 2000). Among borderline deficient adolescents, signs of cognitive change have been recorded, additionally a study of elderly women with significant B12 deficiency were at a two fold risk of severe depression (Bourre, 2006).

Iron deficiencies have been linked to cognitive impairment and depressive disorders. Iron deficiencies can leave a person with fatigue, irritability, apathy and an inability to think (Bodnar & Wisner, 2005). Further evidence suggests that iron deficient mothers show score reduction in depression and stress scales when given iron supplementation (Bodnar & Wisner, 2005; Bourre, 2006; Sathyanarayana, Asha, Ramesh, Jagannatha Rao, 2008). A recent study measuring covariates for iron deficient postpartum mothers showed a strong association between the cognitive variable and behavior variable (Beard et al., 2005). Iron deficiencies in childhood may have long term cognitive effects. Bourre (2006) indicates that iron deficiency in childhood, when treated with an iron supplement, can lead to a cognitive deficit even 10 years after treatment.
Patients with unipolar depression show lower serum levels of zinc than controls without depressive symptoms (Harbottle & Schonfelder, 2008). Deficient zinc levels, a vitamin that is showing a connection with depressive symptoms is supported by some evidence (Harbottle & Schonfelder, 2008; Tassabehji, Corniola, Aishingiti, & Levenson, 2008). A study conducted with rats who were fed zinc adequate, deficient, or supplemented diets for 3 weeks showed depression-like behaviors, such as anorexia, anhedonia, and increased anxiety in the rats who were zinc deficient versus the rats who were zinc adequate (Tassabehji et al., 2008). Zinc supplementation along with antidepressants has been shown to have better outcomes than antidepressant therapy on its own. A placebo-control, double blind pilot study of zinc supplementation with antidepressant therapy showed a significant reduction in their Hamilton Depression Rating scores among both groups after two weeks but at the 6 and 12 week mark the zinc supplement group showed continued improvements compared to the placebo group (Nowak, Siwek, Dudek, Zieba, & Pilc, 2003).

In the same way that these studies support that there is a relationship between nutrition and mental health, Essential Fatty Acids may have a relationship with mental health as well.

**Essential Fatty Acids and Mental Health**

Evidence to support nutrition and nutritional supplements as interventions for mental health therapies are very limited, they often suggest enough of a correlation between nutrition and mental health (Nowak et al., 2003; Harbottle & Schonfelder, 2008; Bodnar & Wisner, 2005), but larger and more thorough studies are needed. However, the
studies conducted on Essential Fatty Acids (EFA) are showing substantial data that supports its role and importance for healthy brain development and functioning (Weissman et al, 1996; Noaghiul & Hibbeln, 2003; Harbottle & Schonfelder, 2008). The most substantial study data being used is from a cross-national epidemiologic survey of major depression and bipolar disorder. The study included 38,000 community subjects from 10 countries for the purpose of estimating the rates and patterns of major depression and bipolar disorder based on cross-national epidemiologic surveys. Weissman et al. (1996) survey concluded similarities between countries and a pattern in major depression and bipolar disorder, furthermore, this data is being used to show that high fish consumption is correlated with a lower prevalence of depression and bipolar disorders (Noaghiul & Hibbeln, 2003).

Omega-3-polyunsaturated fatty acids (PUFAs), are derived strictly from diet, from both plant and marine sources, though plant sources are not as effective as marine sources with providing PUFA’s (Harbottle & Schonfelder, 2008). The conversion of linolenic acid from plant sources to PUFA’s is limited to 5% to 15% depending on a person’s stress level and Omega 6 intake (Harbottle & Schonfelder, 2008). Currently, there is an imbalance between Omega-3’s, derived from fish, wild game and plants with Omega-6 levels which are derived from common vegetable oils (corn, safflower, and soybean) in Western population diets (Schuchardt, Huss, Stauss-Grabo & Hahn, 2010). These imbalances are being associated with numerous childhood disorders and mood disorders. These imbalances may be causing neurological impairment that is being associated with
childhood disorders such as attention-deficit disorder (ADHD), and autism spectrum disorders, as well as mood disorders in both children and adults (Schuchardt et al., 2010).

PUFA’s have been shown to have an essential role in brain development and functioning. PUFA’s are involved in a variety of physiological functions in our bodies: they are an integral component of cell membranes; they affect membrane fluidity, regulate iron channels, modulate endocytosis and exocytosis, modulate hormonal activity, effect immunology and influence gene expression (Schuchardt et al., 2010). Deficiencies in PUFA’s have been shown to alter the composition of structures within the brain that can be linked to behavioral changes. According to Bourre (2005) deficiency in PUFA’s have been shown to affect the composition of membranes of brain cells, neurons, oligodendrocytes and astrocytes, together with myelin and nerve terminals which causes changes in membrane fluidity, thus resulting in biochemical and physiological disturbances that can be linked to neurosensory and behavioral changes.

Research has been conducted on the effects of PUFA’s on the spectrum of mental health disorders starting with developmental disorders in childhood to adult onset disorders such as depression, aggression, and schizophrenia, and then to later adulthood disorders like dementia and Alzheimer’s disease (Sinn, Milte, and Howe, 2010). When looking at childhood disorders Sinn et al. (2010) suggest, that since the brain continues to develop throughout childhood that PUFA supplementation should be considered during developmental milestones, especially with children who have a developmental disorder that might be connected to a PUFA deficiency. Evidence is increasing to support that
PUFA deficiencies, imbalances and metabolism are connected to the development and behavior of children (Schuchardt et al., 2010).

According to the Center for Disease Control and Prevention, ADHD currently affects 3%-7% of school aged children with a 3% rise per year during 1997-2006, affecting boys almost twice as much as girls (2006). Research for the last 30 years has indicated that children with ADHD have shown lower levels of PUFA in their blood analyses when compared to matched controls (Sinn et al., 2010). A recent study conducted in the UK with 20 children (18 males and 2 females) between the ages of 12 and 15 who met ADHD criteria were given fatty acid supplementation for 3 months. Significant results were indicated from fatty acid supplementation on participant’s behavior, reading and spelling performance. The results for the 17 children who completed the trial showed mean reductions in t-scores of -12.3 for the DSM-IV’s Inattention scale, -17 for the DSM-IV’s hyperactive Impulsive scale, and -15.4 for the DSM-IV’s Global Total scale (Portwood, 2006).

In another study a precursor to Omega 3 fatty acids, eicosapentatinoic acid, was supplemented to 70 patients who had persistent depression despite standard antidepressant treatment. The trial was a randomized double-blind trial that distributed a placebo or ethyl-eicosapentaenoate at 1, 2, or 4 g/d dosages for 12 weeks. The patients were tested on 3 depression scales following treatment. Peet & Horrobin’s (2002) study concluded that the 1-g/d group showed trends of improvement in depression, anxiety, sleep, lassitude, libido and suicidality versus the placebo group. The 2-g/d showed little
effect, while the 4-g/d group showed nonsignificant trends towards improvement (Peet & Horrobin, 2002).

A recent review of randomized controlled trials on Omega-3 Fatty Acid supplementation with persons diagnosed with ADHD determined a need for further study. Sinn et al. (2010) determined that the preliminary and collective data suggests that PUFA supplementation may be associated with improved ADHD symptoms, especially in children with learning difficulties. In addition, since the clinical trials for fatty acids are inconclusive and inconsistent, Sinn et al. (2010) suggest that future clinical trials would benefit if they consider methodological differences between studies, such as sample size, selection criteria, the dosage of supplement, the nature of fatty acids and the length of supplementation.

Essential Fatty Acids (EFA’s) are showing some results that support EFA’s having a relationship to mental health, next I will present how physical health may have a connection with mental health (Sinn et al, 2010; Peet & Horrobin, 2002; Portwood, 2006).

**Physical Health and Mental Illness**

Persons with mental illnesses are more likely to suffer from ill health than the larger population. According to numerous studies, people with mental illness are more likely to die from cardiovascular disease and people suffering from schizophrenia are three times as likely (Davidson, Judd, Jolley, Hocking, Thompson, Hyland, 2001; Roick et al., 2007; Sartorius, 2007). Overall, patients suffering from schizophrenia have significantly higher rates of medical illnesses, particularly for obesity, hyperlipidemia,
diabetes, coronary heart disease, and stroke than the general public (Roick et al., 2007). Thorough investigation has been given to the effect antipsychotic drugs have on physical health yet dietary influences have received little evaluation.

The reason for the high prevalence of ill health among people who have a mental illness is yet undetermined. Sartorius (2007) suggests that addiction to drugs and alcohol may be partially responsible for the high rate of morbidity although a look at possible changes in the immune system and hormonal imbalances that are inherent in people with mental illness may be a factor as well.

Recent studies have assessed the lifestyle habits of people with schizophrenia that may suggest lifestyle plays a part in their increased risk for ill health. A recent study analyzing physical activity, diet, and drinking and smoking habits was conducted with 194 outpatients with schizophrenia. The results showed that schizophrenic outpatients tended to eat less in the morning and more in the evening, they consumed more instant meals and drank more coffee than the general public though they showed a reduction in alcohol intake compared to the general public (Roick et al., 2007). Smoking habits showed that patients tended to smoke four times as many cigarettes as the general public, and there was a reduction in physical activity among the outpatient schizophrenics as compared to the general public.

**Diet and Mental Health**

Associating physical health with nutritional deficiencies is common, while depression is traditionally seen as a chemical imbalance or caused by emotions. Yet, food patterns prior to the onset of depression are similar to those experienced during a
depressive state such as poor appetite, skipping meals, and a dominant desire for sweet foods (Sathyanarayana, Asha, Ramesh, Jagannatha Rao, 2008). Nutritional neuroscience is gaining attention and support in hopes of shedding more evidence on how nutritional elements may affect cognitive abilities, behavior, and emotions (Sathyanarayana et al., 2008).

A study conducted with 1252 middle-aged men and 4991 women in Finland set out to measure how food habits affected mental health using a mail survey that assessed current mental health status with a 12-item General Health Questionnaire (Sarlio-Lahteenkorva, Lahelma, & Roos, 2003). According to the study, women who reported having poor mental health consumed less fresh vegetables, fresh fruits, low-fat milk and low-fat cheese on a daily basis, and less whole grains (Sarlio-Lahteenkorva et al., 2003). Men had similar results with consuming less fresh fruits and dark breads (Sarlio-Lahteenkorva et al., 2003). All of these results were statistically significant.

An international study by Peet (2004), using existing databases from the World Health Organization and the United Nations Statistical Database, explored the outcome of schizophrenia and the prevalence of depression for the purpose of finding dietary predictors for these disorders. Peet (2004) found that greater consumption of refined sugar was associated with worse outcomes of schizophrenia and a greater occurrence of depression. Additionally, an increase in dairy consumption was associated with a reduced rate of out-of-hospital days among those same out-patients. Peet reiterates previous research, from epidemiological data, that fish and seafood consumption shows the most substantial evidence for the prevalence of depression (Peet, 2004).
Low fat diets have gained in popularity in America for the past 30 years, recommended by physicians and the national government, yet there is no clear evidence to support that it prevents heart disease or promotes weight loss (La Berge, 2008). Low-fat diets are showing some evidence that they may adversely affect mood. A small study of 10 healthy men and 10 healthy women, between the ages of 20-37 were given low-fat meals, slightly below British guidelines, delivered in their homes for a 1 month period. The study concluded that those who were on the low-fat diet had significantly increased rates of anger-hostility, and some increased rates of depression-dejection though not statistically significantly (Wells, Read, Laugharne, & Ahluwalia, 1997). Rates of tension and anxiety were lowered in the control group that ate a higher fat diet yet not in the low-fat group (Wells et al., 1997). Conversely, the reports from Greenwood and Winocur (2005), previously introduced under “Cognitive Functioning and Nutrition”, identified both human and animal studies showing a high consumption of fat being associated with cognitive decline and dementia.

Further studies have been conducted on diet quality and depression rates that show a correlation between the two variables. A recent study used 1,118 African-Americans and white adults between the ages of 30-64 years living in Baltimore. The data was obtained by trained interviewers who conducted a 24-hour dietary recall with participants. The study showed that diet was significantly associated with symptoms of depression (Kuczmarski et al., 2010).
Diet Composition

There continues to be debate on what a diet should be composed of, though items such as fruits and vegetables have always been regarded as beneficial (USDA, 2010; Jacka et al., 2010; Wells & Buzby, 2008). According to the USDA’s Economic Research Service (2010), Americans on average are consuming more than 500 calories more a day, than they did 30 years ago. The USDA breaks down these additional calories to show what types of food are responsible for the rise: 210 calories from fats and oils; 194 calories from grains (mostly refined); 58 calories from sweeteners; 28 calories from meat; 28 calories from fruits and vegetables; and 18 calories from dairy fats though there was a 3 calorie reduction in dairy products (USDA, 2010). These increases demonstrate an imbalance from dietary guidelines that the USDA recommends, particularly for meats and grains which are being consumed well above dietary guidelines (USDA, 2010).

Food availability has been steadily increasing over the past thirty years though it has not influenced how many fruits and vegetables we eat (USDA, 2010). According to Wells and Buzby (2008) and their report “Dietary Assessment of Major Trends in U.S. Food Consumption”, Americans are consuming too many foods and beverages that are high in fat and carbohydrates and not enough nutrient dense foods and beverages such as milk products, fruits and vegetables.

Currently, women of childbearing age in the United States do not meet Dietary Guidelines for Americans as reported by The Department of Health and Human Services (2003). Women 20-39 have nutritional intake rates at 23% for fruit, 43% for vegetables, and 5% for whole grains for their daily intake, which provides many micronutrients
needed for good health (Bodnar & Wisner, 2005). In contrast the intake of high-fat desserts, high-fat salty snacks, and highly processed grain products has steadily increased over the past 25 years, regularly exceeding recommended intake levels (Bodnar & Wisner, 2005).

**Dietary Patterns**

To date most of the research on diet and mental illness has been conducted on individual food groups or nutrients. Yet, some suggest a more complex interaction among nutrients in our daily diets that would warrant us to consider examining our overall dietary intake (Jacka et al., 2010).

Recent studies are appearing that compare and contrast the benefits of certain dietary patterns. Akbaraly et al. (2009) set out to examine the association between certain dietary patterns and depression using an overall diet approach. The study included 3486 middle aged participants with a mean age of 55.6 that followed one of two dietary patterns: ‘whole food’ (heavily loaded with vegetables, fruits, and fish) and ‘processed food’ (heavily loaded with sweetened desserts, fried food, processed meat, refined grains and high-fat diary products). Akbaraly et al. (2009) found that the whole foods pattern was associated with lower rates of subsequent CES-D depression while the processed food pattern was associated with higher odds of CES-D depression.

Recently, attention to the Mediterranean diet and its association with better health is gaining attention around the world (Trichopoulou & Vasilopoulou, 2000) The Mediterranean diet is comprised of eight components: (1) high monosaturated-to-saturated fat ratio, (2) moderate ethanol consumption, (3) high consumption of legumes,
(4) high consumption of cereals (including bread), (5) high consumption of fruits, (6) high consumption of vegetables, (7) low consumption of meat and meat products, and (8) moderate consumption of milk and dairy products (Trichopoulou and Vasilopoulou, 2000). The Mediterranean diet might include various wild greens which provides a very high quality flavonoid that is consider the most important category of antioxidants in the human diet (Trichopoulou & Vasilopoulou, 2000). In addition, fish consumption is very high in this diet with a rate of 5-6 servings a week while meat consumption is 4 servings a month (Trichopoulou & Vasilopoulou, 2000).

A recent effort to systematically examine all cohort studies that have analyzed the relationship between the adherence of the Mediterranean diet with mortality rates and chronic illness was conducted with a total sample size of 1,574,299 subjects. The study concluded that overall health status was improved on a Mediterranean diet with a reduction in mortality (9%), mortality from cardiovascular diseases (9%), incidence of or mortality from cancer (6%), and incidence of Parkinson’s disease and Alzheimer’s disease (13%) (Sofi, Cesari, Abbate, Gensini, & Casini, 2008). Other mental illness symptoms have been used to address diet influence.

A study assessing women with depression and anxiety was conducted to determine how their diet may influence their symptoms. The study was conducted in Australia and included 1,046 randomly selected women ages 20-93. The dietary behaviors were identified as “traditional” which included vegetables, fruit, meat, fish, and whole grains, and a ‘western diet’ is identified as processed or fried foods, refined grains, sugar products and beer. The results of the study concluded that a traditional diet was
associated with a 35% reduction rate for major depression or dysthymia and a 32% reduction in anxiety disorders (Jacka et al., 2010).

**Interventions**

Possible intervention strategies are being identified in the healthcare setting that may assist those who suffer with a mental health condition or as a preventive measure against mental illnesses. Wilkinson and Himstedt (2008) illustrate a model of nutrition and dietetic care for mental health patients through the collaboration with case managers that may assist in improved quality of life, reduced public health burden and improved financial impact on the healthcare system. The team created a Web-based resource that would extend nutritional care to mental health patients by non-nutritional professionals. The web-based resource could be used by case managers as a triaging tool for further dietetic services or it could be used as a decision making tool linking clients to action-based resources (Wilkinson & Himstedt, 2008).

Researchers from Japan have identified policies that would improve healthcare without increasing the already rising cost of healthcare in Japan. Ishihara, Kame, and Babazono (2008) conducted a study examining a lifestyle intervention program and its effect on mental health with 46 men and 64 women. These participants were randomly selected to participate in either a patient-motivated health promotion program that consisted of a support team of qualified dieticians, exercise instructors and public health nurses who encouraged participants to set goals and make lifestyle improvements or a conventional support group that received a health exam and leaflets on how to make lifestyle improvements. The study concluded that the groups who went from good
mental health before the intervention to good mental health after the intervention and the group who went from poor mental health to good mental health show reduced outpatient medical visits compared to the group with poor mental health before and after the intervention (Ishihara, Kame, and Babazono, 2008). Policies may be an effective intervention compared with the interventions that have major side effects.

One of the major side effects of taking antipsychotic medication is the tendency for weight gain, as mentioned earlier (Harbottle & Schonfelder, 2008). A recent study examined the effects on nutritional interventions on body weight and composition of patients taking the antipsychotic drug olanzapine. The study evaluated 82 people with a severe mental illness who were taking olanzapine and 58 healthy controls. A nutritional program was specifically designed for each participant. Both groups showed a significant reduction in body weight and body mass index though the group taking olanzapine showed a less significant reduction in waist circumference (Skouroliakou, Giannopoulou, Kostara, & Hannon, 2008). These intervention strategies are showing significant results yet guidelines for future studies are necessary.

**Future Studies**

Nutrition and its influence on mental health is gaining speed around the world as the rate of people suffering from mental health issues continues to increase. Interests in how nutrition affects cognitive functioning has created a taskforce in the European Committee called PASSCLAIM (Process for the Assessment of Scientific Support for Claims on Foods), which has set out to appraise existing scientific study that may show evidence that nutrition influences a person’s mental state and performance.
(Westernhoefer et al., 2004). One difficulty many studies experience is proving conclusively that nutrition has an impact on mental functioning.

PASSCLAIM has compiled a summary report from a workshop held in 2009 with over 70 experts from industry, academia, and public bodies to discuss guidelines to establish the beneficial effects of food. The report gives guidelines for future research that will help to substantiate the benefit of certain foods. PASSCLAIM would like to standardize the approach to proving the efficacy of food by identifying important components for the design of the study, the selection of markers, providing guidelines after the study, and defining terms (International Life Sciences Institute, 2009).

**Summary**

The evidence that connects food and mental health wellbeing is lacking. Ample evidence is available to support the importance of certain nutrients on cognitive functioning (Gomez-Pinilia, 2008; Bourre, 2006; Morris et al., 2003; Harbottle & Schonfelder, 2008) yet the evidence to support the impact of individual foods or food combinations on mental health is limited (Sarlio-Lahteenkorva et al., 2003; Sathyanarayana et al., 2008; Peet, 2004; Wells et al., 1997). Certain nutrients have been linked to cognitive decline and certain foods could provide those nutrients (Bourre, 2006; Gesch et al, 2002; Greenwood & Winocur, 2005), yet not enough research has been done to support this claim. The association between whole food diets, like the Mediterranean diet, have shown a substantial reduction in people who suffer from Alzheimer’s, a cognitive impairment (Akbaraly et al., 2009; Trichopoulou & Vasilopoulou, 2000; Sofi
et al., 2008). The Mediterranean diet is high in nutrient dense foods, nutrients that are missing in many people who suffer from a mental illness.

The research that has been done on supplementation of vitamins, nutrients and fatty acids is inconclusive (Sinn et al., 2010; Bourre, 2006; Harbottle & Schonfelder, 2008). These studies are conducted with various methods and small populations that make it difficult to determine actual results (Sinn et al., 2010; Bourre, 2006; Harbottle & Schonfelder, 2008). The data does indicate that we need guidelines that will improve future clinical trials in this area. Interventions are few, further thought needs to be given to appropriate approaches for implementing supplementation or diet changes for people who are suffering from a mental illness or as a preventative measure against symptoms.

The purpose of this study is to explore clinician perspectives on the possible affect food choices may have on a person’s mental health. I have chosen to use LCSW’s, Ph.d’s, PsychD’s and MFT’s who have experience doing psychotherapy with people who suffer from mental illness. The experience and knowledge these clinicians provide will greatly contribute to the literature that is currently available on how food choices affect mental health.

Clinicians can provide the unique knowledge of having one on one experience over many years with people suffering from mental illness. This data can provide insight to interventions that have been effective for clinicians, giving us further cause to explore for evidence based interventions which appear to be lacking in this subject. Also, based on a clinicians experience they can substantiate the need for more information on the subject or the irrelevance of the topic in the field of mental health.
In addition, data will be collected about clinician food choices, their family of origin food choices and their clinical approach with clients and food choices.
Chapter 3

METHODOLOGY

Introduction

In this chapter, I will explain the methodology used in this research project. First, I will present the design and the reason for choosing this specific design for this project. Next, I will explain my sampling procedure for this project and how data was collected from the participants in the study. Finally, I will conclude the chapter with a description of the data analysis and how the protection of human subjects was achieved.

Design

In order to evaluate the clinician’s perspectives on the effects that food choices have on mental health, I will use an exploratory design process. According to Rubin and Babbie (2005) an exploratory study is used to examine a relatively new or understudied subject, allowing the researcher to determine the feasibility and necessity of a more in depth study. There is little data available on the effects that food choices have on mental health, more information is needed to determine if food choices are a variable in mental health. Exploratory studies are essential to social work research because of their ability to break new ground and bring new insights into the field.

Variables

A qualitative study does not necessarily use variables or a hypothesis but will include topics of interests. The variables or topics of interests for this study include a clinicians approach to assessments and interventions, with regards to food choices with clients suffering from mental illness. Participants will identify, based on their experience with
mental health, any effects food choices may have on mental health. Each participant will be asked in terms of variables their own personal experience with certain types of food both presently and growing up. Finally, participants will identify if they believe this subject needs further study. Also, basic demographics will be identified on each participant.

**Sampling Procedures**

The participants for this study include Licensed Clinical Social Workers, Marriage and Family Therapists, and Doctors of Psychology. These clinicians must have direct practice experience with the mental health population. This type of participant was chosen specifically for their direct practice experience and their knowledge of implementing effective assessments and interventions for mental illnesses. Analysis will be done on the perspectives these direct practitioners have on food choices and mental health. Additional analysis will be done on a clinicians food choices and their family of origin’s food choices. The sample will be collected through a non-random, snowball effect. I will make contact with clinicians that I know, asking them to participate, then request their assistance in making contact with addition clinicians who would be willing to participate. The size of the sample is expected to be approximately 30, depending on the number of willing participants. The researcher will distribute 60 consent forms and questionnaires in order to reach the desired sample size.

**Data Collection**

Participants will be gathered through my personal contacts at my current and past internships at a mental health facility, and personal acquaintances in the mental health
field. I have gained permission from my current manager to solicit the clinicians in the facility but not to incorporate the name of the facility. Contact has been made at my current internship by making direct contact and asking the clinicians if they would be interested in participating or by leaving a package that includes a consent form and questionnaire in the clinician’s mail slot. These participants were asked to return the contents of the package to my mail slot or in some cases to return the contents in a self addressed stamped envelope to my home. Personal acquaintances were contacted by phone or email requesting their participation and the participation of their personal contacts that might be interested in participating. These personal contacts were given a packet that included a consent form, a questionnaire and a self addressed stamped envelope.

**Instruments**

This research project used a questionnaire as the instrument for gathering data. This instrument was designed by the researcher in order to retrieve specific data from the participants that pertained to the study. The questionnaire contained 24 open and closed ended questions. The questionnaire requested eight demographics, remaining questions addressed the clinician’s perspectives on the effects that food choices have on mental health, their own personal food choices and that of their family of origin, and their assessment and intervention strategies that may relate to food choices. See Appendix for copy of the questionnaire.
Internal validity may be limited if participants misinterpret the questions being asked and/or if the researcher misinterprets the participant’s responses to open ended questions.

**Data Analysis/Organizing Principles**

The method for analysis for an exploratory study that is qualitative in nature is to identify patterns, themes or common categories from the received data. Then through a simple content analysis, transforming qualitative material into quantitative data by coding will allow for analysis. When the data is coded it will be input into a data processing program called PASW where I will identify frequencies and correlations from the data.

**Human Subjects Approval**

This study is being conducted with adherence to the guidelines that are posed under the University Guidelines for Protection of Human Subjects. Voluntary participation was insured through the use of a signed consent form, given to all participants explaining the details of the study. The consent informed participants that they could decline to participate at any time without consequences. The participants were informed of the approximate time needed to complete the form and were given contact numbers for the project’s researcher and their advisor. If the situation arose that a participant needed to process any feelings arising from participating in the study, they were given a resource within the consent form. Participants were informed of the importance of this project to social work literature in regards to the possible effects that
food choices have on mental health. There were no incentives given for their participation.

This project has been submitted and approved by the Committee for the Protection of Human Subjects at California State University, Sacramento. The risk for this project has been identified and approved as a ‘low risk’ study. In order to insure anonymity the consent forms are separated from the questionnaires when they were received. The participants were asked to refrain from using any identifying information on the questionnaire in order to maintain their anonymity. The consent forms and questionnaires will be stored in a locked safe in my house that only I will have access to. See Appendix for voluntary consent form.

Summary

This chapter has described the methods used in this study and the purpose for choosing qualitative exploratory design. The participants and instrument used to collect data were described in detail. Descriptions of the variables or topics were outlined and how this data was processed and analyzed were presented. Finally, a section on how the application for the Protection of Human Subjects was submitted and approved, additional information was provided on how protection for human subjects was maintained throughout the project.
Chapter 4

ANALYSIS OF THE DATA

Introduction

The main purpose of this study was to explore clinician perspectives on the possible affect food choices may have on a person’s health. Clinicians provide the unique knowledge of having one on one experience over many years with people suffering from mental illness. This data can provide insight to interventions that have been effective for clinicians, giving us further cause to explore for evidence based interventions which appear to be lacking in this subject. Also, based on a clinicians experience they can substantiate the need for more information on the subject or the irrelevance of the topic in the field of mental health. Additionally, the researcher would like to add any useful information to the limited research that has been done on this topic.

The findings for this chapter are demographics of the participants, personal food values, clinical interventions and assessments, and perspectives on current research. In the participant section the demographics of the participants is discussed. The findings from the questionnaires regarding personal food values will include clinician’s perspectives on how food choices affect mental health, identifying primary food groups clinicians ate while growing up and primary food groups they eat now, a 24 hour personal food log, and perspectives on foods that negatively and positively affect mental health. Clinical interventions and assessments will identify when or if clinicians incorporate food choices in their interventions or assessments. Current research will address clinician’s perspectives on the amount of research available on the food choices and mental health,
also it will include clinician perspectives on the effect exercise may have on mental health.

**Participants**

The participants who completed the questionnaire were all LCSW’s, MFT’s, PH.D’s or Psy.D’s in direct practice with people who have a mental illness. There was a total of sixty questionnaires given out, with thirty-three returned. Of the thirty-three questionnaires returned, thirty-three were answered regarding gender with thirty-nine percent being male and sixty percent being female. The ethnicity of the participants were eighty-eight percent Caucasian, three percent Hispanic, three percent Asian and six percent other, which was not specified, all questionnaires for this demographic were answered. The title of the participants comprised of forty-nine percent LCSW’s, thirty percent PH.D or Psy.D’s and eighteen percent MFT’s. The number of years in practice for participants range from one to forty years of experience. The marital status of clinicians comprised of seventy-three percent people who were married or in a domestic partnership, twenty-one percent were separated, divorced or a widower, three percent were single and three percent stated other. The age range for participants was between twenty-seven and seventy-two years old. Fifteen percent of participants identified their income level as low when they were a child, seventy-dix percent identified with being middle income, and nine percent identified with being high income. As adults, eight-five percent participants identified with being middle income and twelve percent identified with being high income, none of the participants identified with being low income.
Table 1

Demographics of study participants (N=33)

<table>
<thead>
<tr>
<th>Gender:</th>
<th>Female</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>13</td>
</tr>
<tr>
<td>Race:</td>
<td>Caucasian/White</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>2</td>
</tr>
<tr>
<td>Title:</td>
<td>LCSW</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>PH.D or Psy.D</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>MFT</td>
<td>6</td>
</tr>
<tr>
<td>Marital Status:</td>
<td>Married/Domestic Partnership</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Separated/Divorce/Widower</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td>Years in Practice</td>
<td>1-5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>6-10</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>11-15</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>16-20</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>21-25</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>26-30</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>31 and over</td>
<td>4</td>
</tr>
</tbody>
</table>
Personal Food Values

Participants were given three sets of questions, the first set of questions pertained to the clinicians personal food values, the second set of questions pertained to the clinicians perspective on current research, and the third set of questions pertained to the clinicians experience with incorporating food choices in their assessments and/or interventions with clients who have a mental illness.

Participants were asked to rank their top three food choices growing up, then rank the top three food choices they make now as adults. Thirty-three percent of participants identified refined grains products as a type of food that was eaten most often as a child versus forty-five and a half percent identified fruits and vegetables eaten most often as an adult. The second most common food eaten as a child was fruits and vegetables at thirty-six percent of participants versus thirty percent for fruits and vegetables, and animal protein as an adult. The third most common food eaten as a child was animal protein at thirty-three percent versus twenty-four percent as an adult.

Participants were asked to identify how many times they ate particular foods. Thirty two out of the thirty three participants took in fruits and vegetables, four had sodas, twenty-six had caffeine, twenty-eight had animal protein, ten had soy, twenty-six had whole grains, seventeen had refined grains, eight had vegetable oil, sixteen had olive oil, seventeen had butter, twenty-five had nuts, two had beer or wine, three had liquor, twenty-six had sweets, twenty-eight had dairy and four had fish.

Participants were asked to identify foods that they believe to negatively and positively affect a person’s mental health. Participants identified twenty-one food items
they believe to have a negative impact on a person’s mental health: forty-two percent of participants identified alcohol; seventy-three percent sugars; forty-nine percent caffeine; twenty-seven percent fats; eighteen percent fast food; sweeteners, salt, process foods were identified nine percent of the participants; trans fats, fried food, carbohydrates, and junk food two times; insecticides, saturated fats, high fructose corn syrup, too much beef, soda, lack of protein, genetically modified organisms, too much dairy, and anything in excess by three percent of the participants. Participants identified nineteen food items they believe to positively impact a person’s mental health: fruits were identified by sixty-one percent of participants; vegetables by seventy percent; protein by forty-nine percent; whole grains by forty-six percent; nuts by eighteen percent; fish by twelve percent; water, Omega 3’s, olive oil, and lean by six percent; and low-calorie protein, moderate alcohol use, fiber, fat, organic foods, green tea, meat, moderate caffeine use and plant protein by three percent.
Table 2

*Negative and positive foods*

<table>
<thead>
<tr>
<th>Food that negatively impact mental health</th>
<th>Alcohol</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sugars</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Caffeine</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Fats</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Fast food</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Artificial sweeteners, salt, processed foods</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Transfats, fried foods, carbohydrates, junk food</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Insecticides, saturated fats, high fructose corn syrup, too much beef, soda, lack of protein, GMO’s, anything in excess,</td>
<td>1</td>
</tr>
<tr>
<td>Foods that positively affect mental health</td>
<td>Fruits</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Vegetables</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Protein</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Whole grain</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Nuts</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Water, Omega 3’s, olive oil, lean meats</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Plant protein, moderate use of caffeine, meat, green tea, organic foods, fiber, moderate alcohol use, low cal protein</td>
<td>1</td>
</tr>
</tbody>
</table>
Finally, participants were asked how important food choices are to them and whether or not they believe food choices affect mental health. Forty-nine percent of the participants identified that food choices were very important to them, thirty-nine identified that they were important, nine percent identified that they were average, and three percent participant identified that they were slightly important. All the participants felt that food affects a person’s mental health.

Table 3

<table>
<thead>
<tr>
<th>How Important Are Food Choices</th>
<th>Slightly Important</th>
<th>Average</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>3%</td>
<td>9%</td>
<td>39%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Assessments and Interventions

Eighty-four percent of participants asked their clients about their food choices during their assessment. Participants were asked why they would or would not ask questions during the assessment in regards to food choices and participants responded that they “only asked questions when necessary”, “to gain an overall picture”, “overall wellness assessment”, “indicator for self care habits”, “general eating habits as it relates to persons health and self care habits” and “to treat the whole person”. Clinicians would
ask questions when they pertained to diagnosing particular disorders such as Autistic Spectrum Disorders, Eating Disorder, Anxiety Disorders or Mood Disorders, stating they use those questions “if relevant to presenting problem”. Additionally, clinicians indicated that they ask about food choices in their assessment when their client had a physical health condition such as “diabetes”, “constipation”, or “headaches”. Some clinicians ask question because of the link between food choices and its effect on a person’s mental health, stating “diet controls body functions and mood”, “because of the mood-food connection”, and “clinically relevant as an effect on mood”. Others stated that they do not talk about food choices in their assessment because of “time constraints” and “lack of time”.

Seventy-three percent of participants discussed food choices as part of their intervention. Participants were asked if there is ever a time when they discuss food choices and ninety-seven percent said they did. Clinicians responded that they discussed food choices as an intervention by encouraging clients to “eat fruit, vegetables, and protein”, “eat three meals a day”, “eat a balanced diet”, and “refer to agencies healthy eating program”. Some clinicians responded that they only incorporate food choices in an interventions when it pertains to a particular clinical issue, stating they only ask with “alcohol and drug assessment”, “only with autistic children”, and “discuss food choices for clients with weight/health issues or depression interested in non-medical interventions”. Others stated it “not a part of regular planning”.
Research

Participants were asked if they had ever read any literature that discussed food choices and mental health, fifty-seven percent said they had read this type of literature and thirty-nine percent said no and three percent did not respond to the question. Sixty-nine percent of participants believed there was “not enough” research that discussed food choices and mental health while twenty-four percent thought there was “just enough”.

One hundred percent of participants agreed that exercise affects mental health and that they believe research literature supports exercise being positively correlated with mental health. Only three percent said they do not suggest exercise when a client is struggling with their mental health.
Chapter 5
SUMMARY AND CONCLUSIONS

Summary

The purpose of this chapter is to discuss the key findings in this study. This study explored how Licensed Clinical Social Workers (LCSW), Marriage and Family Therapists (MFT), and Doctors of Psychology (PH.D or Psy.D) perceive food choices and how these perceptions influence their assessments and/or interventions with clients. Additionally, the study explored the relationship clinicians have between food choices from their family of origin and their current food choices as adults. At the time of this project, the researcher was unable to identify any research that specifically targeted clinical perspectives on food choices and mental health.

Using a self designed questionnaire, data was collected from thirty-three mental health practitioners. Frequency analysis was used to evaluate the data received. Clinicians were asked demographic questions, primarily to identify diversity among the participants. The findings of the study revealed that mental health clinician’s believe food choices affect mental health. The majority of clinicians identified that food choices are “very important” to them and made healthy food choices in their diets. Clinician’s personal food choices as adults were different from ones they made as children. The personal food choices clinicians make as adults reflects their perspectives on food that negatively and positively affects a person’s mental health. Clinicians primarily chose foods they identified as having a positive impact on a person’s mental health.
The majority of clinicians incorporated food choices into their assessments and interventions while working with clients who have a mental illness. Clinicians incorporated broad questions about food choices to assess a client's overall health and level of self-care. Clinicians incorporated some interventions concerning food choices, using broad statements of encouragement to improve their diet.

The personal food choices clinicians make and the value they have regarding food choices further supports their belief that food choices affect mental health.

**Personal Food Values**

A larger number, thirty-three percent, of clinicians identified the first most often consumed category of food being refined grain products as a child versus the consumption of fruits and vegetables as an adult. The second, thirty-six percent, most common food category of food consumed as a child was fruits and vegetables, as it was for clinicians as adults. Lastly, animal protein was the third most common food category eaten as a child for clinicians, as it was when they were adults. The first most often food category eaten as an adult reflects a big change from the primary food eaten as children. Fruits and vegetables represent a whole food that is consumed in a manner that is closely related to its original form, whereas refined grain products have been manipulated and altered from their original structure. This change in food choices can be correlated with a clinician’s belief that food choices affect mental health. Concluding that if people believe that a particular food benefits their mental health they are more likely to consume it.
Clinicians made personal food choices that reflected the foods they identified as positively affecting a person’s mental health. For instance, sixty percent of clinicians identified vegetables as having a positive effect on mental health. Eighteen percent identified fast food and nine percent identified artificial sweeteners, salt and processed foods as negatively impacting a person’s mental health. Clinicians primarily ate refined grain products as children, which are found to make up fast food and processed foods. Therefore, the food choices clinicians make may reflect their belief that food choices affect mental health.

Although, clinicians consumed two food items that they identified as having a negative impact on a person’s mental health. Twenty-six of the thirty-three participants responded that they consume caffeine and sugar, while forty-nine percent identified caffeine and seventy-three percent identified sugar as having a negative impact on mental health. There are many conclusions that one can make from this information, one being that caffeine and sugars need further investigation about why people consume them despite believing that they will affect them in a negative way. The amount of each of these items was not asked which would be helpful in deducing the amounts that people believe create a negative impact. For instance consuming one cup of coffee versus multiple cups might have a greater impact on a person’s mental health.

Almost half of the participants felt that food choices were very important in their life. All of the clinicians identified that food choices were of some importance in their life. Clinicians who have worked with mentally ill clients for many years believe that food plays a part in a person’s mental health and therefore requires a closer look.
Clinician’s predominately made food choices that were considered healthy food choices in the literature review for this project. The Mediterranean diet pyramid recommended eating mostly fruits, vegetables, whole grains and fish (Trichopoulou and Vasilopoulou, 2000). The one item that stands out predominately as lacking in awareness is fish and/or fish oil. Only four clinicians identified fish as having a positive affect on mental health where the literature reflects a strong correlation between fish intake and mental health beyond other food choices (Weissman et al, 1996; Noaghiul & Hibbeln, 2003; Harbottle & Schonfelder, 2008).

These clinical perspectives provide the unique opportunity to identify techniques mental health professionals use for themselves and for their clients, creating a more comprehensive body of knowledge in mental health research. Assessments and interventions clinicians use when working with mentally ill clients provides additional insight to techniques that clinicians have identified as being effective with their mentally ill clients.

**Assessments and Interventions**

The findings support that clinicians believe food choices affect mental health. Seventy-two percent of the clinicians discussed food choice with their clients. Clinicians discussed interventions with clients not as a routine but when it seemed appropriate. Some clinicians identified time as a barrier in providing this type of assessment, while other clinicians stated that food choices may not be relevant to all their clients, therefore they would not incorporate food choices when working with them. Further support from
research is needed; otherwise food choices may continue to be overlooked as an important part to a comprehensive assessment and intervention with mentally ill clients.

Clinicians did identify the importance of eating regular and balanced meals to their clients, supposing that a balanced meal would reflect their beliefs about foods that positively and negatively affect mental health. Clinician’s selected a variety of food categories when identifying the foods they consumed within twenty-four hours, reflecting their beliefs about eating balanced meals. Clinicians appear to practice consuming balanced meals and consuming foods that positively affect their own mental health.

Clinician’s who incorporated food choices into their interventions would do so with specific disorders. These clinicians used food choice interventions when working with particular disorders such as Eating Disorders, Anxiety Disorders, and Mood Disorders.

**Limitations**

It would have been beneficial to know the method of statistics used for this project prior to the development of the questionnaire. The survey was developed in an attempt to explore the subject in general and the questions were formed out of curiosity. The completion of the research, the foreknowledge of the process and response to the questionnaire, the research would be approached differently. In particular, questions about a clinician’s specialty or predominant population they work with would be asked in order to avoid or denote when a person works with mental disorders that involve food such as Eating Disorders and Autistic Spectrum Disorders. Doing so would be a better representation of the general population of clinicians.
A larger demographic area in regards to race and practice settings would have provided a better representation of the larger population of clinicians. The years of experience clinicians had was diverse, with some having just a few years experience and others having twenty or more years. It is not assumed that clinicians with more years of experience necessarily having more knowledge on this topic than those with less clinical experience. Clinical titles were all well represented giving a balance among clinicians who practice in this field.

Implications for Social Work

There is a unique opportunity with this project and the use of additional research literature in identifying the connection between food choices and mental health. The evidence is not conclusive but these findings suggest the need for further research on the topic. The social work field has an opportunity to benefit from this research given the populations social workers primarily work with. Social workers predominately work with lower income populations who commonly have very few food choices available. For instance, homeless and low-income populations often rely on donated food, which further reduces their food choices. Food donation sites and the preference of many homeless persons for foods that can be stored without refrigeration, limits food choices again. Foods that require no refrigeration and offer a long shelf life are predominately refined grain items, processed food and sweets. The clinicians of this study have identified these foods as having a negative effect on a person’s mental health further implicating another barrier to an underserved population.
The foods clinicians identified as having a positive effect on a person’s mental health such as vegetables, fruit and protein need refrigeration and preparation. In addition, these foods are often more expensive than processed foods. The practical needs of the homeless as well as the financial restraints of the homeless and low-income populations, creates a barrier to making healthy food choices.

The homeless and low-income populations suffer from mental illness, as does the general population; with research that identifies the connection between food choices and mental health, another barrier to underserved populations is identified.

**Implications for Policy**

The development of policies that support access to mental health service will enable and support for future studies on the topic of food choices and mental health. Specifically, if our health care system is invested in reducing mental illness then they will be more likely to invest in research related to this topic. Federal policies that support health care services through Medi-Cal and Medicare have the opportunity to develop policies that encourage health care providers to provide and support recipients with not just treatment but education on preventative measures.

Possible policy interventions strategies have been identified in the healthcare setting that may assist those who suffer with a mental health condition or as a preventive measure against mental illnesses. Wilkinson and Himstedt (2008) illustrate a model of nutrition and dietetic care for mental health patients through the collaboration with case managers that may assist in improved quality of life, reduced public health burden and improved financial impact on the healthcare system. The team created a Web-based
resource that would extend nutritional care to mental health patients by non-nutritional professionals. The web-based resource could be used by case managers as a triaging tool for further dietetic services or it could be used as a decision making tool linking clients to action-based resources (Wilkinson & Himstedt, 2008).

Policy directly related to food choices and mental health could dramatically change the incidences of physical and mental health illnesses. Policies that encourage, educate and create access to healthy food choices will enable the population to change their physical mental health outcomes. The creation of policies that restrict the use of processed foods and encourage the use of fresh fruits and vegetables will further this outcome.

Policy changes in health care benefits and food stamp benefits would contribute to healthy changes among low-income populations. Health care benefits could incorporate educational material on healthy diet changes while food stamp benefits could give incentives for purchasing more fruits, vegetables, and healthy proteins.

Current programs could be expanded with the development of policies, including donations from local farms, utilizing unused fruit trees, and the development of urban farming. These types of programs encourage healthy eating and accessibility for those with restricted incomes.

Policy is the cornerstone to change, change happens when policy is act work. Policy is needed to support those who suffer with a mental illness, encouraging and educating them to make healthy food choice that may affect their mental health.
Conclusion

This study revealed that clinicians who work with mentally ill clients believe food choices affect mental health. Clinicians discussed food choices with their clients and incorporated their beliefs in their own food choices.

If food affects a person’s mental health the implications are vast and the continued exploration of this research question is necessary. Food is a component of every human being’s life and we must be aware of how different components may affect our mental health. Wider spread, more in-depth, longitudinal research related to mental illness and food choices are necessary.

I have only been working on this project for eleven months yet with what I know I continue to struggle to make healthy food choices with the wide availability of quick, cheap, and unhealthy food options available. The food culture in the United States is saturated with sugars, refined grains products and unhealthy fats. If we are not proactive in identifying the impact food has on our mental health we may find ourselves backpedaling from serious mental health conditions. The literature on the subject of how food choices affect mental health was very limited and lacked method consistency (Sinn et al., 2010; Bourre, 2006; Harbottle & Schonfelder, 2008). Without consistency the question, “do food choices affect mental health?” will never be answered. I am hopeful that this question will continue to be explored with more consistency in the future so clinicians have the opportunity to incorporate research based interventions that may reduce symptoms of mental illness.
APPENDICES
APPENDIX A

Survey

Please circle or fill in the correct response

1. Gender: Male Female

2. Age:_____

3. Ethnic/Racial Origin
   1. Caucasian/White
   2. African American
   3. Hispanic
   4. Asian
   5. Other

4. How do you identify yourself (circle more than one if necessary)
   1. LCSW
   2. PH.D or Psy. D
   3. MFT

5. How many years in direct practice?
   ________

6. Marital Status
   1. Married/Domestic Partnership
   2. Separated/Divorced/Widower
   3. Single (never married)
   4. Other _________

7. What would you term your economic status growing up?
   1. Low income
   2. Middle Income
   3. High income
8. Identify your current economic status
   1. Low income
   2. Middle Income
   3. High income

9. Rank the top three foods you ate growing up, 1 being the most often.
   Fruits and Vegetables_______
   Soda________
   Caffeinated drinks_______
   Animal
   Protein_______
   Fish_______
   Soy_______
   Whole grain products_______
   Refined grain products_______
   Butter or other fats_______
   Nuts_______
   Beer/wine_______
   Liquor_______
   Sweets_______
   Dairy_______

10. Rank the top three food choices you make now, 1 being the most often.
    Fruits and Vegetables_______
    Soda________
    Caffeinated drinks_______
    Animal
    Protein_______
    Fish_______
    Soy_______
    Whole grain products_______
    Refined grain products_______
    Butter or other fats_______
    Nuts_______
    Beer/wine_______
    Liquor_______
    Sweets_______
    Dairy_______

11. How important are food choices to you?
    
    1  2  3  4  5
    Not important  Slightly important  Average  Important  Very Important
12. In the last 24 hours, how many times did you consume the following items?
   Fruits and Vegetables_______
   Soda________
   Caffeinated drinks_______
   Animal
   Protein_______
   Fish_______
   Soy_______
   Whole grain products_______
   Refined grain products_______
   Vegetable Oils_______
   Olive oil_______
   Butter or other fats________
   Nuts_______
   Beer/wine_______
   Liquor________
   Sweets________
   Dairy________
   Supplements (please specify)

   ________________________________________________________________

   ________________________________________________________________

13. Check the boxes that have a label you look for when you purchase your food.
   No hydrogenated oils/ Trans Fats_______
   No corn syrup added_______
   Enriched________
   No hormones_______
   No Fat_______
   Baked_______
   Fried_______
   All Natural_______
   Vitamin enriched_______
   White meat_______
   Fiber enriched_______
   Organic_______
   Whole grains_______
   Raw_______
   Saturated Fat_______
   Made from concentrate_______
   Previously Frozen_______
   Local_______
   From Mexico_______
   No rBST_______
   Sweetened w/ juice_______
   Light/Lean_______
   White flour_______
14. Do you believe food choices can influence a person’s mental health?

   1. Yes
   2. No

   If yes, what types of foods do you believe would negatively impact a person’s mental health?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   ____________

   If yes, what types of foods do you believe would positively impact a person’s mental health?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   ____________

15. During your assessment of a client, do you ask any questions about food choices?

   1. Yes
   2. No

   Why or why not?
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
16. When planning an intervention for a client with a mental illness do you discuss their food choices?

1. Yes
2. No

If you answered “yes”, describe your approach
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

17. Is there ever a time when you discuss food choices/diet with a client?

1. Yes
2. No

If yes explain:
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

18. What types of questions have you asked clients regarding food habits in the past?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

19. Have you read any literature that discusses food choices and mental health?

1. Yes
2. No
20. How do you view the amount of research on food choices and its relationship to mental health?

1. Not enough research
2. Just enough research
3. Too much research
4. This subject does not need to be researched

21. Do you believe exercising regularly is important to a person’s mental health?

1. Yes
2. No

22. Have you ever suggested exercise to a client who is struggling with their mental health?

1. Yes
2. No

23. Do you believe current research supports a positive correlation between exercise and mental health?

1. Yes
2. No

24. Is there anything you would like to add about food choices and mental health?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
APPENDIX B

Consent to Participate in Research

My name is Mia Shepherd and I am in my second year at California, State University of Sacramento (CSUS) in the graduate program of Social Work. I have a great interest in mental health and am interested in Licensed Clinical Social Work.

As a second year student I am conducting an exploratory study for my thesis on the perspective clinicians have on the affect that food choices may have on a person’s mental health. The purpose of this study is to evaluate the level of concern clinicians have on the subject and how it influences their assessments and/or interventions with clients. Additionally, I would like to identify any relationship you the clinician may have between the food choices of your family of origin and your current food choices.

I would greatly appreciate your participation in my study. In exploring this issue I have not found a substantial amount of research on the subject. I am interested to know, based on your experience, what you have found in your practice with people suffering from a mental illness. The field of mental health and those who suffer with mental illnesses can greatly benefit from your participation.

There is minimal risk associated with completing this questionnaire. Questions will be asked based on your opinion and direct service experience with clients who have a mental illness. Participation in this study is completely voluntary and refusal to participate will have no consequences. Participation in this study will entail signing this consent form and the completion of the included questionnaire, taking approximately 20 minutes to complete. In order to protect confidentiality, I ask that you refrain from
including your name on the questionnaire. Included in this packet is a stamped envelope with my address that you may use to mail the questionnaire and consent form back to me.

Again, your participation is appreciated. If you have any questions or concerns, please do not hesitate to contact me via email or telephone. My advisor for this project at CSUS is Teiahsha Bankhead, Ph.D, LCSW who may be reached at (xxx)xxx-xxxx if you have any questions or concerns. If for any reason, you are in need of processing any feelings that arise from answering the questionnaire, you can receive support through NASW socialworkchat.org.

Thank you for your time and willingness to participate.

Sincerely,

Mia Shepherd

You may decline to participate at any time without any consequence. Your signature below indicates that you have read the consent form and agree to participate.

_________________________________  _______________
Signature of Participant     Date
REFERENCES


