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A phenomenological study of social workers' meaning of food, mood, and their readiness to adopt dietary interventions with clients who are depressed

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A Phenomenological Study of Social Workers' Meaning of Food, Mood, and Their Readiness to Adopt Dietary Interventions with Clients who are Depressed.

by

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Many contributed to this study. Some inspired. Some provoked. Some provided their lived experience, some shared their wisdom, and others shepherded me when I became lost in the process. I am especially grateful for those who just listened, over, and over, and over as I spent a decade learning, growing, and complaining. My greatest hope is that this study provides a tiny contribution to the body of research that seeks to understand how nutrition may improve the quality of life for those who experience depression.

Abstract

As incidence of depression rises worldwide and treatment effectiveness remains flat, interest grows in developing novel treatments to improve outcomes for those seeking help for depression. Research on diet, nutrition, and depression suggests that food affects mood. The literature addresses how a certain dietary pattern may be incorporated in clinical treatment as a modifiable risk factor with those presenting with depression, but the voices of social workers are absent. Given that social workers are the largest providers of therapeutic services for those experiencing depression, the field has much to contribute to the development and assessment of new, non-pharmaceutical, treatment protocols. This phenomenological inquiry explored how personal, professional, and academic experiences of social workers impact their readiness to include diet and nutrition in their treatment with individuals who are depressed. The intention of this research was to learn from social workers themselves about the challenges they, and the profession, face in including diet and nutrition in their treatment of clients who are depressed. The participants in this research demonstrated a curiosity and willingness to learn more about the role of nutrition in depression. Limited knowledge of modifiable risk, bias, and scope of practice concerns emerged as potential barriers that need to be addressed for participants to include nutrition as a modifiable risk factor with their clients. As barriers to adoption are addressed, and the body of research on dietary patterns known to improve depression outcomes strengthens, those who suffer from depression may have one more option in their journey towards optimal mental health.

Keywords: Depression, Dietary Patterns and Depression, Food and Mood, Diet and Modifiable Risk Factors for Depression

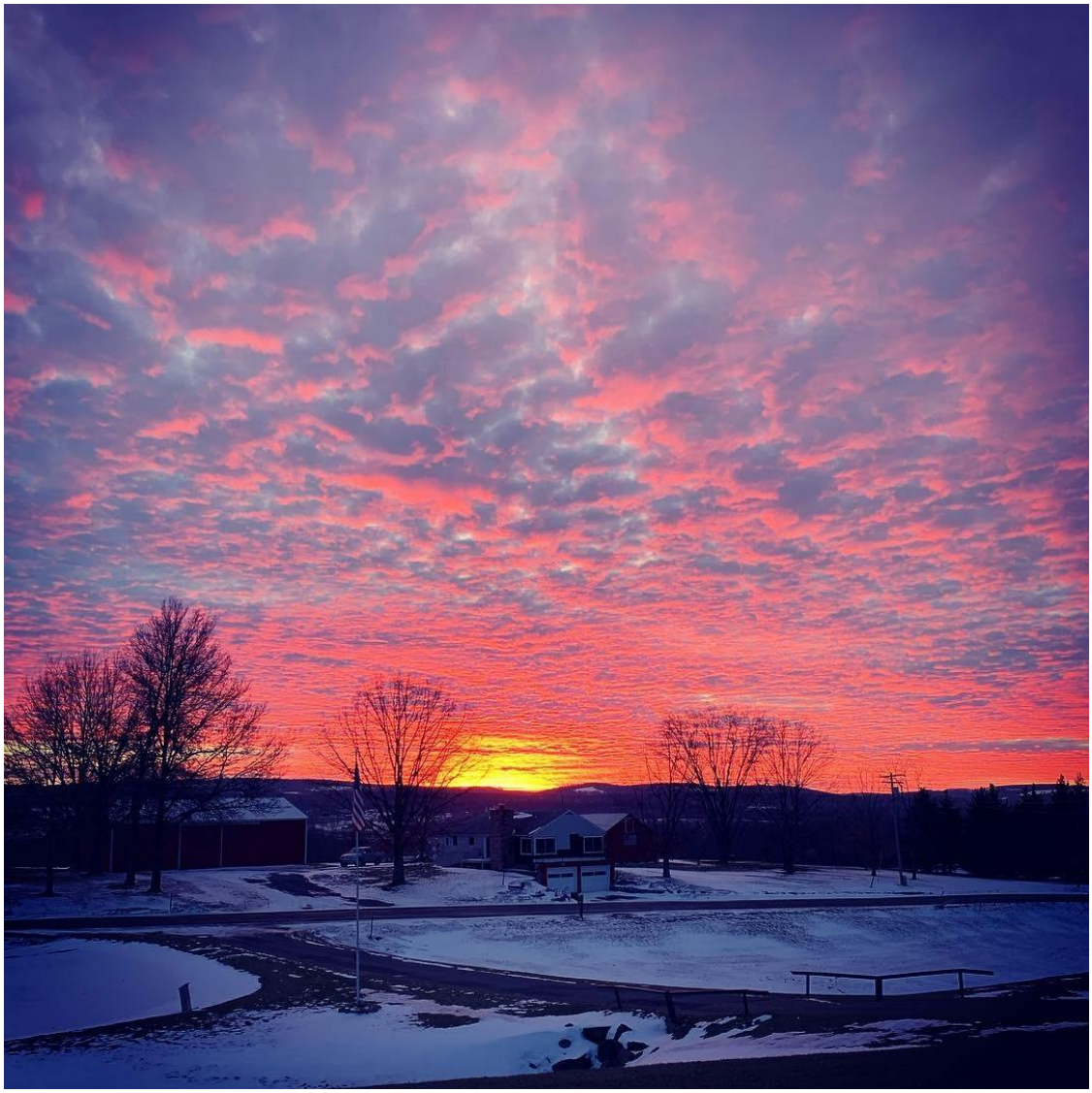
Contents

Preamble

Everyone has a personal journey with food, and some have a professional journey with food too. My personal journey began on a dairy farm in Upstate New York where my parents built our family home in 1970. My maternal and paternal grandparents had adjoining farms. One farm, the dairy, was on the top of Shoemaker Hill overlooking the bucolic Mohawk Valley. The other farm, beef, was just a mile walk through the woods nestled in the valley along Fulmer Creek.

Though now deceased, my two grandmothers remain the most influential people in my life's journey. My Polish grandmother taught me the value of hard work, the importance of doing the right thing, and it was she who taught me how to grow and preserve food. My Italian grandmother taught me what being loved deeply felt like and how I could connect friends and family with food, cooking, and tradition. From kapusta and borscht to cucidati and eggplant parm, my grandmothers shared their recipes and countless cooking lessons born out of their traditions and informed by the Great Depression. This early training at the feet of my family's matriarchs allowed me to learn and pass along our food traditions to my family. Little did I know some of those traditions I loved would come into question later in my journey.

It is no surprise that I built my family's home on the dairy farm next to my grandmother in the “old night pasture.” Customary of family farms, old pastures were often deeded to family members with an expectation of lifelong service to the family and to the land.



The photo above was taken of my grandmother’s home the evening of her death at 94.

I joined my mom on the farm who lived across the road in my childhood home, my aunt and uncle who lived adjacent to me with their children, both of my brothers and their wives and children up the road, and eventually two cousins and their families joined the family farm. It was

there that I would share what I learned with my wife Colleen and two daughters, Audrey, and Anna. We gardened together, made hay every summer with my aunt, uncle, siblings, and cousins, planted an orchard and strawberry bed, preserved a lot of our own food, and raised chickens and Icelandic horses. The reliance on teamwork to accomplish goals became a foundation of my later professional work. I can still see my grandmother atop of the old Ford tractor she called "Big Blue." She advised, "More hands make less work" and "If it's a job worth doing, it's worth doing right – the first time."

Pictured below are my daughters planting a strawberry bed on the left and harvesting cucumbers on the right.

Later, my personal horizons and food journey expanded exponentially when I met my partner, Falayrium (Ty). I was introduced to a whole new cultural tradition - his Cuban-infused, Southern, African American food culture steeped in history - and he gained experience with mine. This was, and continues to be, a culinary and cultural fusion that enriches our relationship. These experiences showed me the powerful role food traditions can play in bringing people of different backgrounds closer together. Meeting Ty, and the positive effect of expanding my

experience of food culture, strengthened my personal motivation for my academic and professional journey.

The photo below was taken on my 50th birthday with my partner, my stepson Alexander, and my two daughters, Anna on the left and Audrey on the right. Missing from the photo is my stepson, Andrew.

Long before I met Ty or imagined a Ph.D., I worked in a family business for ten years as an accountant in a small manufacturing job shop. I believed there had to be something more for me and my future than what the family business had to offer, so I worked to further my education to prepare me for a change (This took me a few extra years to accomplish because I dropped out of high school in 11th grade with the equivalent of a tenth-grade education). After graduating with my master's degree, I was drawn away from the family business and the farm and its wonderful simplicity into the world of non-profit and all its complexity. I learned of a search for the next Executive Director of Cornell Cooperative Extension of Oneida County's Extension Service. My grandparents relied heavily on Extension to teach them conventional

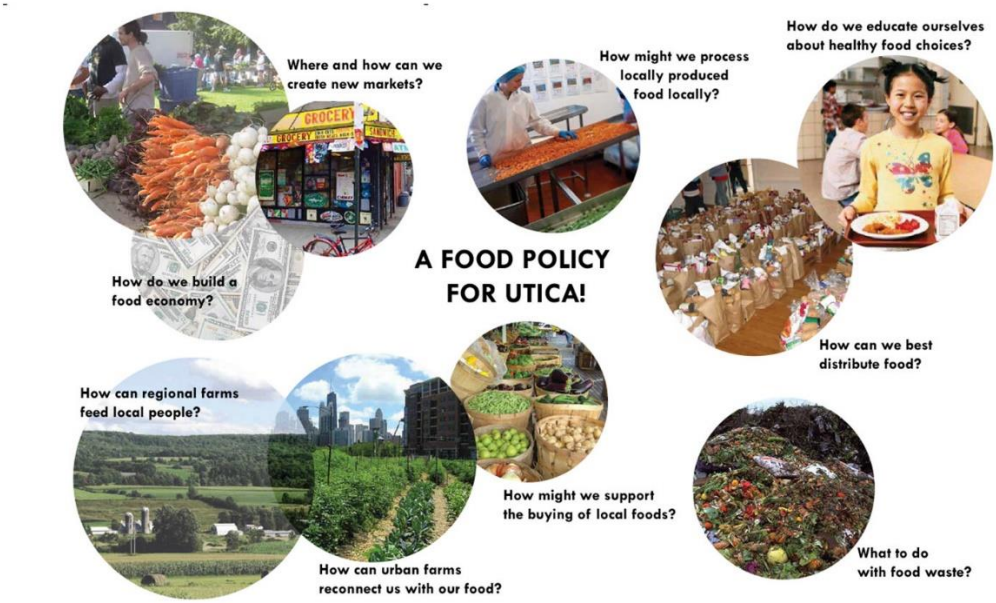
farming practices in the 50's and 60's and I was a 4H'er as a young child, so I knew Extension personally. Still, I could hardly believe that there was a position where I could get paid to work with youth, food, nutrition, farmers, and agriculture. I applied, and at the age of 34 I found myself to be the youngest Extension executive director in New York State. I stayed there ten years and relished the diversity on campus and the connection to learning and ideas. Over that decade, my mind was opening to the possibility of increased outreach through research, education, and service.

It was through Extension that I met Paula Horrigan, a professor at Cornell's School of Landscape Architecture, and a remarkable mentor. She introduced me to participatory action research (PAR), and we worked together to develop Rust to Green Utica (R2G) https://www.rust2greenutica.org/about. Rust to Green is a participatory action research project engaging academic and community partners in collectively identifying problems and needs and the specific steps that can be taken to address them. This project sought to restore ecological integrity and biodiversity in the city of Utica, adjust and localize flows of food, energy, and waste, and provide opportunities to enable cooperative action and ecological stewardship. This was my first experience of using research to contribute more to my community and the turning point of my professional life. I was so inspired by it, I applied to the University at Albany State University of New York's School of Social Welfare to work toward my Ph.D. in Social Work, and I was thrilled to be accepted.

While working for Extension, our team, Cornell faculty, students from Cornell, and other local colleges, and our community formed the first food policy council in New York State called Mohawk Valley Food Action Network or MVFAN (https://www.rust2greenutica.org/food-policy-project). MVFAN was one of many projects that R2G spawned. This community

included our academic partners, students, farmers, policymakers, elected officials, neighbors, friends, and refugees. Refugees were an important component of our work. Utica has the fourth largest refugee resettlement community in the United States and over 40 languages are spoken.

The photo below depicts early conversations with our community.



(*Food Policy Project*, n.d.)

The food culture in Utica is rich with history and diversity of people, cuisine, and culture with contributions from the early Irish, Italian, German, and Polish settlers, and later Bosnian, Russian, Arab, and Southeast Asian refugees. I believe growing up in a sleepy little farm town with three stoplights will forever be a part of my core identity, but it also stirred me to seek experiences different than my own. I believe the homogenous nature of my childhood led me to social work, my current occupation, my partner, Rust2Green, and my research. It is in experiences where I feel conflicted that I am fulfilled though I often feel caught between two

worlds – those that I find familiar, safe, and that shaped me, and experiences that create tension and discomfort to learn and grow.

When I was working with the community to understand food systems, I experienced one of those moments of tension where all I knew and loved was called into question. I continued to learn more about the impact of large conventional farms on the environment and the health of individuals. The China Study, by T. Colin Campbell, a Cornell University professor of biochemistry, nutrition, and microbiology, forever changed the way I would experience food, farming, and health. That large observational study on diet, lifestyle, and disease mortality characteristics in 65 rural counties in China offered a unique understanding of diet and disease because of the unique diet consumed in each of the rural counties. Compelling evidence suggests animal foods like meat and dairy promote disease and plant foods prevent and treat it.

This was a foreign concept to me and very different from my childhood food culture expectations. I began to see that my assumptions about diet and food might involve breaking from cultural expectations. I also began to fully understand that diet impacts health and I became curious about diet and mental health. Most troubling, this book called into question my own personal, professional, and political food identity and posed challenges to relationships with those I love, and yet there was no turning back. Imagine growing up on a dairy farm, working to promote the health of dairy and beef products at Extension, and learning all that I knew may be incorrect – maybe even harmful.

I began to wrestle with working on behalf of an industry that I was expected to promote, while beginning to understand how detrimental it could be to the health of individuals, communities, and our planet. I respected, admired, and sincerely loved the farmers and the farm

families I worked with, but I started to struggle to remain silent with this new understanding. I knew I could no longer fulfill my obligation at Cooperative Extension and the families we served with integrity, so I transitioned to the National Association of Social Workers. There, I hoped to focus on advocacy, pursue my Ph.D., and marry my two loves, food, and social work.

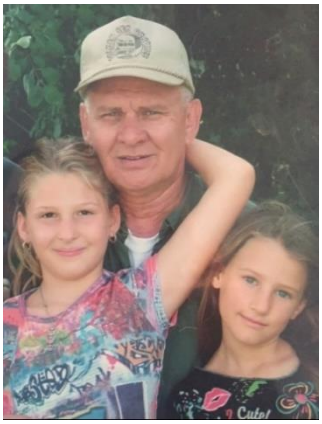
As I embarked upon my Ph.D., I needed to identify and develop my research interests. By then I knew, through my work with Paula Horrigan and R2G, that food systems impacted the health of communities. I knew that food, specifically a whole food plant-based diet, espoused in the book The China Study, was demonstrating significant improvement in physical and environmental health outcomes. I wondered if a whole food plant-based diet could have a similar effect on mental health. I delved into the world of research to search for everything known about diet and depression.

There was very little research on depression and a whole food plant-based diet. I believed, at that time, that this diet had the greatest opportunity for exploration and potential unearthing of mental health benefits. I continue to believe so, based predominantly on my understanding of the The China Study. I did find that a growing body of research suggested a Mediterranean diet rich in fruits, vegetables, beans, legumes, and whole grains, consumed over time, offered an array of health benefits including improved mental health outcomes. I began to wonder what I could learn from social workers, who are the largest body of treatment providers of those who are experiencing depression in the United States. My profession of social work appeared to be absent from the growing research on food and mental health.

This study builds on my personal foundations born in traditional farming, my professional role in community service and food systems, and my discovery of the role food and diet play in mental health and relationships. The study identifies how food experiences of social

workers support and impede the use of dietary interventions with clients experiencing depression. These findings contribute to the global body of research on food and mood. I hope the ongoing work of researchers of food and mood will help the millions of people who struggle with depression each year, many of whom will lose the fight after a valiant effort. In one final connection that sustains my commitment to this research, I remember my beloved father-in-law, Eddy, who committed suicide while this study was underway. I honor him, those I love, and all those who have shaped me on this journey.

Eddy is pictured below with my daughters.



Chapter 1: Introduction

Problem Statement

Depression is one of the leading problems social workers are presented with in clinical practice. The most recent data on the lifetime prevalence of diagnosable mental health disorders are as follows: anxiety disorders, 28.8%, mood disorders, 20.8%, impulse-control disorders, 24.8%, substance use disorders, 14.6%, any disorder, 46.4% (Kessler et al., 2005). Diet and nutrition research is demonstrating that food can be a modifiable risk factor in the treatment of depression. Much remains to be discovered in this area of research.

For centuries, the scientific community has identified foods that promote physical well-being and foods that contribute to illness (Gratzer, 2005; Silverstein, 1984; Willett et al., 2019). As far back as 400 B.C., Greek physician Hippocrates was believed to have said, "let thy food be thy medicine and thy medicine be thy food." Over the past two decades, understanding foods that support positive mental health outcomes and foods that contribute to mental illness has gained the attention of researchers. While evidence of treatment effectiveness of food on mood mounts (Akbaraly et al., 2009a; Ángel Martínez-González, 2006; Beezhold et al., 2010; Sánchez-Villegas, Delgado-Rodríguez, Alonso, Schlatter, Lahortiga, Majem, et al., 2009; Sánchez-Villegas et al., 2011), the perspectives of social workers, who as a group represent one of the largest treatment providers for depression, are missing. In this study I sought to understand social workers' understanding of diet, nutrition, and the body on healing and health. I further sought to understand how a social workers food culture, beliefs, and practices both support and interfere with their ability to use food in treatment protocols with clients effectively. This understanding was built by gathering and analyzing the lived experience of social workers.

This research helps to increase understanding of the intersection of food in the personal, academic, and professional experiences of social workers. This search for better understanding recognizes there is always an intersubjective aspect of data interpretation, and it cannot be separated from social circumstances like beliefs, practices, standpoints, and culture (Schwandt et al., 2007). Food is deeply embedded in these constructs, and it is impossible to fully understand social workers' readiness to adopt diet and nutrition interventions without understanding their beliefs and practices. This study also sheds light on how food culture complicates the experience of social workers who incorporate diet and nutrition in a clinical intervention with depressed clients. What I learned from social workers through this study provides valuable information to the profession as the field begins to understand and incorporate food in the treatment of depression.

I used a phenomenological approach for this study and a hermeneutic framework. I chose a phenomenological approach because this approach searches for understanding in lived experience. I chose a hermeneutic framework because of the way it accounts for bias. This framework and approach were chosen together because they provide the best opportunity to understand social workers' lived experience with food and mood while addressing trustworthiness. The approach and framework are explored in greater detail in the philosophical framework section of Chapter 3: Methods.

Purpose Statement

This study seeks to add to the body of research on integrative approaches to the treatment of depression to improve outcomes and quality of life for those who suffer from it. A phenomenological approach uncovers the experiences of social workers as they reflect on food and healing. A virtual platform was used to interview social workers who treat people with

depression. The interviews focused on understanding the experiences of the participant with food and mood.

An extensive literature review on diet, nutrition, and depression was completed to provide the scientific backdrop for this study and can be found in Chapter Two. It was important to understand what is known about the emerging literature on diet, nutrition, and depression to determine that food can be used successfully as a modifiable risk factor in the treatment of clients who are depressed. The literature indicated promising outcomes for clients when diet and nutrition was used as a component of clinical treatment. It is important to understand social workers' readiness to adopt diet and nutrition as a modifiable risk factor in their treatment interventions with depressed clients because this research is currently understood as being new and in the process of emerging. It is also important to identify barriers to adopting diet and nutrition as a component of the treatment of depressed clients. A section of the literature review addresses research on clinical adoption and non-adoption of evidenced-based practices. The Theory of Diffusion of Innovation is explored to guide the development of research questions pertaining to the readiness to adopt diet and nutrition as a component of a clinical intervention with depressed clients.

The relationship individuals have with food is complex. Humans are required to eat to sustain life, but people also eat for joy, comfort, and a host of other emotions. Our patterns of eating are shaped by our culture, the foods we were accustomed to eating, and the memories of sharing meals with family and friends. What we eat is also impacted by our perception of our body and the perceptions others have of our body. We celebrate with food, and we mourn with it. What we eat and how we feel is shaped by our socioeconomic status, agency, ethnicity, gender, religion, and even politics. It is important to understand the role of food and the experiences

social workers have with food if diet and nutrition is to become a common part of the treatment protocol with people who are depressed. The data gathered aids in understanding the experiences of the participants to determine how those experiences may affect their adoption of diet and nutrition as a modifiable risk factor in the treatment of depression. Barriers to adoption are also identified and explored in this study.

The research and literature supportive of both integrative approaches and dietary patterns that promote mental health is becoming more convincing with each study. That said, it is important to note that this study did not seek to argue that diet and nutrition, specifically dietary patterns that focus predominantly on whole foods and plants, should be considered as part of an integrative approach in interventions with individuals experiencing depression. The literature is becoming more convincing with each study on both integrative approaches and dietary patterns that promote mental health. Rather, this study seeks to better understand social workers' readiness to adopt an integrative approach to depression treatment that includes diet and nutrition. Specifically, it asks and seeks to understand the following: how prepared, and how inclined, are social workers to move beyond traditional cognitive behavioral therapy and pharmacological interventions to include diet and nutrition in their treatment of depression?

Study Rationale

Depression is a treatable illness that can have a devastating impact on individuals and their families when left untreated. One of the most significant correlations with depression is suicide. The Centers for Disease Control and Prevention (CDC) estimates over 44,000 people die of suicide each year, making it the tenth leading cause of death in the US (*Get Involved | NAMI: National Alliance on Mental Illness*, n.d.). There is an emotional and social toll of depression and suicide. There is also an economic cost of depression that is difficult to quantify. Greenberg and

colleagues postulate the incremental economic burden of people with mental depressive disorder (MDD) increased by 21.5% from $173.2 billion to $210.5 billion, inflation-adjusted dollars (Greenberg et al., 2015). Greenberg (2015) noted that approximately 45% of this economic burden is attributable to direct costs, 5% to suicide-related costs, and 50% to workplace costs. Of the total costs, 38% were due to MDD itself as opposed to comorbid conditions (Greenberg et al., 2015).

Depression statistics post COVID-19 are even more concerning. A 2021 study on the global presence of depression revealed a 27.6% increase in cases of major depressive disorder or an additional 53.2 million people impacted (Santomauro et al., 2021). It is important to remember that prior to 2020, mental disorders were already the leading cause of the global health-related burden, with depression and anxiety disorders being leading contributors to this burden (Santomauro et al., 2021). This underscores how COVID-19 has exacerbated an already troubling trend and supports the need for effective interventions.

Psychopharmacological research varies widely on the effectiveness of medication prescribed for those experiencing depression, but studies consistently demonstrate a relatively small effect in patients broadly classified as having depression (Cipriani et al., 2018). Mild depression tends to improve more with placebo, and therefore the difference between antidepressant effect and the placebo effect is exceedingly small, or at times, absent. In more severe forms of depression, antidepressants show greater efficacy (*NIMH » Antidepressants: A Complicated Picture*, n.d.). Ioannidis (2008) suggests that small randomized trials, clinically non-relevant outcomes, improper interpretation of statistical significance, manipulated study design, biased selection, short follow-up, and distorted reporting have fostered an illusion of

pharmacological effectiveness. This suggests the need to better understand other nonpharmacological approaches to the treatment of depression and their effectiveness.

According to the United States Bureau of Labor and Statistics, there are currently an estimated 707,400 social workers acting as the nation's leading providers of behavioral health services. This number of social workers is more than double that of any other mental health-related profession (*Social Workers*, n.d.). Nationwide, social workers are uniquely positioned to assume a lead role in providing non-pharmaceutical treatments that improve outcomes for people with depression.

A growing body of research suggests that diet and nutrition have both physiological and psychosocial implications for health, and yet the focus of treatment of psychiatric symptoms continues to rely on psycho-pharmaceutical interventions (Kohatsu, 2005a). A meta-analysis of the research on dietary patterns and depression provides compelling evidence for the inclusion of diet and nutrition in a holistic assessment and treatment of mental health service users (Low Dog, 2010a). The research identified is primarily outside of the United States and in medical, psychiatric, and nutritional science journals. Curiously, while social workers are academically prepared to understand the relationship between the body, diet, nutrition, and mood using a biopsychosocial approach, and are the largest provider of behavioral health services, no study on dietary patterns and depression has been conducted by social workers.

Social workers need to have an awareness of the impact food has on mood to develop, incorporate, and assess intervention strategies that promote optimal mental health. Social workers also have an opportunity to generate knowledge on the use of diet and nutrition as an intervention strategy based on their academic training and professional experience. In doing so,

social workers may develop new intervention strategies that can be used to improve outcomes for clients who are depressed.

This study uses a phenomenological approach to understand social workers' experience and meaning of food and mood. This provides an indicator of their readiness to incorporate dietary and nutritional interventions in their treatment of depression. This is important because, as understanding of modifiable risk factors of depression expands, there is a professional obligation to incorporate it in clinical practice. More importantly, understanding social workers' readiness to adopt diet and nutrition health research in the treatment of depression to improve outcomes for them could be lifesaving for the millions of individuals who are living with depression.

This study begins with an analysis of the body of research that connects diet and nutrition with depression. The literature review explores the epidemiology of depression. Incidence, distribution, determinants, and known potential modifiers of depression are identified and discussed. The resulting understanding of depression demonstrates the need for the mental health community to seek better outcomes for people with depression. The biopsychosocial model and integrative practice frameworks are then discussed to provide the justification of an inquiry on diet and depression in the profession of social work. This is necessary because some people may view diet and nutrition as being outside the scope of the professional preparation of a social worker.

Coupling epidemiology of depression and literature on diet, nutrition, and depression sets the stage for understanding of how evidence to date supports improved clinical outcomes using dietary and nutritional interventions. This provides the necessary scientific foundation to explore the meaning of social workers' experiences with food and mood. A component of the literature

review addresses social worker adoption and non-adoption of evidenced-based practices. This provided fundamental information that guided the development of research questions on social workers' readiness to adopt diet and nutrition in their clinical interventions with depressed clients. The data gathered from social workers who participated in this study was analyzed to better understand their readiness to adopt dietary pattern research as a part of their therapeutic interventions in treating individuals experiencing depression.

Depression Epidemiology

Estimates of the general population affected by depression vary from region to region but remain consistently high worldwide. The World Health Organization (WHO) estimates that 280 million people have depression (*Depression*, n.d.), and depression is ranked the single largest contributor to global disability or 7.5% of all years lived with a disability (*WHO-MSD-MER-2017.2-Eng.Pdf*, n.d.). WHO estimates health loss by multiplying prevalence of disability by the average level of disability to estimate years lived with disability (YLD). In the Americas region, the United States holds the record for the highest percentage of people with a depressive disorder at 5.9 %, representing 3,088,893 YLD. As previously noted, a systematic review post COVID-19 found a staggering 27.6 percent increase in major depressive disorder or an additional 53.2 million individuals affected (Santomauro et al., 2021).

The CDC affirms the significance of depression with a finding that 8.1 percent of Americans experienced depression over a given two-week period between 2013-16 (Brody, 2018) with women and non-Hispanic black individuals significantly disproportionally impacted. In New York, the pervasiveness continues. In 2013, 10.5 percent of adolescents aged 12-17 years experienced a major depressive disorder within the prior year of the survey, a substantial increase from 7.2 percent in 2010 (*Behavioral Health Barometer: New York, 2015*, n.d.). The

NYS Behavioral Health Barometer further notes that of those suffering from depression, only 45.5 percent sought treatment.

The Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V) diagnostic definition of depression requires the presence of five or more of nine criteria during two weeks that represent a change in functioning including at least depressed mood or loss of interest or pleasure (Segal et al., 2017). DSM-V criteria include depressed mood, diminished interest in pleasure, significant weight loss/gain, insomnia/hypersomnia, psychomotor agitation, fatigue/energy loss, feelings of worthlessness/guilt, diminished concentration, and recurrent death/suicide ideation. Comorbidity often includes substance-related disorders, panic disorder, obsessive-compulsive disorder, anorexia nervosa, bulimia nervosa, and borderline personality disorder.

Customary treatment modalities include psychopharmacology (antidepressants), psychotherapy (cognitive behavioral therapy, interpersonal therapy, and problem-solving therapy), a combination of the psychopharmacology and psychotherapy, and electroconvulsive therapy in certain individuals who have experienced little improvement with other treatments ("NIMH » Depression," n.d.). Complementary treatments have had varying degrees of effectiveness, including St John's Wort, folate, acupuncture, exercise, omega-3 fatty acids, and S-adenosylmethionine (SAM-e) (Nahas & Sheikh, 2011). Psychedelic medications and psychedelic-assisted psychotherapy are also being explored as treatment modalities for depression and anxiety. Recent research, although preliminary, appears to hold promise for the effective use of psychedelics in the treatment of depression (M Trigo, 2021; Manzano-Nieves & Liston, 2021; Palhano-Fontes et al., 2019; Pollan, 2018; Reiff et al., 2020).

Social Work Practice Frameworks for Nutritional Intervention

As noted in the literature review section below, there is substantial evidence for the incorporation of diet and nutrition as a component of social workers' treatment of depression. Adoption of a diet- and nutrition-based intervention with a client requires basic knowledge of diet and nutritional science and with the literature on promising clinical practices that improve outcomes for individuals experiencing depression. Researchers will lead that effort, but to be effective they must start with knowledge of social workers' lived experience, food culture traditions, beliefs, and practices around food. The experiences of social workers may represent readiness or barriers for the adoption of diet and nutrition as a modifiable risk factor in their treatment of depressed clients. Both are discussed in the findings section of this study. The current research was conducted to help fill these gaps in knowledge.

Biopsychosocial Model

The biopsychosocial model has had an enduring influence on many professions, including social work. The term "biopsychosocial" originated with George Engel (Engel, 1977) who believed that the predominant biomedical model of the time neglected to take into consideration the psychological, social, and behavioral dimensions of illness. The biopsychosocial model suggests that biological, psychological, and social factors interconnect with one another to influence depression in an individual (*Current Understandings of Major Depression – Biopsychosocial Model*, n.d.). Engel believed that psychology was too narrowly focused on the biological component of mental health. Engel's model is particularly relevant to this study's focus on the role physical health, specifically the role diet and nutrition can play when connected with psychological and sociological health in the treatment of depression.

Social workers could argue that the diet and nutrition component of depression would be best left for a dietician or a medical doctor (Anda et al., 2006; Dube et al., 2001; Mersky et al., 2013; Sun et al., 2017; Ximenes et al., 2019). However, social workers recognize that biological, psychological, and sociological factors are critical to the assessment and treatment of mental health challenges. Therefore, research support for incorporating diet and nutrition into assessment and treatment of depression justifies use of the biopsychosocial approach to the treatment of depression (Akbaraly et al., 2016; Lai et al., 2014a; Sanchez-Villegas & Martínez-González, 2013). These studies support the interconnectedness of the mind and physical body and provide evidence of how diet and mental health are connected. The biopsychosocial approach compels social workers to reject the idea that diet and nutrition should be left to physicians and dieticians.

Integrative Approaches

The social work profession has experienced a long road towards legitimacy since being provoked by reformer and educator Abraham Flexner's 1915 speech and analysis, "Is Social Work a Profession" (*Is Social Work A Profession?*, 2012). Lee et al. (2018) posited that social work, in line with Flexner's call for greater scientific grounding and professionalization, became increasingly influenced by positivism, the scientific method, and rationalism, all of which were used by medical professionals and in academia. Therapeutic approaches defined as "alternative" were marginalized and qualitative approaches to knowing were delegitimized.

However, challenges to positivism and reductionist inquiry have gained momentum. Wilber argued that reductionism differentiates and disassociates the mind and body (Wilber, 2000). He subscribed to an Eastern tradition and believed ways of knowing are vastly incomplete if obtained exclusively through the scientific method. Wilber's work is part of a larger

contemporary movement that regards the qualitative and "alternative" in a positive light and is directing its focus towards research and practice involving integrative, or complementary, social work approaches.

Over the past 10-15 years, researchers have sought new ways of approaching health, disease, diagnosis, and treatment by identifying diet, nutrition, and environmental factors essential for optimal mental and emotional functioning. An integrative approach is emerging that recognizes psychological well-being as being connected to our physical well-being. Integrative approaches distinguish mental illness and physical illnesses as a combination of psychosocial, spiritual, and physical influences while recognizing the importance of both Eastern and Western healing traditions. Lee and colleagues (2018) centralize spirituality in social work practice while integrating cognitive, affective, behavioral, and social realms. These emergent approaches seek to reshape a current service delivery system that emphasizes therapeutic interventions and often ignores mind-body-spirit interconnectedness within a social environment.

From an integrative perspective, therapeutic interventions involve more than delving into psychosocial processes. They seek to improve outcomes by improving the interaction between psychosocial and physical realities, including lifestyle and nutrition factors. Social workers are at the forefront of providing therapeutic interventions that address modifiable risk factors for those experiencing depression. As research on food and mood continues to evolve, incorporating diet and nutrition as another modifiable risk factor for those presenting with depression may become a routine element of treatment. This treatment for depression may include a combination of pharmaceutical interventions, non-pharmaceutical interventions (like acupuncture, exercise therapy, herbal supplements, meditation, yoga), and cognitive therapies.

An integrative approach embraces diverse traditions and methods of knowing and can be used in clinical practice to better meet the mental health needs of clients (Lee et al., 2018). Lee and others challenge approaches termed "holistic," "allopathic," "alternative," and "complementary" to counteract the potential stigma of integrative approaches being grouped with approaches often associated with pseudoscience. This stigma often plagues social workers who use methods and interventions outside of the positivist tradition. While diet, nutrition, and bodily healing of diseases has a longstanding body of evidence to support them, diet, nutrition, and mental health have only just entered the scene with barely over a decade of research. An integrative approach to the treatment of depression that includes diet and nutrition is further supported by Tangenberg and Kemp's (2002) research on the body's role in healing.

Integrative social work, which is to be employed in addition to, rather than in lieu of, conventional evidence-based social work approaches, is supported by a growing evidence base. Growing evidence is also showing that dietary interventions should be part of the holistic treatment and assessment of individuals presenting with depression. (Almudena et al., 2009; Lai et al., 2014a; Le Port et al., 2012; Sánchez-Villegas, Delgado-Rodríguez, Alonso, Schlatter, Lahortiga, Majem, et al., 2009; Sanchez-Villegas & Martínez-González, 2013; Vermeulen et al., 2016). Overall, this expanding research base is supporting movement beyond existing social work models of treatment. Like integrative approaches, the application of nutrition in the treatment of depressed clients can create effective, positive, and transformative change in individuals and families (Lee et al., 2018). The current study recognizes an integrative view of social work practice that includes nutrition.

The theories presented in this chapter serve as theoretical framing for a study centralized around social workers and the use of diet and nutrition as a modifiable risk factor for depression.

The biopsychosocial approach was identified because it is a preeminent theory cited by social workers that recognizes the biological component of healing and mental health. A study that centralizes social workers and food cannot be fully understood without recognizing the role food plays in people's bodies and their bodies interactions within systems.

Integrative approaches to social work practice are relevant to this study because these approaches recognize the connection between psychological, sociological, and spiritual realms. An integrative approach also provides a framework to demonstrate the ways that diet, nutrition, the body, and mental health are connected. The biopsychosocial model and integrative social work practice are frameworks that provide an argument for the use of diet and nutrition in social work practice with clients who are depressed. While each offers a different way of justifying diet and nutrition as a component of social work practice, they are not contradictory. With theoretical grounding in social work practice, the literature on dietary patterns and depression can be legitimately explored.

Chapter 2: A Review of the Literature

Introduction

This literature review summarizes the contemporary literature on dietary patterns and depression. The literature shows that knowledge on this subject is evolving and underscores the complexity of understanding diet in the context of health and disability. The literature review was based on characteristics including author/year/country, study design, subjects (sample), dietary assessment (how measured), instrument used to determine dietary patterns (erroneously rejecting null hypothesis due to multiple testing error), how depression was assessed, confounding variables, and main findings. The search results included landmark studies on diet and depression, isolated nutrients and depression, the Mediterranean diet and depression, plant-based/vegan diet and depression, vegetarian diet and depression, and the Western diet and depression. Current research on each of these components is summarized below.

There are several diet related definitions that are important to understand prior to reading the literature review. They are as follows:

- Dietary Patterns: are the quantities, proportions, variety, or combination of different foods, drinks, and nutrients in diets, and the frequency with which they are habitually consumed (*USDA Food Patterns | Center for Nutrition Policy and Promotion*, n.d.).

- Mediterranean Diet Pattern: is a way of eating that's based on the traditional cuisines of Greece, Italy and other countries that border the Mediterranean Sea. Plant-based foods, such as whole grains, vegetables, legumes, fruits, nuts, seeds, herbs, and spices, are the foundation of the diet. Olive oil is the main source of added fat. Fish, seafood, dairy and poultry are included in moderation. Red meat and sweets are eaten only occasionally (*Mediterranean Diet for Heart Health*, n.d.).

- Plant Based Diet Pattern: It is important to note that there is not a consensus on the definition of a plant-based diet. Some plant-based diets exclude all animal products, some exclude certain animal products, and others minimize the use of animal-based products. Definitions of plant-based diets consistently emphasis fruits, vegetables, whole grains, beans, legumes, nuts and seeds, herbs, and spices and minimize or eliminate animal products.
- Processed Food: is defined as any raw agricultural commodity that has been subject to washing, cleaning, milling, cutting, chopping, heating, pasteurizing, blanching, cooking, canning, freezing, drying, dehydrating, mixing, packaging, or other procedures that alter the food from its natural state. This may include the addition of other ingredients to the food, such as preservatives, flavors, nutrients and other food additives or substances approved for use in food products, such as salt, sugars and fats (Processed Foods What You Should Know, n.d.).
- Standard American Diet Pattern: is characterized by high amounts of processed foods, refined carbohydrates and added sugars, refined fats, high fat dairy products and red meat. As a result, it is also typically low in a healthy variety of minimally processed vegetables, fruits, legumes, and whole grains.
- Veganism: is a philosophy and way of living which seeks to exclude, as far as is possible and practicable, all forms of exploitation of, and cruelty to, animals for food, clothing, or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans, and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals (*Definition of Veganism*, n.d.).

Dietary Patterns and Depression

"Dietary pattern is defined as the quantities, proportions, variety, or combination of different foods, drinks, and nutrients in diet and the frequency with which they are habitually consumed (*2015-2020 Dietary Guidelines - Health.Gov*, n.d.)." A century or more of research has demonstrated the causal relationship between what a person eats and their physical health, yet research is still emerging about how what people eat impacts their mental health. Dietary components and their impact on physical, mental, and cognitive health have also been examined but little is known about dietary patterns and mental health. Diet varies by culture, ethnicity, climate, economic status, country of origin, and even philosophical beliefs and practices. Consequently, foods and nutrients are eaten in a variety of combinations, or patterns, and can have interactive and potentially aggregate or confounding relationships.

For this systematic review, the USDA definition of a dietary pattern was used previously. A developing body of literature on dietary patterns and depression provides persuasive evidence that food impacts our emotions (Akbaraly et al., 2009a; Ángel Martínez-González, 2006; Beezhold et al., 2010; Hibbeln et al., 2018; Lassale et al., 2019; Le Port et al., 2012; Li et al., 2019; Liu et al., 2016; Low Dog, 2010b; Miki et al., 2018; Psaltopoulou et al., 2013; Sanchez-Villegas et al., 2018; Sanchez-Villegas & Martínez-González, 2013; Skarupski et al., 2013; V. Costarelli et al., 2013; Vermeulen et al., 2016; Xia et al., 2017).

Landmark Studies

Whitehall II (1985) was a landmark study that introduced the mental health community to a potential new paradigm, one where diet impacts how people feel. That study focused on understanding the health risks associated with disparities of wealth and power. Later data from the study was used to better understand how diet impacts mental health, specifically depression.

What began in 1985 continues today with a growing cohort of 10,308 British civil servants. The Whitehall II study was partly modeled on the Harvard Nurses Study (*Nurses' Health Study*, n.d.), with adaptations to reflect European dietary patterns.

This study distinguishes itself from most previous studies that had sought to understand the impact on mental health of isolated nutrients. Whitehall II uses a food frequency questionnaire to establish adherence to one of two dietary patterns: whole food (rich in fruits, vegetables, beans and legumes, and whole grains) and processed (like a traditional Western diet). The Center for Epidemiologic Studies Depression Scales (Radloff, 1977) was used to measure the occurrence of depression. Results, for those who were identified in the processed food pattern group, indicated a risk for depression five years later. For those in the whole food pattern group, results demonstrated protective factors against depression. The findings of this 1985 study provided baseline data to build upon during a time when little was known about dietary patterns and depression. Thereafter, an emerging body of research sought to determine just how food and the body may impact mood and depression.

Another landmark study, The SUN Cohort (Ángel Martínez-González, 2006), sought to understand how dietary patterns may, over time, impact wellness. Like the Whitehall study, it is modeled after the Harvard Nurse's Study and its purpose is to assess the Mediterranean dietary pattern's impact on health. The initial study recruitment took place in Spain in 2000. The SUN Cohort involves a permanently open (dynamic) cohort group comprised of a growing number of participants who are assessed every two years. Data have been collected from 17,200 (2010 data) enrolled participants with a follow-up rate that approaches 90%. The SUN Cohort study is distinguished from Whitehall because of its contribution to the advancement of knowledge and the breadth of studies that continue to be published based on its data. Most studies on dietary

pattern focus on isolated nutrients and the Mediterranean dietary pattern. Knowledge of broader scope is still emerging.

Isolated Nutrients and Depression

This review includes 21 journal articles that pertain to single nutrients. Gould (2008) offered a review that summarized the biology of mood and food. His work focused on reviewing research on various isolated nutrients found in certain foods including soy, thyme, and gingko biloba. Gould, too, recognized an ever-increasing demand for non-pharmaceutical solutions to mild and moderate mood fluctuations. He sought to understand and identify the molecular mechanisms for various nutrients that can be realistically targeted to enhance emotional wellbeing. By using double-blind placebo-controlled clinical crossover studies, Gould's study determined there were few foods offering credible scientific proof related to mood impacts.

Astorg (2008) studied the association of fish and long-chain n-3 polyunsaturated fatty acid intake with the occurrence of depressive episodes in middle-aged French men and women. Later Fang (2016) performed a meta-analysis to evaluate the association between fish in the diet and mood. A total of 26 studies involving 150,278 participants were included in that meta-analysis, which concluded that high fish consumption can reduce the risk of depression for the highest versus lowest consumption of fish, relative risk (RR), 0.83 (95% CI 0.74 to 0.93), and the results remained significant in the cohort studies ((RR=0.84, 95% CI 0.75 to 0.94, n=10) as well as in the cross-sectional studies (RR=0.82, 95% CI 0.68 to 1.00, n=16) (Fang Li et al., 2016).

A meta-analysis focusing on the evidence for the association of fruit and vegetable intake with the risk of depression in the general population included 21 studies in ten countries involving 227,852 participants for fruit intake in two studies and 218,699 participants for vegetable intake in eight studies. They found that fruit and vegetable consumption may be

inversely associated with the risk of depression (Liu et al., 2016). The association between added sugars or sugar-sweetened beverage consumption and the risk of depression, as well as the role of carbohydrate quality in depression risk, has been explored in several studies. The SUN Cohort study found that higher added sugars and lower quality of carbohydrate consumption were associated with higher depression risk (Sanchez-Villegas et al., 2018). Christen and Somers (1996) compared dietary intake in depressed subjects (N=29) and controls, finding that the former consumed more carbohydrates and sugar than did controls. This could suggest a causative role for sugar, or simply indicate that depressed people prefer high carbohydrate, sweet foods (Ruxton et al., 2009).

There is currently insufficient high-quality data to conclude with certainty that sugar has a causal impact on mental health. That said, longitudinal studies have shown the consumption of sweetened beverages, refined foods, and pastries to be associated with an increased risk of depression. Vermeulen et al. (2016) examined whether high sugar and high saturated fat dietary patterns were associated with depressive symptoms in the 5-year British Whitehall II study of 5,044 individuals. Using logistic regression analysis, they found no association between diets studied and new onset or reoccurrence of depressive symptoms.

Studying postmenopausal women, Gangwisch et al. (2015) found a progressively higher dietary glycemic index associated with increasing odds of incidents of depression in fully adjusted models, with the trend being statistically significant. They also found that progressively higher consumption of dietary added sugars was associated with increasing odds of incidents of depression. Higher consumption of lactose, fiber, non-juice fruit, and vegetables was significantly associated with lower odds of incidence of depression, and nonwhole/refined grain consumption was associated with increased odds of depression. Any influence that refined

carbohydrates/sugars have on mood could be commensurate with their proportion in the overall diet; studies are therefore needed that measure overall intake of carbohydrate and sugar, glycemic index (GI), and glycemic load (Gangwisch et al., 2015).

Western Diet and Depression

A "Western" diet, broadly speaking, is characterized by a high intake of saturated and omega-6 fatty acids, reduced omega-3 fat intake, overuse of salt, and too much refined sugar (Myles, 2014). Felice et al. (2010) used a food frequency questionnaire to examine the extent to which the high prevalence of mental disorders was related to habitual diet in 1,046 women ages 20–93 years randomly selected from the population (Felice N. et al., 2010). Food frequency questionnaires are often used in studies of the role of diet and its potential relationship with depression.

These results demonstrated an association between habitual diet quality and the high prevalence of mental disorders, although reverse causality and confounding were identified. Sánchez-Villegas (2012) found risk of depression was higher in those who had greater consumption of fast food and processed food and the potential relationship with depression. Oddy et al. (2018) studied 843 adolescents using structural equation modeling and similarly found an association between a Western dietary pattern and increased depression and mental health problems from diet, obesity, and inflammation, whereas a healthy diet appeared protective.

Le Porte (2012) examined the longitudinal association between dietary patterns and depressive symptoms assessed repeatedly over 10 years in the French occupational GAZEL cohort. A total of 9,272 men and 3,132 women, aged 45–60 years in 1998, completed a 35-item Food Frequency Questionnaire (FFQ) at baseline. Dietary patterns were derived by Principal

Component Analysis. Depressive symptoms were assessed by the Center for Epidemiologic Studies Depression Scale (CES-D) in 1999, 2002, 2005, and 2008. The highest quartile of low-fat, Western, high snack, and high fat-sweet diets in men and low-fat and high snack diets in women were associated with a higher likelihood of depressive symptoms at the start of the follow-up, compared to the lowest quartile (Le Port et al., 2012). The author speculated that subjects with the highest consumption of low-fat food could have already had the poorest health (like increased rates of obesity), suggesting a possible selection bias. However, reverse causality and generalizability remains problematic in this study. An example of reverse causality is assuming that a particular dietary pattern caused an improved mood outcome when another potential cause could be an accompanying weight loss and improved self-image. Other examples of reverse causality may include increased activity resulting from weight loss and exercise.

Mediterranean, Vegetarian, and Plant-Based Diet and Depression

The SUN cohort study has contributed much to the growing body of literature on dietary patterns and depression (Sánchez-Villegas, Delgado-Rodríguez, Alonso, Schlatter, Lahortiga, Majem, et al., 2009, 2009; Sánchez-Villegas et al., 2011, 2012, 2013a, 2015; Sanchez-Villegas et al., 2018; Sánchez-Villegas, Pérez-Cornago, et al., 2018; Sánchez-Villegas et al., 2019; Sanchez-Villegas & Martínez-González, 2013). Findings include 1) high adherence to a Mediterranean diet associated with a lower risk of depression, 2) inverse linear association between fruit and nut consumption and depression, 3) significant risk reduction of depression of those in the third quintile for fish intake, 4) consumption of meat and whole fat dairy foods associated with a higher risk of depression, 5) fast-food commercial baked goods associated with increased depression risk, and 6) Mediterranean diet supplemented with nuts could exert a beneficial

effect on risk of depression in type II diabetes among other diseases (Sánchez-Villegas, Delgado-Rodríguez, Alonso, Schlatter, Lahortiga, Serra Majem, et al., 2009).

More recently, the SUN cohort study has yielded a study of the relationship between depression and fish and seafood consumption and omega 3 polyunsaturated fatty acids intake using multilinear regression models in 6,587 participants of which 1,367 experienced depression. The study found that moderate fish intake (not high intake) was associated with lower odds of depression (Sánchez-Villegas, Álvarez-Pérez, et al., 2018). A prospectively assessed association between micronutrient intake adequacy and depression risk in the dynamic SUN Cohort study over 8.5 years found that a deficiency in four or more micronutrients could play a role in development of depression (Sánchez-Villegas, Pérez-Cornago, et al., 2018). Sanchez-Villegas et al. are currently studying prevention of recurrence of depression with a Mediterranean diet supplemented with extra virgin olive oil using a multi-center, two-arm, parallel-group clinical trial (Sánchez-Villegas et al., 2019).

Other notable studies on the relationship between a Mediterranean diet and depression include that of Francis et al. (2019), who studied a brief dietary intervention closely aligned with the Mediterranean dietary pattern in 101 young adults in a randomized control trial and found that the control group experienced significantly lower depression symptoms at the conclusion of the study and three months after the conclusion. Results of the Center for Epidemiology Studies Depression Scale indicate a medium relative strength. Similarly, Masana et al., (2018) found a beneficial effect of strong adherence to the Mediterranean diet on symptoms of depression with a sample of 2,718 participants from 22 Mediterranean islands using population-based, multinational, convenience, and cross-sectional sampling. In a systematic review and meta-analysis, Lassale et al., (2019) found that adhering to a healthy diet (Mediterranean/non-

inflammatory) appeared to be protective against depression in 20 longitudinal and 21 cross-sectional studies. Adjibade et al., (2018) found that higher adherence to the Mediterranean diet at midlife was associated with a lower risk of depressive symptoms in a large French cohort of 3,523 participants, particularly in men.

In earlier studies, Psaltopoulou et al. (2013) reported on a meta-analysis of studies on adherence to a Mediterranean diet and risk of stroke, depression, cognitive impairment, and Parkinson's disease. Twenty-two eligible studies were included (11 on strokes, 9 on depression, 8 on cognitive impairment, and 1 on Parkinson's disease). Researchers found observance of a Mediterranean diet was consistently associated with less risk for depression (RR = 0.68, 95% CI = 0.54-0.86). Skarupski et al. (2013) examined the protective factors versus prevention factors and whether adherence to a Mediterranean-based dietary pattern is predictive of depressive symptoms among older adults.

Akbaraly and colleagues (Akbaraly TN et al., 2009) found consuming of whole food was inversely associated with depression and that consuming of processed food was positively associated with depression. A study of 3,486 British middle-aged men whose diet was whole food plant-based found that this diet gave protection against the onset of depressive symptoms (Low Dog, 2010a). This study also identified an increase in depressive symptoms in those consuming a high-fat, highly processed animal-based diet. A study of 1,190 men and women over 65 also cited by Low (2010b) identified similar results in a study in Greece (Costarelli et al., 2013). The authors concluded that a truly integrative approach to mental health should include a thorough assessment of dietary habits, level of exercise/physical activity, environmental exposures, medications, comorbid conditions, life stressors, level of social support, and family history. Xia et al. (2017) reported a case-control study on the association between dietary

patterns and depression symptoms in 1,351 Chinese adults using exploratory factor analysis, revealing three dietary patterns: vegetable and fruit, sweets, and animal foods. They found the vegetable and fruit quadrant negatively associated with high depression symptoms (CI .52-.83 p for trend <0.001) with positive association for the other two patterns.

Miki et al. (2018) studied 3-year longitudinal adherence to dietary pattern and risk of depression in 903 employees who at baseline were free of depression symptoms and found maintaining high or improved adherence to diet rich in vegetables and fruits and low in rice over three years was associated with decreased risk of depression. One study (Hibbeln et al., (2018) found high depression scores in 9,668 adult male partners of pregnant women in the Avon longitudinal study who self-identified as vegetarian and used a food frequency questionnaire and a depression scale (M= .96, 95% CI [.53,+1.4%]. The author cited nutritional deficiencies, quality of diet, and reverse causation as possible explanations.

Beezhold (2010) examined associations between mood state and polyunsaturated fatty acid intake with adherence to a vegetarian or omnivorous diet in a cross-sectional study of 138 healthy Seventh Day Adventist men and women residing in the southwest United States. Participants completed a quantitative food frequency questionnaire. Vegetarians reported significantly less negative emotion than omnivores. However, it is important to note the relatively small sample size and under/overreporting intake challenges with self-report depression scales and food frequency questionnaires. Contradictory evidence includes the work of Sugawara et al. (2012) as they studied the association between dietary patterns and depressive symptoms among 791 Japanese community-dwelling individuals using a diet history questionnaire and the Center for Epidemiologic Studies Depression Scale (CES-D) to assess the prevalence of depression. The study found no associations between dietary patterns and the

prevalence of depression. Limitation of conclusions included measuring at one point in time and not controlling for known confounding variables like physical activity and employment status.

Research on dietary patterns and depression is ongoing. The MooDFOOD project is a collaborative project that includes 13 organizations and 8 European Union countries and seeks to understand the role of diet, food-related behavior, and obesity in the prevention of depression. It will use existing data from longitudinal retrospective European cohort studies, combined with new data from surveys, short-term experiments, and a long-term preventive intervention study to determine causal links and underlying pathways between diet and depression (*Mood Food | Preventing Depression Through Food*, n.d.). Overall, despite the exponential growth in studies to understand the relationship between dietary patterns and depression, the field is still young and emerging as evidenced by the fact that the oldest article cited in this literature review dates to 2004.

Although evidence of the connection between food and mood continues to grow, the literature also reveals current challenges and limitations. On the one hand, evidence suggests that dietary patterns emphasizing seafood, vegetables, fruits, nuts, and legumes are associated with lower risk of depression. On the other hand, measurement of dietary patterns and determining depression/depressive signs and symptoms is problematic given the narrow range of methodologies currently being used to define and assess depression. The number of existing studies from which to draw conclusions on dietary patterns from diverse populations remains limited. In addition, methodological and outcome dissimilarity complicates any attempt to discern and determine protective patterns.

This body of evidence has other limitations. Because of the lack of diversity in the study samples, the association between dietary patterns and depression risk cannot be extrapolated to

other populations. Study samples overall lack broad socioeconomic, geographic, age, cultural, and ethnic representation. Research is needed to determine whether dietary patterns are associated with risk of depression in particularly vulnerable subgroups, specifically children, adolescents, young adults, and women during the post-partum period. Randomized controlled intervention studies combined with appropriate standards of care will be paramount to drawing stronger conclusions. Of additional concern, few studies have been conducted in U.S.-based populations, and no studies were identified in a social work journal, despite the important role of social workers in identifying and treating depression. Pending those high-level studies, the current study represents an effort to provide additional qualitative data focused on an important underrepresented population.

Readiness to Adopt

It is necessary to understand social workers' readiness to adopt diet and nutrition as a modifiable risk factor for use in their professional treatment protocols with clients who are depressed. This will help to identify and overcome barriers so that this new intervention in the treatment of depression can be tested and outcomes can be assessed. Gallo and Barlow (2012) reviewed the literature on the characteristics of social worker adoption and non-adoption of evidenced-based interventions. Their work provides a valuable contribution to this study by providing a theory to understand adoption of innovation.

The three primary barriers identified in the implementation of evidenced-based practices among social workers were lack of organization/systemic support, patient factors, and failure of social workers to adopt innovations (Gallo & Barlow, 2012). Rogers (1962) offered a five-stage theory called "Diffusion of Innovation" to interpret readiness of the social work profession to

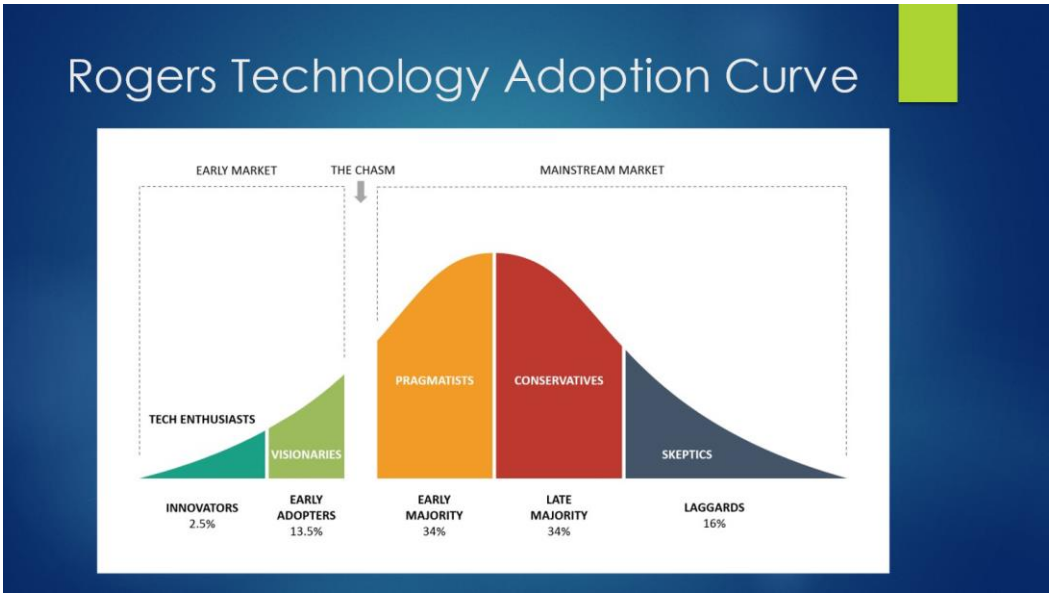
adopt evidenced-based practices. Diffusion has been described as a social process that occurs among groups in response to learning about an innovation (Dearing & Cox, 2018).

The five stages of adoption according to Diffusion of Innovation theory are knowledge, persuasion, decision, implementation, and confirmation (Rogers, 1962). For an adopter of innovation, the first stage requires acquisition of knowledge about the innovation. Stage two requires persuasion, and stage three a decision regarding whether to accept and adopt the innovation. Implementation occurs when the new practice is used in clinical treatment. Confirmation is achieved when the new practice becomes commonplace.

Roger's (1962) theory identifies five adopter categories: innovators, early adopters, early majority, late majority, and laggards and they are depicted below.

Table 1

Understanding Readiness to Adopt



(*Technology Adoption Curve - Everything that you need to know*, n.d.)

Innovators are the trailblazers and the first to adopt new innovations. They are the people standing in lines outside Apple to be the first to purchase the new iPhone model and they are willing to pay a premium to have it. They are followed by the early adopters who are characterized as being highly educated and respected in their discipline. They are willing to take risks but remain more pragmatic than the innovators. Early adopters are well positioned to diffuse innovation with the remaining adopters (Gallo & Barlow, 2012). Early majority and late majority adopters are earlier or later to accept and deploy the innovation as it becomes embraced by the larger majority. The laggards, bound by tradition, are skeptical and find it difficult to engage in trying something new. They will often continue using older technologies long after the rest of the population has moved on.

Four primary reasons for nonadoption of evidenced-based practices are an inability to remain current on new developments, perceived difficulties accessing training, selective adoption, and clinician's preconceptions and misconceptions (Gallo & Barlow, 2012). There appears to be a lack of general knowledge among social workers that diet and nutrition can be used effectively in an intervention with clients experiencing depression to improve outcomes. Social workers are not engaged in any study in the literature on diet, nutrition, and depression. For an innovation to diffuse, there must be knowledge of it, and an innovator or early adopter must exist. Understanding these critical steps is a key goal of the current study.

As the proposal for this study was prepared, I hoped to identify readiness and barriers among social workers related to adoption of diet and nutrition in their interventions for treating depression. I believed that culture, beliefs, and practices would emerge as potential barriers to adoption. Dearing (2009) noted that we assume evidence matters in the decision-making of potential adopters, yet interventions of unknown effectiveness and even known ineffectiveness

often spread while effective interventions do not. Robinson (*Summary_Diffusion_Theory.Pdf*, n.d.), identified incompatibility with existing personal and professional values as one reason that innovations do not diffuse. It is critical to understand factors that represent either readiness or barriers to a new clinical intervention if the diffusion process is to succeed. I determined that the best way to understand potential barriers and readiness to adopt diet and nutrition in clinical interventions with depressed clients was through a phenomenological study of the lived experiences of social workers and food. The methods section operationalizes this approach.

Chapter 3: Methods

Depression statistics and the intractable therapeutic response to pharmacological treatment of depression create a need to explore new approaches to treatment protocols with clients. The promising literature on food's ability to impact depression may encourage social workers to explore the inclusion of diet and nutrition in clinical practice to improve outcomes for them. While the evidence mounts, so too does the body of literature that suggests improved outcomes for clients when integrative treatments are incorporated in clinical practice. These treatments position the body, and its complexity, at the forefront of clinical practice. Currently social workers are not represented in research on the use of diet in the treatment of depression. Moreover, there is no research on the extent to which social workers might be ready to incorporate diet and nutrition in treatment.

Our relationship with food is complex, intertwined with our personal history and possibly pleasant or negative experiences. Before change can take place, these connections must be explored. Understanding social workers' experiences with food may provide a profound contribution to the field as this integrative approach is explored, developed, and assessed by those most responsible for treatment of depression. This methodology provides a platform for the voices of social workers as it seeks to ensure that their valuable experiences are told, shared, and included as a component of the growing body of research on diet, nutrition, and mental health. It brings greater empowerment for change to social workers, who are providing most of the clinical interventions with clients experiencing depression. The phenomenological approach of this study prioritizes the experiences of social workers to construct new understanding.

In this chapter, I further explore the reason for using a phenomenological approach to understand social workers' readiness to adopt diet and nutrition as a component of their clinical

intervention with clients who are depressed. I discuss the selection of participants and data sources along with research procedures, and I identify interview questions and data collection methodology. I then describe the analysis methodology and provide a summary of trustworthiness and ethical considerations.

Phenomenological Research Framework

Phenomenological research is a philosophical approach used to understand the essence of something as it has been lived, experienced, and described by the individual (Peoples, Katarzyna, 2021). The purpose of the researcher is to hold space with the individual to document those experiences as the individual reflects and shares them. This provides an understanding of what it is like to experience a certain phenomenon and how it functions in lived experience (Smith, 2018a). Much can be learned when food, the body, and healing are discussed with a group of social workers and connections with their personal, academic, and professional experiences are explored. Two primary philosophical approaches are used in a phenomenological study: transcendental, or descriptive, and hermeneutic, or interpretive. There are two corresponding founders of these approaches, Edmund Husserl, and his student Martin Heidegger.

In the first decade of the 20th century, philosopher Edmond Husserl (1859-1938) introduced phenomenology as an approach to understanding a phenomenon through bracketing lived experiences in search of meaning (Smith, 2018b). Husserl (1982) states:

> That we set aside all hitherto prevailing habits of thinking, that we recognize and tear down the intellectual barrier with which they confine the horizon of our thinking and now, with full freedom of thought, seize upon the genuine philosophical problems to be set completely anew made accessible to us only by the horizon open on all sides. (p. XIX)

Husserl emphasizes the importance of avoiding the delineation of meaning based on preconceived knowing. This *tabula rasa* approach to knowledge challenges the researcher to begin an inquiry by erasing all that is believed to be known. This is accomplished, he postulated,

through bracketing. Bracketing, or suspending judgement, allows the inquiry to proceed unadulterated by dogma.

Husserl's approach was part of a reaction against scientific inquiry based exclusively in the study of "objective material reality." He and others believed that the exclusive use of the scientific method to gain understanding failed to take into account the experiencing person and the subjective connection between the human experience and the object of the material world (Clark Moustakas, 1994) (Beyer, 2020)(Beyer, 2020)(Beyer, 2020). Martin Heidegger (1889-1976) broke from Husserl's transcendental approach with his hermeneutic philosophy. The essence of his departure was the belief in one's inability to bracket experience. Heidegger believed it is impossible to truly suspend judgments because people cannot separate themselves from being within the world or what he called Dasein (Wheeler, 2020). His solution to this phenomenon was the hermeneutic circle, a revisionary and interpretive process that acknowledges biases or assumptions rather than bracket and attempt to erase or suspend them from consciousness (Peoples, 2021). Heidegger believed that people come to knowing or understanding through a combination of 1) for-conception (all that is currently known/believed by the self or biases and assumptions), 2) new data or interpretation, and 3) revision of biases/understandings/judgments to create new understanding. In the hermeneutic circle, this process of knowing is repeated and layered upon each other to arrive at new insight.

Data analysis in such a study follows a similar circular or helix-like pattern. The transcript in a Heideggerian study is reflected upon in its entirety. The transcript is then broken into parts based on coding and themes to seek understanding of those parts. Data are then analyzed in search of patterns and understanding, synthesized, and reflected on again in the context of wholeness. New understanding leads to repetition of the process and repeats again and

again to discover new meaning and revise understanding. Assumptions and biases are continuously revised through journaling until there is a full comprehension of the phenomenon. Heidegger (1971) characterizes this process as moving from the object or experience that is to be understood to the personal understandings of the researcher and then back to the object. Because bracketing is not useful in a hermeneutic approach, the researcher journals about assumptions and biases.

I chose a hermeneutic approach for this phenomenological study because it remains close to the roots of a phenomenological philosophy. This fidelity to the founder provided a useful basic tool to collect and analyze the lived experience of food and mood with social workers. Focusing on a hermeneutic approach provided an advantage over a transcendental approach because it focuses more on interpretation rather than description. More importantly, a hermeneutic approach recognizes that the researcher, and participants, bring conscious and subconscious biases to a subject. These biases cannot be reliably bracketed, which ruled out use of Husserl's transcendental approach.

The research question of this study sought to identify assumptions and biases within data gathered from the lived experiences of participants as they pertain to food and mood. Unearthing bias is important because I hypothesize bias can be a formidable barrier to the adoption of nutrition as a component of clinical practice with depressed clients. One example of bias may be holding to a long-held belief that certain foods are required for optimal health, while lacking up-to-date scientific evidence to substantiate this belief. Such a belief may be rooted in familial food culture or held due to specific age-old or new food and health-related preferences, habits, and practices. Beliefs and biases, which proliferate in the psyches of social workers, are real and are also often intractable, which is why they are so important to understand in any effort to adopt a

change in practice. Understanding of core beliefs and biases aids in determining receptivity and readiness towards adoption of research on nutrition and depression in clinical practice with clients.

Bias is also a challenge for the investigator. I too face challenges in truly eliminating biases through bracketing due to having spent more than a decade learning, analyzing, and revising my own biases and assumptions concerning food and mood. As an early adopter of a whole foods plant-based diet, I've grown ever more confident that my beliefs are supported by sound research. However, research on nutrition, diet, and depression is ever-expanding and much remains unknown. I am aware that I need to maintain a realistic perspective and be continuously cautious about the reliability of evidence and sources of knowledge related to nutrition and depression. It would be easy, for example, to become overzealous about my own plant-based diet or to villainize other foods without providing scientific evidence. Journaling and notetaking aided in recognizing and exposing my biases to avoid having them interfere with data collection and analysis. Throughout, I sought new understanding through use of a hermeneutic circle approach. This enabled me to continuously revise and interpret my biases and assumptions.

Research Question

Integrative approaches to social work practice have been contextualized in the biopsychosocial model. Research seeks to understand and incorporate integrative approaches to common mental health challenges that present to social workers as they work with clients to develop plans of treatment together. As previously stated, this study did not seek to argue that diet and nutrition, specifically dietary patterns that focus predominantly on whole foods and plants, should be considered as part of an integrative approach in interventions with individuals experiencing depression. Rather, this study sought to better understand social workers' readiness

to adopt an integrative approach to depression treatment that includes diet and nutrition. Specifically, how prepared, and inclined are social workers to move beyond traditional cognitive behavioral therapy and pharmacological interventions to include diet and nutrition in their treatment of depression?

The field of social work has much to gain from this study and much to contribute to understanding of diet, nutrition, and depression. There remains an opportunity to consider how emerging knowledge may be experienced by social workers as they reflect upon the body of literature in the context of their lived experience and the meaning they assign to that experience. This recognizes the interconnected nature of the body, food, culture, and science. It also recognizes the implications in both personal and professional space held by social workers and those they serve. To gain this understanding, the following question was explored:

> How do social workers' personal, professional, and academic experiences impact their readiness to include diet and nutrition in their treatment of individuals who are depressed (RQ#1)?

Participant Sample and Recruitment

To be included in this study, participants had to meet the criteria of being at least the age of 21, have a master's degree in social work, live in the United States, and provide or has provided therapeutic interventions with individuals experiencing depression. Participants needed to be willing to share their personal, professional, and academic experience with food, mood, and healing. It was considered useful to the study if a participant was currently incorporating diet as a part of their clinical practice with individuals experiencing depression. Participants who were currently using diet and nutrition as an intervention could serve as key informants for additional understanding and improved study trustworthiness.

The sample method was both purposive and snowball. Creswell (2018) defines a snowball sample as representing cases of interest from people who know people who meet the research participant criterion. It focuses on identifying individuals with known experience and is therefore considered a non-probability sample. Purposive method, like snowball method, is a non-probability sample and not generalizable beyond the cohort of participants. Fortune and Reid (Fortune & Reid, 1999) define purposive samples as being "handpicked" because they have the characteristics defined in the participant criterion parameters. This type of sample does not rely on a geographic location or randomness.

The sample sought for this study was 12 to 15 social workers who met the study criterion, and 17 were ultimately chosen. One participant interview was mistakenly not recorded, and therefore data for that participant could not be included in the study. Concerns about the legitimacy of one participant's social work credentials based on the interview content led to exclusion of data for this participant from the study. This is discussed further in the section titled Recruitment Challenges. The resulting sample size was 15 (N=15).

This sample size was chosen to ensure an adequate number of participants to amply understand the phenomenon and reach an acceptable level of saturation. Saturation is used in qualitative research as a benchmark for determining when it is appropriate to discontinue data collection (Saunders et al., 2018). Creswell (2018) recommends three to four or as many as 10-15 participants to reach saturation and Gentles and his colleagues (2015) suggest at least six for phenomenological research studies. Because the unit of analysis in qualitative research is experience, not individuals or groups (Polkinghorne, 2005), the sample goal of 12-15 was sufficient. This sample size was chosen recognizing saturation as the primary goal of the sample. This sample provided many perspectives of the same phenomenon to compare and contrast to

reveal similarities and differences of experience until saturation was achieved (Polkinghorne, 2005).

To reflect the larger population of social workers (*New Report Provides Insights into New Social Workers' Demographics, Income, and Job Satisfaction*, n.d.), the study population included 60 percent non-Hispanic white participants. The remaining participants were non-white based on categories identified by the U.S. Census Bureau under the heading U.S. Race and Hispanic Origins (*U.S. Census Bureau QuickFacts*, n.d.). An overview of the participants is provided in the Findings section and in Addendum E. Diversity of the study population was important because of the need to consider and understand corresponding differences in food culture.

Participants were directly recruited through my professional contacts and networks via social media posts (Facebook and LinkedIn) that described the study and invited interested participants to contact me. A sample of the recruitment flyer made available online is below. The remainder are available in Appendix C. I also advertised through the New York State Clinical Society and the California Chapter of the National Association of Social Workers.

Recruitment Challenges

The National Association of Social Workers California Chapter allows researchers to email their membership for a fee. I arranged to distribute a recruitment flyer to their membership. I also posted a study advertisement on their Facebook page, a service they offer as a courtesy, which reached non-members and non-social workers. This resulted in well over 100 inquiries to participate in my study. I distributed informed consent information to them through DocuSign but then learned that many of these individuals were not social workers, so they did not meet research criterion for participation. To address this concern, email correspondence was used to confirm that a potential participant met the requirements to participate prior to distributing the informed consent form. This email asked them to briefly describe their current role or provide a brief work history to confirm they were working in the field of social work.

Data Sources and Data Collection

The virtual platform Zoom was used to conduct interviews with study participants because of University of Albany COVID-19 restrictions against meeting research participants in person. Interviews were recorded with participant consent. The audio recordings were then uploaded to the software platform Otter, which converts audio and visual recordings into a transcript. The transcripts from Otter were read for accuracy and then uploaded to the software platform NVivo, a data analysis platform often used in qualitative inquiry. The average length of the interview was 45 minutes (range, 12-63 minutes). Notes were taken on the interview guide during the interview and were incorporated as journaling data.

The interview guide was utilized to increase the likelihood of obtaining relevant information and provide consistency from the first-person accounts of participants' lived experience. It was designed with open-ended questions that sought to build rapport initially and

allow for deeper insight into the social workers' experience with food and mood. The interview protocol (Appendix A) is semi-structured, meaning that the questions were used as a guide. Sometimes these questions were asked in order, sometimes not, and some questions were not asked at all. If further explanation was necessary when transcripts were analyzed, additional contact was made. Information from these follow-up contacts was included with all other data.

Data were continuously collected, analyzed, coded, and reanalyzed until understanding was believed to be complete (Giorgi, 1985). This aligns with the hermeneutic philosophy that seeks to continuously modify understanding through interpretation. I used journaling as a data source to address my preunderstanding, assumptions, and biases. This was done before, during, and after participant interviews and was used as a secondary data source. Preliminary interviews, follow up interviews, journal notes, and any observation memos (inflections, tone, mood, environment, tempo, facial expressions recorded during the interview) are the key data sources used in this study.

The qualitative data management tool NVivo was utilized to manage the data collected from this study. This program maximizes efficiency in categorizing and reducing data (Wong, 2008). Once data was uploaded to NVivo, transcripts were read again, or "cleaned," to ensure that the transcript accurately reflected the conversation. While the transcription software is an excellent tool, it does not transcribe with one-hundred percent accuracy, hence the need to clean the transcript. Transcript details that appeared to have significance and required further analysis were organized by ascribing codes to them. For example, the code "Bio" was used anytime a participant identified food as a biological component of the traditional biopsychosocial assessment completed routinely by social workers. Addendum F contains a codebook created from data gleaned from participant interviews.

Data Analysis

Qualitative research data analysis is characterized by a process of methodically examining the interview transcripts, journal transcripts, observation notes, and other non-textual materials that the researcher accumulates in search of understanding of the phenomenon (Bogdan, 1982). Because the goal of this phenomenological study was to unravel social workers' phenomenological experiences with food and mood, the method of analyzing is considered emergent. As such, the goal of data analysis was to present a description of essential themes of the experience participants have with food and mood in a way that is understandable and readily identifiable to anyone who has had the experience (Grbich, 2007).

Figure 1 below provides an overview of the data analysis process as adapted from Peoples (2021). This is a graphic depiction of the hermeneutic circle that shows the role of continuously journaling to record and revise my experiences, assumptions (biases), and interpretations of food and mood. The process of journaling and interpretation continued throughout data analysis. Journaling ensures that investigator perspectives and biases are considered as participant responses are reviewed and interpreted. Using this method, the investigator can achieve new understanding. This process was repeated until I believed I had eliminated as much of my own bias as possible and had a full understanding of social workers' experience with food and mood, as indicated by their response to the research questions.

A Phenomenological Approach to Data Analysis

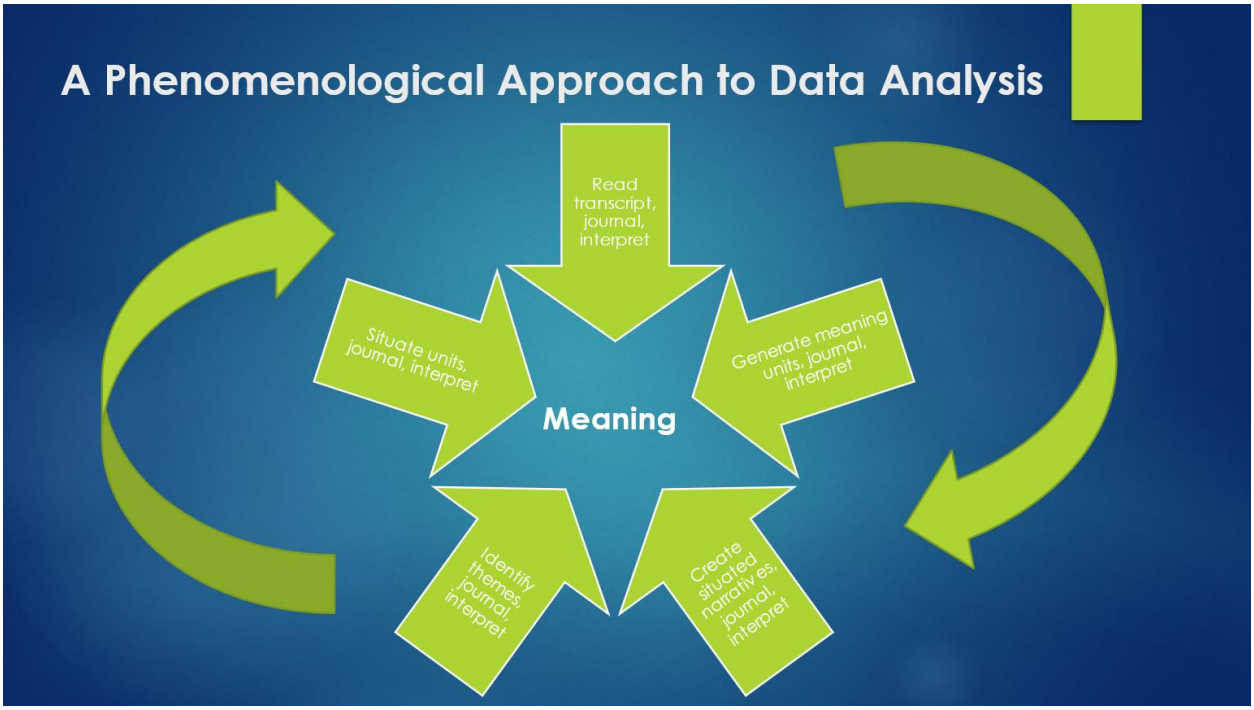


Figure 1. Adapted From Peoples, (2021)

Openness to revisions of current understanding was a key element of my methodology, as is customary of a hermeneutic phenomenological approach. A good example of this openness to revision can be seen in the coding of themes. Themes are emergent because what appeared to be a theme at one point in the analysis changed over time. Early in the analysis, for example, I coded many transcripts excerpts in categories demonstrating how food was incorporated in clinical practice. The theme at that time was "food in clinical practice." Later, I realized that food was being incorporated in the customary biopsychosocial assessment component of the therapeutic relationship, not in clinical practice. The theme then changed to bio, psycho, and social. This continuous willingness to revise understanding aids in fully capturing the essence of the participant's meaning of their experience (Wheeler, 2020).

Trustworthiness

Determining if data is credible and truthful when analysis is complete is a challenge that must be addressed in a phenomenological study to establish trustworthiness (Schwandt et al., 2007). I used Lincoln and Guba's (1985) four criteria for establishing trustworthiness: credibility, transferability, dependability, and confirmability. Credibility requires prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, and/or member checking.

Member checking involves returning data or results to participants to check for accuracy and resonance with their experiences (Birt et al., 2016). For this study, I member checked during participant interviews, during follow up interviews and questions, and at the end of the study. Member checking provided an opportunity for participants to confirm the accuracy of my understanding and provide additional clarification as necessary (Schwandt et al., 2007). Transferability requires "thick" descriptive data to provide enough information to allow others to draw their own conclusions (Lincoln & Guba, 1985). Thick descriptions are used to describe participants, procedures, results, and discussion. These descriptions provide rich detail so readers can visualize and recreate the individuals, environment, and dialogue. An audit trail that included process logs and peer debriefings was used to establish dependability and confirmability. This step helps to ensure replicability and establish the extent to which the study findings may be useful in other settings.

Ethical Considerations

An Institutional Review Board (IRB) application was submitted to the University at Albany Office for Pre-Award and Compliance Services seeking approval to conduct this study. The IRB application addressed the purpose and rationale, use of human participants,

inclusion/exclusion criterion, description of study design, methods and procedures, data collection methods, recruitment plan, informed consent, time considerations, incentives, benefits to the subject/society, risks, and confidentiality.

Food may evoke emotions for those who struggle with their perception of their body or have experienced an eating disorder. Other participants were expected to find exploring their experience with food, healing, and their body empowering. Participants were provided with the opportunity to skip questions that they did not want to answer to minimize risk. Participants were informed that they could end the session and/or their participation in the study at any time without consequence. All information gleaned from this study was stored on a password-protected computer with facial recognition to protect participants' privacy. Data were deidentified by use of codes and altered names to protect anonymity.

Chapter 4: Findings

Introduction

The purpose of this study was to understand social workers' readiness to adopt nutrition as a modifiable risk factor in their treatment with depressed clients. A phenomenological approach was used to answer this question. As previously stated, this methodology was chosen because it provided an opportunity to understand the lived experiences of social workers and their understanding of the relationship between food and mood. This chapter presents the findings of the study and are organized into themes under the three main categories of personal, professional, and academic. The chapter begins with a description of the participants and concludes with the presentation of themes that resulted from the responses to questions from the semi-structured interviews with the 15 participants (N=15).

Participant Overview

Participant bio-sketches are below and in Appendix E.

Participant 1: "Lena" was interviewed using the platform Zoom on 03/14/2022 and 03/24/2022 and identified as a 70-year-old Female of White Jewish descent. They identified parents as first-generation US and their father's ethnicity as Russian, and their mother's as Ukrainian. She is a New York State Licensed Clinical Social Worker (LCSW) with 47 years of social work experience who is currently working as a psychotherapist in private practice. Lena shared her food culture that was shaped by her family's Jewish traditions, and she delved through her memories of her mom's preoccupation with weight and how that impacted her decision-making as an adult.

Participant 2: "Min" was interviewed using the platform Zoom on 03/27/2022 and identified as a 28-year-old female of Asian descent, specifically, Cantonese Chinese. Min was born in Hong Kong. They identified their father's birth country as Macau, and their mother's as Hong Kong. She is a master's level clinician with 2000 hours towards her clinical license and 1.5 years of social work experience. Min is currently working as a child and family therapist in an outpatient mental health clinic. She works in both an eating disorder clinic and intensive outpatient within the overall clinic. As a recent graduate, Min demonstrated a strong understanding of social work theory and practice and was committed to evidenced-based practices. She also provided insight into bias and how it might impact clinical decision making, despite a notable propensity for using research and evidence to guide decision-making.

Participant 3: "Kelly" was interviewed using the platform Zoom on 03/14/22 and identified as a 46-year-old White female. They identified their father's country of birth as U.S., and their ethnicity as Sicilian, and their mother's country of birth as Holland and their ethnicity as Irish. She is a master's level clinician with 3 of years of social work experience who is currently working as a private practice clinician in a group private practice. Kelly identified as an innovator and her commitment to understanding food and mental health was the strongest of all participants. She sought both evidence of food known to impact mental health and an evidence supported structure to help her test and evaluate nutrition interventions. I learned Kelly recently entered a Ph.D. program to continue her efforts to understand food and its intersection with mental health and the social work profession.

Participant 4: "Chase" was interviewed using the platform Zoom on 03/13/2022 and identified as a 73-year-old male of Caucasian descent. They identified their father's country of origin as the

U.S., but first generation Italian and their mother's country of origin as U.S. He is a New York State Licensed Clinical Social Worker with the R privilege (LCSW-R) with 43 years of experience. Chase identified as a Vietnam veteran who has worked all but 6 years of his professional career as a private practice clinician. Chase has extensive experience working in clinical practice where he maintains fidelity to the psychodynamic approach that was focused on at the university he attended. Chase was matter of fact about his skepticism for treatments that often come into vogue like EMDR.

Participant 5: "Natasha" was interviewed using the platform Zoom on 05/02/2022 and identified as a 38-year-old Caucasian female who was born in Russia. They identified their father's ethnicity as Russian, and their mother's as Russian; both are currently living in Russia. She is a master's level clinician with 9 months of social work experience who is currently working as psychotherapist in a private practice. For Natasha, social work was her second career after working in real estate and finance for 12 years. She shared with me her fascinating and personal journey with food and scarcity born in her childhood experiences, customs, beliefs, practices, and traditions growing up in communist Russia.

Participant 6: "Thao" was interviewed using the platform Zoom on 04/24/2022 and identified as a 40-year-old Vietnamese American female who was born in the US. They identified their father's birth country as Vietnam, and their mother's also as Vietnam. She is a California Licensed Clinical Social Worker (LCSW) with 10 years of social work experience. Thao is currently working as an Orange County Mental Health completing intakes for the severe and persistent mentally ill. She has worked part time in a private practice for the past two years. Thao works in a major city on the West coast where she is a case manager but has recently sought

what she described as more rewarding work as a private practitioner. She shared with me a beautiful story of her grandmother's death and the Buddhist tradition of offering a karmic sacrifice. This is accomplished, she said, through the avoidance of eating animals for several months because loved ones who passed away were believed to have the ability to be reincarnated as something better than they were in their previous life by doing so.

Participant 7: "Zendaya" was interviewed using the platform Zoom on 03/08/2022 and identified as a 31-year-old black Muslim female. They identified their father's home country as the U.S., and their mother's as the U.S. She is a California Licensed Clinical Social Worker (LCSW) with 17 years of social work experience who is currently working for the Los Angeles County Department of Mental Health with a focus on juvenile justice and foster care. Zendaya shared with me her ongoing struggles with weight and her commitment to healthy eating and exercise. She doesn't think of food as healing but recognizes it as comforting and uses various strategies to limit portions and eat healthy. Zendaya reflected sentimentally on occasions where she used food to celebrate clients in a juvenile residential treatment facility to comfort them.

Participant 8: "Marlee" was interviewed using the platform Zoom on 03/04/2022 (with the camera off) and identified as a 30-year-old Black female. Their birth country is unknown, but Marlee spoke with an accent believed to be African, but I was unable to confirm. She is a master's level clinician with 3 of years of social work experience who is currently working in a faith-based NGO. Marlee was believed to be from the continent of Africa based on cultural cues. She spoke of food and depression as arising from the community or environment within which people live. She shared her experience with food insecurity and spoke of a healthy diet as having consistent access to food and not skipping meals.

Participant 9: "Nia" was interviewed using the platform Zoom on 03/24/2022 (with the camera off) and identified as a 30-year-old Black female born in the U.S. They identified their father's birth country as the U.S., and their mother's as Senegal. She is a master's level clinician with 4 years of social work experience who is currently working as counselor in a community-based NGO. Nia was also believed to be of African descent based on cultural cues. She, like Marlee, spoke of not always having access to food and when needed, sharing the little they had with each other. She spoke of "lifestyle" diseases in her family and her commitment to a healthy diet to avoid them herself.

Participant 10: "Kristina" was interviewed using the platform Zoom on 03/10/2022 and identified as a 49-year-old Caucasian female who was born in the U.S. They identified their father's birth country as the U.S., and their mother's as the U.S. She is a New York State Licensed Clinical Social Worker (LCSW). She has 25 years of social work experience and has been working as a private practice clinician for the past 10 years where a significant portion of her work is with bariatric clients. Kristina offered a unique lens to this study as a large part of her clinical practice is focused on aiding bariatric surgery seeking clients with the prerequisite psychological clearances. While she specifically cited scope of practice concerns, she also demonstrated comfort providing psychoeducation on diet and behavioral interventions focused on healthy body mass.

Participant 11: "Emma" was interviewed using the platform Zoom on 03/27/2022, and identified as a 40-year-old Caucasian female born in the U.S. They identified their father's birth country as the U.S. and their mother's as the U.S. She is a California Licensed Clinical Social Worker (LCSW) with over 10 years of social work experience who is currently working at UC-

Davis as a hospital-based social worker. Emma was performing postnatal depression screening for new mothers at the time of my interview with her. She shared her experience with trying to change her diet to impact her own mood because of her recent struggle with depression.

Participant 12: "Alona" was interviewed using the platform Zoom on 04/25/2022 and identified as a 33-year-old American Indian female who was born in Guatemala. They identified their father's birth country as Mexico, and their mother's as Guatemala. She is a California Licensed Clinical Social Worker (LCSW). Alona has been working for a federally qualified health clinic as a therapist for approximately 5 years. Alona spoke of her childhood food culture and described using food and psychoeducation on nutrition freely in her clinical practice. However, Alona was not comfortable including food in clinical practice when she learned it contradicted her own food preferences.

Participant 13: "Aliyah" was interviewed using the platform Zoom on 04/05/2022 and identified as a White Jewish 28-year-old (LGBTQ) female who was born in the US. They identified their father's birth country as England, but he migrated to England from Germany because of the Holocaust. Aliyah's mother was born in the U.S. She is a masters level clinician with 1 year of social work experience who is currently working in a small group practice. Aliyah, like Chase, preferred a psychodynamic approach to clinical treatment of depression. She candidly shared her own struggle with disordered eating and body image issues. She now seeks to eat a healthy diet and avoids restricting herself.

Participant 14: "Elenore" was interviewed using the platform Zoom on 03/02/2022 and identified as a 74-year-old Caucasian female who was born in the U.S. They identified their father's country of origin as the U.S., and their mother's as Canada. She is a New York State

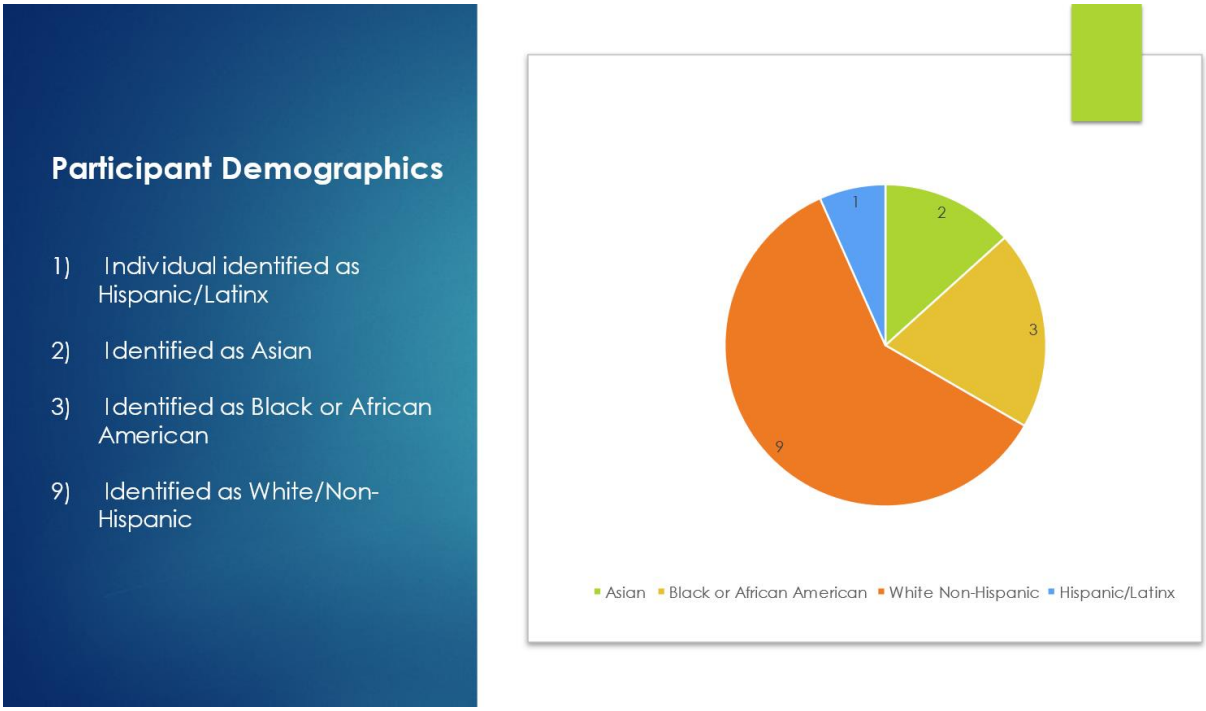
Licensed Clinical Social Worker (LCSW), has a Doctorate degree and has 52 years of social work experience. Elenore had a cognitive behavioral background, partly coming out of her work with children with autism. She readily discussed the connection between exercise, natural endorphins, and serotonin but was skeptical of food's role in healing.

Participant 15: "Sylvia" was interviewed using the platform Zoom on 05/20/2022 and identified as a 27-year-old Caucasian female who was born in the United States. They identified their father's country of birth as the U.S. and their mother's country of birth as the U.S. She is a master's level clinician with 4 years of social work experience who is currently working as a school social worker. Because Sylvia worked in a school setting, she was able to share her experience with students and food behaviors. She shared her work with individuals with eating disorders and individuals who were transitioning their gender. Both offered an interesting perspective to understand how she used food in her clinical work with clients.

Of the 15 participants, 7% were male (n=1) and 93% were female. The average participant age was 42.5 years (range, 27 to 74). These statistics are graphically depicted below in Table 2.

Table 2

Participant's Race



There was a total of 211.4 years of social work experience in the population sampled. The average social work experience of participants was 14 years (ranging from 9 months to 52 years). All the participants met the research study required minimum education level of a master's degree in social work. Fifty-three percent (n=8) held the advanced clinical license (Licensed Clinical Social Workers/LCSW) in the state where they worked.

One participant (P6) was excluded from the study because I questioned their qualifications to participate. The individual reported being a master's level social worker, used some typical industry language, but also used language that was uncharacteristic of a professional social worker. When asked if they would include diet as a component of their

treatment with depressed clients, participant 6 responded; “like when it's (they are) depressed about getting too fat and stuff like that.” The length of the transcript also reflected the overall difficulty I had with engaging the individual (12 minutes 20 seconds). Given the uncertainty, the participant was excluded.

As a result of recruitment methods that focused heavily on New York and California, 8 (53%) of the 15 participants lived in New York, 6 (40%) in California, and 1 (7%) in Colorado. Sixty percent of the participants identified as White, 20% as Black, 13% as Asian, and 7% as Hispanic. Participants identified in a variety of ways including LGBTQ, veteran, Jewish, Cantonese Chinese, Russian, Muslim, American Indian, Vietnamese, and Sicilian. Three (20%) participants were born outside of the United States. Seven participants (44%) fathers were born outside of the United States and, and eight (50%) participants mothers were born outside of the United States. The diversity of the participants may reflect the geographic distribution of recruitment materials in densely populated urban centers in and around New York City and California. These demographics are depicted in Table 3 below.

Table 3

Participant Demographics

ID	Pseudonym	Gender	Race	Self Identified	Social Work Experience (years)
P1	Lena	Female	White	Jewish	47
P2	Min	Female	Asian	Cantonese Chinese	1.5
P3	Kelly	Female	White	Sicilian	3
P4	Chase	Male	White	First Generation Italian Veteran	43
P5	Natasha	Female	White	Russian	.9
P6	Thao	Female	Asian	Vietnamese	10
P7	Zendaya	Female	Black	Muslim	17
P8	Marlee	Female	Black		3
P9	Nia	Female	Black		4
P10	Kristina	Female	White		10
P11	Emma	Female	White		10
P12	Alona	Female	Hispanic /Latino	American Indian	5
P13	Aliyah	Female	White	LGBTQ Past Eating Disorder	1
P14	Elenore	Female	White		52
P15	Sylvia	Female	White		4

Themes of Adoption Readiness

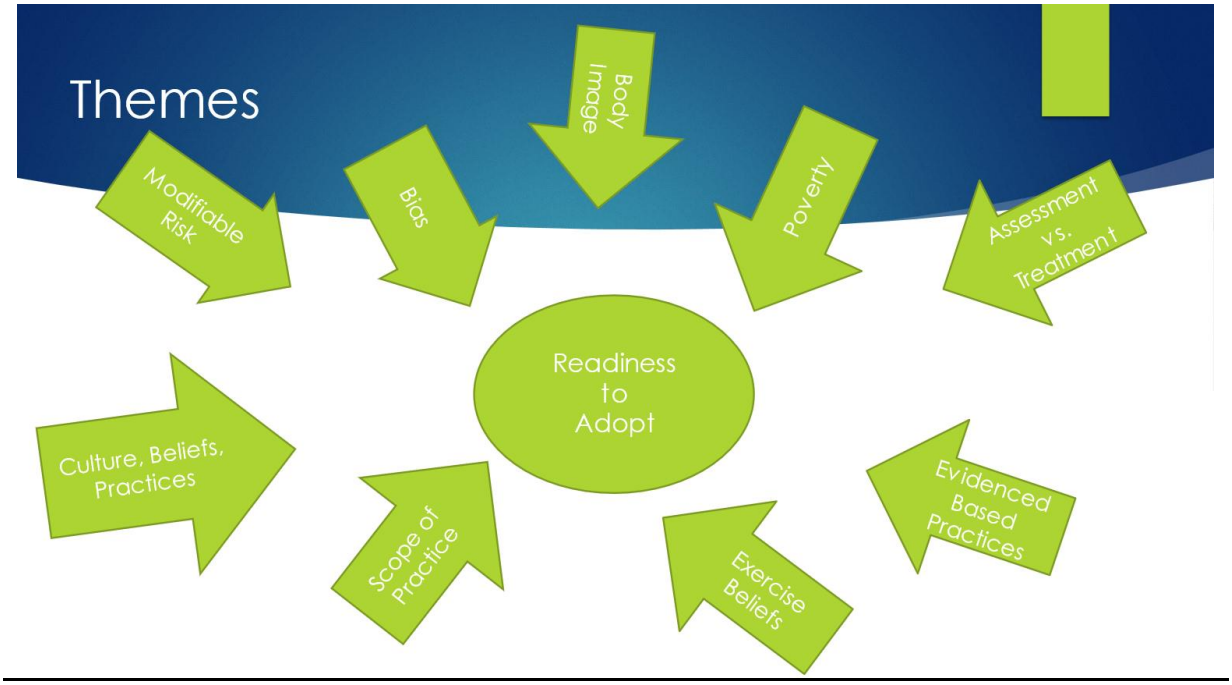
Readiness to adopt was discussed in detail in Chapter 2 and for the purpose of this study, this phrase is used to reflect social workers willingness to include nutrition as a component of depression treatment. Themes that impact readiness to adopt emerged from participant interviews in the academic, personal, and professional realms of the participant's experiences. One theme emerged in the academic learning category around there being no shared language around modifiable risk factors, a central component of depression treatment. Three personal sub-themes

emerged around culture, beliefs, and practices that impact readiness to adopt nutrition in clinical practice and they include (1) a healthy diet includes fruits, vegetables, and balance (2) beliefs about food's ability to heal; and (3) diet and health beliefs and practices unsubstantiated by evidence.

Two other themes that emerged under the personal category include (1) weight and body image and (2) growing up in poverty. Five themes in the professional category were (1) nutrition viewed as outside the scope of practice for social workers, (2) exercise viewed as embedded in the scope of practice, (3) food is used in biopsychosocial assessment, but not as a component of treatment, (4) strong adherence to evidenced based clinical modalities in treatment, and (5) beliefs about nutrition in clinical practice. Under the professional theme of the meaning social workers ascribe to the role of food in clinical practice, sub themes included (1) biological, (2) psychological, and (3) sociological ways social workers incorporate food in their clinical practice. Themes that impact readiness to adopt are displayed in Table 4.

Table 4

Themes Impacting Readiness to Adopt



Category 1: Formal Learning of Depression Treatment Protocol

Academic Theme 1. No Shared Language Around Central Component of Depression Treatment. The treatment of individuals with depression includes the clinical assessment of risk factors that can be changed by a client to improve mood. These risk factors are known clinically as modifiable risk factors. Social workers identify factors known to worsen or lessen depression with clients and use psychoeducation and behavioral change strategies to encourage clients to decrease behaviors that make depression worse and increase behaviors that are known to lessen depression. Some examples of modifiable risk factors include altering the frequency and quantity of alcohol consumed or cannabis used, eating a healthy diet, improving sleep, stopping tobacco use, managing weight, and exercising (Cairns et al., 2014; Meng et al.,

2017). Fourteen of the 15 participants lacked familiarity with the term modifiable risk factor. This is important because shared language is critical to a profession (Frantk, 1961) and equally important to clinical treatment modalities. The discussion chapter will explore how the lack of a shared language must be addressed if nutrition is to become a common modifiable risk factor assessed by social workers in their treatment of depressed clients just as exercise is.

When participants were asked about their knowledge of modifiable risk factors their answers varied, but all answers demonstrated a general lack of familiarity with the term. Chase, a licensed clinical social worker with the New York State "R" privilege and a 43-year veteran of the profession, responded with a frank "no" when asked if he remembered learning about modifiable risk factors for depression. The "R" privilege requires insurance carriers to provide reimbursement for psychotherapy services whenever a health insurance contract includes reimbursement of qualified psychologists and psychiatrists (*NYS Social Work Psychotherapy R Privilege,* n.d.). Min, a 28-year-old MSW with 1.5 years of professional experience post MSW, answered, "I think we learn(ed) social determinants of health…. So, this is why it's important, and ACE's. But I don't think we ever touched on that specific, like, how do we modify risk factors or modifiable risk factors?" "Risk factors in terms of suicide?", was Kristina's response. Kristina is a licensed clinical social worker with 10 years of professional experience post MSW. In general, participants lacked knowledge, or language familiarity, of this fundamental component of improving outcomes for depressed clients.

In addition to the apparent lack of language around a core component of depression treatment, this theme challenged my justification for including nutrition in the treatment of depression as discussed in Chapter 1. In that chapter, I argued that nutrition should be included as an integrative component of treatment and cited the biopsychosocial model as further

justification of nutrition's place in social work practice. While both support the incorporation of food and nutrition in clinical practice, addressing food as a modifiable risk factor is a practice concept and is used in practice differently. The implications for this lack of language or familiarity with modifiable risk factors will be explored in depth in the discussion chapter.

Category 2: Personal Experiences That Impact Readiness to Adopt Nutrition in Clinical Practice

Personal Theme 1. Culture, Beliefs, and Practices That Influence Readiness to Adopt. When a participant stated or alluded to their beliefs about the meaning of a healthy diet, it was coded under the theme healthy diet. When a participant stated or alluded to their beliefs about the ability of food to heal, it was coded under the theme healing. When a participant stated, alluded to, or described a belief or practice about diet and nutrition, it was coded under the theme dietary beliefs. Thus, the culture, beliefs, and practices subthemes that emerged were 1) a healthy diet includes fruits, vegetables, and balance, 2) beliefs about the ability of food to heal, and 3) diet and health beliefs and practices unsubstantiated by evidence.

Personal Subtheme 1: A Healthy Diet Includes Fruits Vegetables and Balance.

Evidence suggests that a dietary pattern rich in fruits and vegetables and low in animal-based foods improves outcomes for individuals with depression. Most participants indicated they believed a diet rich in fruits and vegetables are healthy. When participants were asked what a healthy diet meant to them, their answers consistently identified fruits, vegetables, and balance. Aliyah, a 28-year-old female, who identified as being in recovery from an eating disorder in college, spoke of fruits, vegetables, balance, unprocessed food, and mentioned restriction several times. She responded to what a healthy diet meant to her by saying:

> Whole foods, like whole vegetables, meats, whole grains. I tried to like to have a pretty good balance of the different food groups like I don't restrict carbs, I don't restrict fat. I

> don't. I eat like sugar and things in moderation. And like organic and yeah, little processing as possible.

Natasha, who emigrated from Russia and who had experienced food insecurity said, "A healthy diet to me means definitely lots of vegetables. Fruits too I guess fruits and vegetables." Marlee, who also spoke of food insecurity as a child, said, "A healthy diet consists of fruits, vegetables, legumes, maybe whole grains." Kristina, a private practice clinician who works with individuals seeking clearance for bariatric surgery said, "Honestly, a healthy diet, to me means balance." Emma spoke of minimizing processed foods while incorporating fruit and vegetables when she said, "… I also tried to minimize processed foods, you know, I try to make sure I'm eating lots of fruits and vegetables." While answers varied somewhat, most acknowledged that they believed key components of a healthy diet are fruits, vegetables, and balance. This common ground may be important to social workers adopting nutrition as a modifiable risk factor with clients who are depressed and will be explored further in the discussion chapter.

Personal Subtheme 2: Beliefs About Food's Ability to Heal. Participants' beliefs about food and healing are important to understand. For some, like Elenore, this may have been the first time they considered food as having the ability to heal. Others, like Chase, outright rejected the notion of food having the ability to heal. The belief that food can be a component of healing may support readiness to adopt nutrition as a modifiable risk factor for depression. The belief that food has no connection to healing may pose a barrier to the adoption of nutrition as a modifiable risk factor for depression treatment.

When participants were asked about experiences where they felt like what they ate was healing, some rejected the notion of food having the ability to heal. Elenore, the most senior participant in this study at the age of 74, said, "…it's a nice thought. I mean, maybe I'll put that into some guided imagery for myself." Other participants connected food with physical healing

like Lena who said, “When I want comfort, or when anyone in my family is sick and sometimes even friends, I make chicken soup, my grandmother's chicken soup, with matzah balls, maybe with kasha, and it smells like my grandmother's house.” Several participants connected a feeling of love and comfort around food and family customs or traditions. Thao said:

> When I was going through fertility challenges, I was craving for things that my mom made for me. So, I turned to Vietnamese recipes to eat. So, like Vietnamese curry, which tends to be very rich, creamy, and sweet compared to Thai curries.

Lena connected her culture with food and the feeling of love as was evident when she said, “I mean, food in the Jewish culture is a big deal. It's a definite way of showing love of carrying on family traditions.” While most connected the experience of food with healing in their own way, Zendaya may have captured the sentiments of many of the answers when she said, “I don't know about healing, I mean, comforting for sure.”

Personal Subtheme 3: Diet and Health Beliefs and Practices Unsubstantiated by Evidence. Throughout the interviews, participants shared thought-provoking, and sometimes highly unique, dietary beliefs and practices. Strongly held beliefs about diet and health or closely held familial practices, contrary to evidence that supports their efficacy, may pose a barrier to the adoption of evidenced based approaches that contradict these beliefs. There was wide dissimilarity in the dietary beliefs and practices between the participants and the implication of these beliefs and practices will be explored in the discussion chapter. Some of these beliefs and practices are conveyed in transcript excerpts below to provide evidence of their idiosyncrasy.

During a conversation about where Lena gets information on healthy diet and nutrition, for example, she said, “Kripalu, [a large yoga center in the Northeastern US] I've gone to for over 25 years..., it's Ayurvedic…” When describing one of her beliefs about diet, Kelly said, “I think food processing in terms of how we digest and how we process, I do think our point of

origin potentially has some impact on what foods genetically feel right for our bodies." Natasha, who spoke to me about her experience with food scarcity growing up in Moscow and the utilitarian approach required for meal preparation there described her relationship with food like this, "I would say complicated because on one hand, daily food I completely see as a utilitarian thing. As a matter of fact, like two weeks ago, my husband and I started drinking Soylent drinks [a brand of meal replacements]." Natasha spoke of Soylent as a way of simplifying her relationship with food and not having to eat or plan to eat at all.

In responding to a question about her experience with a vegetarian diet, Thao shared a belief and practice around her Buddhist tradition:

> After my grandmother had died, in Buddhist tradition, we eat vegetarian food for about, I think it was like three months. So, in Buddhist tradition, from what I've learned, eating animals is contributing to their suffering, and by not eating them, we are helping out our own kind of karmic energy and reserves as well. So, as we are saying goodbye to a loved one, and we're hoping that they go to heaven or get reincarnated as something better than they were in the previous life. So, by honoring them and giving them more karma points, essentially, or leverage, where we're not eating meat, we're helping them along their journey and giving them more karma.

Marlee spoke of her belief about meat being a component of a healthy diet when she said:

> But also, I don't like taking it (meat) from the stalls when it's already cooked, because at times these foods are already overstayed or maybe they have been put chemicals, so as much as possible to be on the safe side.

Emma shared her belief about an Arbonne cleanse [a product and process believed to detoxify the gastrointestinal tract]:

> So, I recently did this Arbonne cleanse, so it's like a healthy living type thing. Yeah, it actually really did boost my, like, mood, it boosted my, you know, energy, my concentration, like I felt those positive effects all happen. And so, I was like, okay, I want to try to keep this healthy, you know, lifestyle kind of going.

When asked about her meaning of a healthy diet, Aliyah said, "And one more thing to add, it was made a joke that he (my dad) would only ever disown me if I moved to Texas or became a

vegetarian." She added, "Vegans were scorned in my family." When asked about where Elenore gets health information, she said:

> So finally, I found this guy all the way out in Alaska who had done a lot of research, and he's got me on three other natural substances, which I've been a little skeptical about, I mean, I'm not just going to take them. So, I've been slowly adding one because supposed to use three times three times a day.

As indicated in the transcript excerpts, dietary beliefs and practices were highly idiosyncratic and demonstrated no pattern. However, within the various beliefs and practices discussed, there is a common thread of pseudoscience that may be a barrier to adoption of evidenced based practices known to improve depression outcomes. This needs to be understood and will be explored further in the discussion chapter.

Personal Theme 2: Weight and Body Image. Nine of the 15 participants discussed their personal or familial experience with weight or used terms that reflect feelings toward their body, size, or body image. Participants described their lived experience with weight and body image in ways that demonstrate how weight and body image have impacted them. Food and diet are woven closely together with health, disease, and body mass. Statements about weight and body image provide a window into the psyche of participants. I will draw conclusions in the discussion chapter on how experiences and beliefs around social worker participant's own body image may impact their readiness to adopt nutrition as a modifiable risk factor with clients. Doing so requires a certain level of comfort with evidence of dietary patterns known to influence health even when such evidence contradicts the beliefs and practices of the participants.

Min, who is Cantonese Chinese, spoke of the pressure from her family to remain thin. She said, "This diet mindset of needing to stay skinny, needing to stay slim, a lot of care and

concern about, you know, being on a diet all the time. That's kind of the stuff I grew up around."

Zendaya, who identified as a Black Muslim, spoke of being chastised for her weight:

> I just, I think I've always been, you know, like a thicker person. And so, I don't like how people judge me based on my appearance, especially like, with the teaching, you know, of my classes, I've had people be rude, or I've had people walk out when they see me walk in as the instructor because they're judging me based on my build and thinking that I can't do anything for them.

Emma said she was chastised for being too thin: "So I was always extremely skinny. So, I actually had body image issues around like anorexia like, like, my mom would say something you're just skin and bones."

Aliyah, who experienced an eating disorder spoke of her experience with weight and body image: "In terms of myself, like, (I) work very hard to be, like, do intuitive eating or like, you know, not restrict my eating, but I did have an eating disorder in college." She said, "My family was like super fat phobic," and she continued to share a story of meaning for her:

> The first thing that comes to mind when you ask that question is that I have a very clear memory. So, I gained a ton of weight when I first went to college, like classic freshman 15. And I went home for the holidays, and I like ate dinner with my family. And I said, like, oh, I'm so full. After the meal. And my dad said, like, oh, you do that a lot, don't you?

Aliyah's experience, and those of others who spoke of weight and body image, will be explored in the discussion chapter. For now, this theme may be summarized using Lena's reflection, "…And I've had my own things with food, who hasn't?"

Personal Theme 3: Growing Up in Poverty. Nine participants made direct, indirect, or general reference to their or their family's experience of poverty. Most of them directly or indirectly connected poverty to food or nutrition. Lena, a White, Jewish woman born of immigrant parents, said:

> And my mom had cancer (and dad had) just turned 36 (when he died). My mom was 33. And there were three little girls, and we had no money coming in. And he had been in the war, but veterans' benefits were little. And luckily her brother helped.

Emma described her own experience of poverty:

> But in general I grew up in a pretty poor family so we had to go to like the government assisted food bank, when they used to have that, where you would stand out in the line and they would, you know, give you bread and milk, getting you know, flour and sugar and things like that, and all in the white packages with just black letters that said like sugar or milk or butter."

Natasha experienced food insecurity and scarcity growing up in Moscow:

> So, growing up, you know, communist Russia, food was not necessarily scarce, but it was something that was on our mind. So, you did have to think, you know, what we're going to have for the next meal, it wasn't just as easy as opening the fridge and grabbing something, it was more like, you have to make something out of very basic ingredients. And you might not always have cheese or butter. So, you kind of have to make do with what you have. And then I also remember long lines standing for food. So, I think to me, it was like this if you have it, you grab it. If something's good in front of you, you grab it. So, we would eat pretty simply on a daily basis. And then we would have something sweet at the end. And sometimes it was as simple as you take a bit of jam and dissolve it in a cup of water. And that's like your sweet drink and you enjoy that. But there was something sweet at the end to kind of finish off the meal.

Thao, a woman who identified as Vietnamese, shared her experience: "…I didn't grow up with a lot of financial support, essentially. So, my parents were immigrants and on welfare, and I kind of understand how level of support they (clients) need in order to raise their family." Marlee had a similar experience:

> I grew up in an area where my parents are not all that well off. So, I think you'll miss out on food. So, at times, they even thought that foods (was a) luxury at the moment. But now, right now, I'm in a better position, because at least I can afford a balanced diet.

Nia too, spoke of food insecurity:

> My family's relationship with food is that they love eating good food, though, in case the food wasn't enough, at least we'll share the little we had. But things got better. So, we were able to afford food as days goes by. Yeah. My mom really tried for us not to miss out on food.

How participants experience poverty may show up in their willingness to adopt nutrition as a modifiable risk factor for depression and will be explored in the next chapter.

Category 3: Professional Experiences That Impact Readiness to Adopt Nutrition in Clinical Practice.

Professional Theme 1: Nutrition Believed Outside Scope of Social Work Practice. Nine participants directly or indirectly acknowledged believing or feeling nutrition is outside of the scope of practice in treatment of individuals experiencing depression. Some of the nine specifically used the term "scope of practice." Several referenced the need to consult or refer to a dietician or nutritionist, and others spoke of lacking knowledge or expertise. Believing nutrition is outside the social work scope of practice, coupled with limited language around modifiable risk, is a formidable barrier to nutrition becoming a component of treatment of depressed clients. This will be discussed in detail in the next chapter. Kelly spoke of wanting to include nutrition as a component of her clinical interventions but cited barriers to doing so:

> So, it's really hard to integrate it because there you know, I haven't been successful in finding like a certification program, something that really solidifies my knowledge in nutrition so that I can really bring it in with some more confidence and feeling like I'm trained in it in a way you know.

She continued, "I haven't really found anything that's like stamped and approved NASW kind of thing." Natasha said:

> Hmm. If we were to do the same scale of one to 10 - 10, being like the most comfortable, I would say, I would be like a seven. And my hesitation is, how would it be perceived by the client? Is it perceived as me going out of my area of expertise?

Kristina, the social worker who works with bariatric surgery clients, said, "And again, scope of practice, I always say to somebody, I can't comment on the nutritional plan that you're choosing, but do you feel it's working for you?" Alona, like several others, referenced depending on a nutritionist for guidance. She said, "I rely a lot on our dietician…but if I had more access to

them on a regular basis, I think that I would feel more comfortable doing that." When Aliyah was asked how comfortable she was with including nutrition as a component of her treatment with clients experiencing depression, she said, "I would also probably recommend that they see a nutritionist."

Professional Theme 2: Exercise Embedded in Social Work Scope of Practice.

Thirteen participants currently include exercise as a component of their clinical practice [they discuss the importance of exercise or movement in alleviating depression symptoms], one was conflicted, and one lacked data to determine an answer because the question was not asked. No scope of practice concern was cited by participants who incorporate exercise as a component of their treatment of clients who are depressed. This is important to unpack because willingness to adopt nutrition in clinical practice may eventually parallel exercise, which went from novel to commonplace in clinical practice with clients who are depressed.

When asked if she included exercise as part of her treatment of depressed clients, Kelly said, "I do. You know, I'll use, depending on how much they want to know, you know, I'll say, do you know that when you move, we released some happy hormones…and then sometimes I'll do some psychoeducation around that." Natasha referenced using research to encourage clients to exercise, "Yes, absolutely. I will usually mention studies about how important exercise is for depression specifically. So that's a big one that I talked about." Kristina elaborated further on the body of evidence that supports exercise to improve outcomes for depressed clients:

> I do that for the psychosocial for all my clients, regardless if they're bariatric because exercise does increase positive endorphins. And I do think it's great for moderate exercise for anybody. 30 minutes a day is usually what I encourage for all of my clients as tolerated…I mean, I don't quote as far as a percentage go, but I do tell my clients that numerous studies…have said that when you do have moderate exercise, it's equivalent to taking an antidepressant.

Alona was the most enthusiastic about incorporating exercise with all clients:

> Absolutely and (I) talk about it with every patient...yeah, yeah. No, I talk to everybody about it. I talk to her because it's like, I tell him, I'm like, It's the magic pill. You know, that's the magic pill that's gonna help them with their depression or with their cholesterol or whatever.

Elenore's statement above echoes the sentiment of others and provides an overall example of how highly embedded exercise is in the treatment of clients who are depressed. She said, "Yes… I think the connection to natural endorphins and serotonin is well established." Aliyah, the participant with a history of disordered eating, was the least enthusiastic about including exercise as a component of treatment of depressed clients, "I have a little hesitation around it. I think because I try to be so conscious of like peoples, like limitations, or like, like I work with people who have disabilities, or who are fat or whatever."

The table below creates a visual depiction of participants inclusion of exercise as a component of depression treatment, their willingness to include nutrition in their treatment of depression, and whether they cited a scope of practice issue pertaining to including nutrition as a component of depression treatment. The table was compiled based on excerpts from participant transcripts gathered from three themes previously discussed and listed in Category 3: Professional. They include Theme 1: nutrition believed outside scope of practice Theme 2: exercise embedded in scope of practice, and Theme 5: beliefs about nutrition in clinical practice. This table, supporting data, and its significance to the research question posed will be discussed further in the next chapter.

Table 5

Modifiable Risk Factor Data Comparison

#	Name	Exercise Y/N/C/U	Adoption Willingness W/N/C	Scope of Practice Issue Y/N/C/U
P1	Lena	Y	W	U
P2	Min	Y	N	Y
P3	Kelly	Y	C	Y
P4	Chase	Y	C	Y
P5	Natasha	Y	C	Y
P6	Thao	Y	C	U
P7	Zendaya	Y	C	U
P8	Marlee	U	W	Y
P9	Nia	Y	W	U
P10	Kristina	Y	C	Y
P11	Emma	Y	W	U
P12	Alona	Y	N	Y
P13	Aliyah	C	C	Y
P14	Elenore	Y	C	Y
P15	Sylvia	Y	C	U

Key	
Y	Yes
N	No
C	Conflicted
U	Unasked, unknown, unanswered
W	Willing
N	Not willing

Professional Theme 3. Food is Used in Biopsychosocial Assessment, But Not as a Component of Treatment. Participants described how they incorporate nutrition in their clinical work with clients. With a few exceptions, these statements reflected incorporation of nutrition as a component of the customary biopsychosocial assessment, not as a component of treatment. Therefore, statements made by participants during their interview that alluded to or described the

way they incorporate food and nutrition in practice are divided into the subthemes biological, psychological, and sociological. Transcript excerpts from participants are listed below and sorted by subtheme. This provides evidence of the theme that emerged regarding how social workers are using food in a traditional biopsychosocial assessment with their clients.

Professional Subtheme 1: Food Incorporated in Clinical Practice as Part of Biological Assessment. Participants cited many ways they incorporated food in their clinical practice with clients in a traditional biopsychosocial assessment. They mentioned diabetes, gastric bypass, autism, gastronomy tube patients (9G-Tube), lactating mothers, gut problems, depression, appetite assessment, eating disorders, working with individuals who identify as transgender, and food consumption frequency. A review of some of these topics and the ways social workers described them aids in supporting the subtheme.

Participants often identified eating frequency as a component of assessment for depression because change in appetite is one of several indicators mental health professionals use to assess for depression. Alona said, “So like, for me, I know that when I get depressed food is the first thing to go. It's out. Right? And so just like from a screening standpoint, like I'm always looking for it, right, you're depressed.” Alona spoke of the importance of assessing eating frequency. She said she asks, “how often they're eating? Right? Because those are going to be red flags for me.”

Marlee, who spoke of not having enough food to eat as a child, noted assessing food frequency with new mothers. She said:

> For people who come out of these relationships, especially when it's a new mom, you see, most of us are so like, depressed, that they don't even have to have enough milk for the child. And the babies may be breastfeeding.

When Kristina spoke of how she incorporates food in clinical practice, she said “Yeah, in somewhat interesting ways, because sometimes we have G-tube patients, like we had a G-tube patient, where the doctors said, it's not that she couldn't eat food. It's that she wouldn't eat.” Elenore spoke of how food plays a critical role in working with clients with eating disorders. She said, “I've had some clients specifically come for that (food). For example, I'm treating one youngster with anorexia.” Sylvia mentioned how she uses food frequency assessment with transgender individuals. She said:

> I'm thinking of it as we have two students that are in the transgender process, one, only in seventh and eighth grade. So, they can't really start that process, but they officially identify as a different gender. And I always say, are you eating? And I don't believe they are.

Min provided the most comprehensive answer when asked how she incorporates food in her clinical practice. She demonstrated how she uses food in various situations and well within the scope of practice boundaries she espoused earlier. She said:

> I think in assessing for symptoms, during the assessment process that is like, have you had changes in appetite, that is, that is one thing to have kind of qualifying like, okay, that's one symptom with depression, or with anxiety, that's the other thing too. And then with my eating disorder work, that would be the other biggest piece, where eating really comes into the clinical piece of getting a 24-hour food log of what they've eaten. And because I work with children, and youth and teens, eating disorder, treatment really involves their parents as well. So, pulling parents in to also support them with making sure they're eating at the scheduled times. When I am working with eating disorders, we do work with a nutritionist closely as well. So, they're kind of helping them to have that guidance. But and then my role was more like, hey, have you been reading the meal plan they offered? What's getting in the way of that? What's getting in the way of your, your second snack of the day? So more brainstorming plans forward around that.

Professional Subtheme 2: Food Incorporated As Part of Clinical Practice in Psychological Assessment. The way food entered clinical practice as a component of psychological assessment include challenges with weight (perceived belief around a number that reflects health), body image (client’s perception of their body and feelings toward it), and body

mass (a medical standard often used to classify healthy and unhealthy weight range). This is important because it further demonstrates how social workers are adhering to traditional biopsychosocial assessment. Min spoke to me about the challenges that presented with adolescents post-COVID. She explained:

> And I think timewise working through the pandemic, has really spiked up a lot of it, because the classic story you hear is either they gained a lot of weight during the pandemic and wanted to lose it and went to an extreme, or they were stuck at home had nothing to do all they could see were workout videos. And then that's all they did; they took that time to lose weight based on some triggers that have been building up for them. So, the quarantine was kind of this perfect recipe for a lot of teens who really have nothing else to focus on also, right, like they're at home. And especially as they, you know, for those who like, maybe gain more weight from sitting around and eating food, that mentality of like, oh, no, no, I'm going back to school, and people are going to see me, what are they going to think that stirred the pot for them too.

Several participants connected weight, body image, and depression. Marlee said, "I remember most of the time, people who are depressed, some could be as a result of their, their, their body, how they look, or how people perceive them." Elenore too spoke of the impact of weight on mood. She said, "My clients, where, you know, the amount of weight they're carrying around has got to have a huge impact on their mood and on their health and their energy level." Chase said, "And also, you know, you look at someone in terms of their, their body mass in terms of how they take care of themselves, and how does that contribute to their depression and self-image and self-worth?" Alona discussed the psychological battle many people face when managing their weight. She provided the following client example, "Her relationship with food was not about, how is this going to give me nutrition? It was kind of fighting food all the time." Kristina spoke of the challenges of clients who need to change their diet to manage their weight. She said, "And it's a lot for people to change, because to some people, they feel like they're losing their identity."

Professional Subtheme 3: Food Incorporated in Clinical Practice as Part of Sociological Assessment. Participants made many statements during the interview that indicate how they use food in their clinical practice as a part of the sociological assessment of a traditional biopsychosocial assessment. Race, culture, poverty, food insecurity, and food access are concepts that would be considered sociological. Kristina spoke of how race impacts her work with those seeking bariatric surgery. She indicated that certain cultures consume diets that negatively impact health and that are difficult to help clients change or modify. Alona spoke of how race impacts access when she said, "There's such a great lack of access to grocery stores that have high quality fruits and vegetables, within proximity to a lot of low-income communities, which are typically more likely to have people of color occupying those spaces."

When asked how Emma believed the food her client consumed impacted their body or mood, she responded:

> But sometimes there's a lot of cultural issues that come around that too, I especially notice for our Latina patients. Because culturally, oftentimes, they're the ones that cook the meal for everyone in the home. And if they don't have a supportive partner who's willing to adjust the household diet, then it creates a situation where they might have to make a separate meal just for themselves. And they often find that to be a significant barrier to making that change.

Alona, who identified as Native American responded to the same question by sharing her experience leading a diabetes support group:

> I definitely say that in the diabetes support group, it was very much cultural. So, there was very much this idea of, this is what I eat, because it's part of my culture. And if you're telling me not to eat it, you're attacking my culture. Right? Yeah. So, it was really hard in that group, the dietitian, she had her work cut out for her. I think for me, it was a little bit easier, because I would say, you know, cookies aren't a part of your culture, right?

Min shared her experience with clients and food insecurity. She said:

> The poverty piece can be challenging, because a lot of times, there's some food insecurity there. So, there have been some patients who are more worried about, you know, how is my mom gonna afford this food, or we just don't, or they have this belief that there isn't enough food in the house, so they don't deserve to eat the food (that is there).

Zendaya spoke of how food insecurity showed up in behavior with children in residential care. She shared:

> In terms of poverty, … I know that I had kids who had food insecurity in their homes. And so that could show up for them in different ways, once they were in residential care… Yeah, so that food insecurity definitely would show up in terms of how some of my kids reacted or responded to food once they had access to it.

This section demonstrates all the ways that social workers seek to understand food and the impact it has on their client's lives. It further demonstrates how food is routinely understood through the customary biopsychosocial assessment.

Professional Theme 4: Strong Adherence to Evidenced Based Clinical Modalities in Depression Treatment. Participants frequently cited using standard treatment protocols characteristic of the evidence-based movement. Participants did not cite integrative approaches as I previously used to ground this study in theory. Transcript excerpts taken from participant interviews demonstrate this theme: Min said:

> I pull from a mix of CBT, DBT. ACT, solution focused, brief therapy. Some elements of internal family systems, I'm not fully trained, but like the idea of parts work, I kind of pull from mostly a mixture of those, and of course, motivational interviewing, which I think is everywhere.

Natasha, Zendaya, Alona, Elenore, Kristina, and Sylvia acknowledged using Cognitive Behavioral Therapy (CBT). Chase spoke of his graduate school's psychodynamic focus and said when asked what approach he used to treat depression, "I always use psychodynamic." Aliyah also uses a psychodynamic focus in her treatment of depressed clients. I was intrigued to learn how closely participants adhered to standard treatment protocols. This will be discussed at length in Chapter 5, but the most important takeaway is that this adherence to evidenced based practices

may increase adoption readiness or social workers willingness to include nutrition as a modifiable risk factor as research advances and nutrition becomes a more widely known evidenced based practice.

Professional Theme 5. Beliefs About Nutrition in Clinical Practice. As new clinical approaches build evidence of efficacy and become more widely known by the profession, social workers may begin to adopt them as a component of practice. Understanding where participants' current willingness to adopt nutrition as a component of treatment of depression provides valuable insight for researchers and change agents as they seek to foster a broader incorporation of this new practice in the profession. Participants stated, alluded to, or described their willingness to include nutrition as a component of their treatment with depressed clients throughout the interviews. Table 3 above is duplicated below charting the answers. Four participants were willing to include nutrition as a component of their treatment of clients who are depressed (P1, P8, P9, P11). Two participants were not willing to include nutrition as a component of their treatment of clients who are depressed (P2 and P12). Nine participants gave conflicted answers that could not be reliably categorized as either a yes or no (P3, P4, P5, P6, P7, P10, P13, P14, P15).

While some participants said they were willing to incorporate nutrition as a component of treatment, they also noted challenges or barriers of doing so. These individuals were listed as conflicted. This includes "Kelly" (P3) who was the most enthusiastic of all participants, but still noted challenges in incorporating nutrition in treatment of depressed clients based on scope of practice concerns. The thick transcript excerpts, customary of a phenomenological inquiry, for this theme are taken from participant interviews to demonstrate the rationale for their categorization in Table 5 reproduced below.

Table 5

Modifiable Risk Factor Data Comparison

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P4	Chase	Y	C	Y
P5	Natasha	Y	C	Y
P6	Thao	Y	C	U
P7	Zendaya	Y	C	U
P8	Marlee	U	W	Y
P9	Nia	Y	W	U
P10	Kristina	Y	C	Y
P11	Emma	Y	W	U
P12	Alona	Y	N	Y
P13	Aliyah	C	C	Y
P14	Elenore	Y	C	Y
P15	Sylvia	Y	C	U

Several participants demonstrated a willingness to learn more about how nutrition or food may be incorporated in clinical practice with depressed clients, but they conveyed a sense of uncertainty as well. Lena said, “You know, I haven't really thought about it, in that way, I would definitely, if I know more about it.” Chase said, “And ride the line in terms of I would be careful about the scope of practice issues. But yeah.” Chase also spoke of novel practices saying, “I've been in practice long enough to know that things come in vogue. And sometimes they don't stay long enough.” Natasha demonstrated a willingness to adopt nutrition as a component of practice but said, “And my hesitation is, how would it be perceived by the client? Is it perceived as me going out of my area of expertise, and pushing something on them that, again, they might have a sensitive relationship with?” Zendaya, who spoke of being chastised for her weight, continued:

> I just felt sensitive to the fact that probably every other person in their life was talking to them about their weight. You know, and so I didn't necessarily need to pile on to that, unless it was something that kid brought up.

Thao spoke of her willingness to discuss nutrition as a component of treatment of depressed clients. However, she continued to think out loud about the implications of doing so. She offered the following insight as she processed aloud:

> I think I would be open and willing to have that discussion with my clients, too. But I also am concerned about are they getting their nutritional needs met, if they have any physical health issues where they are required or should be eating more of something or less of something, and also the cultural implications of that. So, if they come from a cultural background, or where they don't eat a lot of meat, or they're vegetarian? And so how do those, how does a plant-based diet play into that? Or doesn't play into that, too? And their family of origin? Whether they're very into eating, like protein? How does that sort of factor in, and can they afford? Is it affordable to have a plant-based diet with the cost of living and inflation going on too? And it's not necessarily practical, affordable, and also accessibility. Do they have stores that they can go to get nutritious plant-based food? So, there's a lot of things to consider.

Some participants used language that demonstrated being uncomfortable with including nutrition as a component of practice with depressed clients. Alona said, “Right now, I don't know that I feel I feel that comfortable. I rely a lot on our dietician” She also said, “It'd be really hard for me just because like I said, I'm grant funded based on certain evidence-based practices.” Elenore said, “I'm intrigued by it. I'm not at a point myself personally, where I could give up all meat and dairy.” Sylvia shared how conflicted she was when she said:

> But also, how do you tell a student that's in seventh grade that's struggling with her weight? Oh, you need eat less. Or like, maybe you should do this. So, kind of that fine line of you're struggling with depression? I don't want to tell you what to do. But these are some coping mechanisms.

She continued to demonstrate how conflicted she would be with her personal; beliefs when she said:

> And I have to say I grew up on meat and potatoes. So, it'd be like very hard. I'm a big proponent of whole milk. We grew up on milk. My mom grew up on a cow farm. That's not a plant-based diet, like its greens and veggies.

Min demonstrated the most concern when she said:

> I think just hearing that it's a plant-based diet. And with my experience with eating disorders, I'm very wary of it because I feel like it can go. I feel like just hearing it, it seems like a slippery slope because some part like the sneaky part of eating disorders, too, can be like, well, I'm going to be vegan, because I'm, I care about the environment.

A few participants were enthusiastic about the notion of nutrition playing a role in supporting positive mental health outcomes. Kelly was the most enthusiastic in her willingness to adopt nutrition as a component of her clinical practice. When asked, “If science identified a certain pattern of eating as having the ability to improve outcomes for clients who are depressed, how might that impact your work?” Kelly responded, “I would love it. I would love it. I just feel it needs to be part of our practice. Yeah. I mean, you know, it's just, it's so essential.”

Despite her enthusiasm, Kelly said:

> So, it's really hard to integrate it because there you know, I haven't been successful in finding like a certification program, something that really solidifies my knowledge in nutrition so that I can really bring it in with some more confidence and feeling like I'm trained in it in a way you know, this has been my experience.

Kristina echoed Kelly’s sentiment when she said:

> Well, I'm very comfortable with that. I talk about it all the time and plant based. You know, again, I don't tell people what type of diet to go on. But a lot of keto, Mediterranean diets on that, and I'll have them say to me, well, what do you think of that? And again, scope of practice, I always say to somebody, I can't comment on the nutritional plan that you're choosing, but do you feel it's working for you?

Emma said:

> It's a convenient intervention, right? you know, when people eat, so, you know, being able to get positive outcomes for changing their diet, I think there's, it's really good, and if there's evidence to support that, and, you know, that's even better, if there are certain protocols that, you know, are evidence based, because I think, I think philosophically, we all kind of know that eating healthier, makes you feel better. But we get stuck in that cycle of, it's too hard to like, figure out, like, what to eat, or I don't have enough.

As I coded the first round of transcripts, I learned that social workers were comfortable

talking with clients about exercise as a component of their treatment of depression. While they demonstrated a curiosity to understand nutrition and how it may impact depression, participants were not as comfortable talking with clients about nutrition as they were with exercise. I became curious to understand this divergence and wanted to hear the thoughts of participants themselves.

Readiness to Adopt: Participant Reaction and Reflections

Participants were asked to respond to the following question posed to them by email after the first round of data analysis was completed, "Most of the social workers I interviewed acknowledged feeling confident incorporating discussions of exercise as part of their treatment of depressed clients. Few social workers in my study said they feel confident incorporating nutrition as a component of treatment with depressed clients. Many social workers cited scope of practice concerns around nutrition, but none cited scope of practice concerns around exercise. Would you take a moment to share with me your thoughts on why you think that is?" Eleven participants responded.

There were six references to the perceived simplicity of addressing exercise as a modifiable risk factor. The participants acknowledged believing they felt confident discussing exercise because they could focus on movement, versus recommending a form of exercise that would require expertise. Kristina acknowledged the depth of research on exercise and feeling comfortable incorporating it in clinical practice, but said, "I would never suggest to a client what types of exercise would suit them best as that is not within our scope of practice." Alona, who was unwilling to adopt nutrition as a component of practice said:

> When it comes to exercise almost anyone regardless of medical issues can benefit from a 30-minute walk to help their mental health symptoms. Even when someone has recently had surgery and is limited, I will ask them about the exercises their physical therapist has recommended and reinforce this will also help them with their mental health symptoms. The goal is to move your body however you are able to.

Thao explained her thoughts around exercise when she said:

> I think social workers and/or mental health clinicians feel there is less potential harm or risk with incorporating exercise. I do talk to my clients about doing walking and simple stretching/yoga. Some mindfulness and grounding exercises also incorporate movement.

But when it came to nutrition she said, “Whereas, when it comes to food, I also feel I do not have enough training to make recommendations.” Aliyah felt that exercise was a broad topic that can be incorporated in many ways but viewed nutrition as “scientific” and “confusing”. Kelly spoke of exercise as being “simply movement” whereas food is “ingested” making it more complex.

As many participants cited the ease of incorporating exercise into clinical practice, more participants than not spoke of lack of knowledge or complexity when it came to nutrition. Emma captured this sentiment well when she said, “I suspect there may be discomfort around making nutritional recommendations due to personal experiences with food and lack of knowledge (other than “eat healthy”) around the types of foods that are connected to decreased depression or increased depression.” She also cited lack of training, as did Thao, who said, “when it comes to food, I also feel I do not have enough training to make recommendations.” Anna too felt she was ill-equipped to incorporate nutrition when she said, "It seems like more expertise is required in recommending specific nutrition as opposed to recommending general exercise.” Aliyah mentioned nutrition being more scientific than exercise and Sylvia echoed her sentiment when she said, “I know little about nutrition besides what was learned in health class back in high school.”

Although I believed many would cite the depth and breadth of research on exercise efficacy in the treatment of depression, only two of the ten participants acknowledged that. There were five references to being uncomfortable talking with clients about food. Natasha felt talking about food seemed “judgmental” compared to exercise. Aliyah mentioned feeling anxious about

being “politically correct” around an individual’s food culture and worried about “shaming” her clients. Sylvia said, “personally for me, I struggle with nutrition and how it impacts me, therefore talking to someone about it would not benefit them.” All these feelings are grounded in bias that began early in their lives as evidenced by their transcripts and will be explored further in Chapter 5.

To assess implications for adoption readiness in this study, participants were asked how likely they were to try a new treatment for depression that they know little about on a scale of 1-10 with one being least likely and 10 being most likely. They were also asked when it comes to adopting something new, would they call themselves an innovator, early adopter, late adopter, or laggard. Of the 14 participants (n15) who answered the question pertaining to adoption readiness, most, or 71%, indicated being an innovator or early adopter. This is captured in Table 6 below.

Table 6

Diffusion of Innovation

#	Name	Scale	Descriptor	Adoption Willingness W/N/C
P1	Lena	9	Innovator	W
P2	Min	1	Laggard	N
P3	Kelly	X	Innovator	C
P4	Chase	7	Early Adopter	C
P5	Natasha	9	Early Adopter	C
P6	Thao	6	Late Adopter	C
P7	Zendaya	8	Early Adopter	C
P8	Marlee	X	Innovator	W
P9	Nia	X	Early Adopter	W
P10	Kristina	X	X	C
P11	Emma	X	Late Adopter	W
P12	Alona	X	Innovator	N
P13	Aliyah	6.5	Late Adopter	C
P14	Elenore	5	Early Adopter	C
P15	Sylvia	X	Early Adopter	C

Note. X means participant either did not answer or did not provide a numerical response or question was not asked. W means willing, N means not willing, and C means conflicted.

Of the 14 participants that identified themselves on the adoption scale, twenty-nine percent identified as an innovator, forty-three percent identified as an early adopter, twenty-one percent identified as a late adopter, and seven percent identified as a laggard. When compared to their answers on willingness to adopt nutrition as a modifiable risk factor, two participants answers did not coincide with their adoption scale. Alona described herself as an innovator but was unwilling to adopt nutrition in clinical practice. This may be due to personal bias. Emma described herself as a late adopter but was willing to include nutrition as a component of her treatment with depressed clients, which may be due to participant bias.

This chapter identified key themes that emerged from participant interviews. Within these themes are insights that when mined for meaning may provide valuable information on how ready social workers are to incorporate food in their clinical practice with depressed clients. Barriers to incorporating food in clinical practice with depressed clients is just as important to understand. Within these themes, barriers must be identified and explored. These themes will be analyzed in the next chapter.

Chapter 5: Discussion

Introduction

In Chapter 4, findings were presented that reflect some of the similarities and unique differences of each participant's lived experience with food and mood. This chapter discusses the findings using the voices of social workers to identify implications for research, practice, and education. The semi-structured interview guide was designed to learn from social workers themselves how ready they are to adopt nutrition as a modifiable risk factor in their treatment of depression. Questions were posed to participants in academic, personal, and professional categories to understand how their experiences in these three realms of lived experience may support or impede adoption of nutrition as a modifiable risk factor. Social workers' answers to questions revealed themes that can be mined for new insights that when understood may increase adoption readiness and ultimately improve outcomes for depressed clients. These themes were presented in Table 2 and throughout the last chapter. There were four fundamental observations gleaned from the themes that impact participants readiness to adopt nutrition as a modifiable risk factor with depressed clients.

1) The first observation is that there is a discrepancy in how social workers perceive they incorporate food in clinical practice. The themes that will be used to support this conclusion include professional theme 4 and professional theme 3, subtheme 1, 2, and 3.
2) The second observation is that the research on modifiable risk factors provides justification for the incorporation of nutrition in clinical practice, and additional understanding of them and the important role they play with depressed clients is

necessary. The theme that will be used to support this conclusion is academic theme 1.

3) The third observation is that personal bias does play a role in participants' willingness to adopt nutrition as a modifiable risk factor in clinical practice. The themes that will be used to support this conclusion include personal theme 1, subtheme 1, 2, and 3 and personal theme 2 and 3.
4) Lastly, participant reflections on exercise's role with depressed clients and their reflections on nutrition's role with depressed clients diverge. It will be important to understand this divergence and its implications for readiness to adopt. The themes that will be used to support this conclusion are professional theme 1 and professional theme 5.

Discrepancy Between Incorporating Food As A Component of Assessment Vs. Treatment

In Chapter 1, I justified the use of nutrition in social work clinical practice by positioning it in two social work theories, the biopsychosocial model and integrative social work. As previously discussed, the biopsychosocial model suggests that biological, psychological, and social domains or factors interconnect with one another to influence an individual's depression (*Current Understandings of Major Depression – Biopsychosocial Model*, n.d.). I argued that nutrition should be included as a component of social work practice because of the biopsychosocial assessment. I continued my justification for incorporating nutrition in clinical practice through a second social work theory, integrative social work practice. Integrative approaches to social work practice recognize the connection between psychological, social, and spiritual realms. I posited that integrative approach provides a framework to demonstrate the

ways that diet, nutrition, the body, and mental health are connected and make sense in social work practice.

What I learned from participants during their interviews was that both arguments are relevant, but there was a discrepancy between how social workers incorporate food as a component of assessment versus incorporating food as a component of treatment. I asked participants several questions to better understand how they experience food in their professional world. The first question asked sought to understand treatment, and two others sought to understand how food was incorporated in clinical practice. Responses to all three, however, demonstrated how participants incorporated food as a component of assessment rather than treatment. Questions asked include:

- Tell me of an experience where food was a core part of your treatment relationship.
    - Have you had an experience where you needed to help a client manage their ***illness*** through their relationship with food? Describe.
    - Have you had an experience where you helped a client manage health and ***wellness*** through food? Describe.
- Describe how the body is part of your clinical practice.
- Describe how diet and nutrition is a part of your clinical practice. Share an experience if any.

Without exception, each of the participants in this study identified how they were using food in clinical practice. I was intrigued to learn of them doing so, until I began coding and themes emerged. What I learned was that the participants were using food in clinical practice, just as social workers are taught in their graduate education - in *assessment* - through the biopsychosocial assessment of the therapeutic engagement. The reason this is so important to

understand is because study participants are NOT using food in their clinical practice as a means of treatment, nor are they using it as a modifiable risk factor.

Social workers are maintaining fidelity to the biopsychosocial assessment model and were adamant that anything further would lead them outside their professions scope of practice. Themes were identified in the findings chapter that demonstrate all the ways that social workers are including food as a component of the biopsychosocial assessment. Examples include appetite assessment (a common diagnostic indication for depression), eating disorders, diabetes, body image, and food insecurity. There were no examples of participants using food as a component of *treatment*.

There are many examples in the findings chapter demonstrating how engrained exercise is in the profession as a modifiable risk factor, and this will be discussed later in this chapter. Social workers will need to get as comfortable with the dietary patterns known to demonstrate improved outcomes for people who are depressed as they have learned how exercise and physical activity have a positive impact on depression and can be reliably incorporated as a component of clinical practice. This will be discussed in the section of this chapter on bias. It will also be important for social workers to become comfortable with food beyond assessment and as a component of treatment to increase the likelihood of adoption of nutrition in treatment of depressed clients. To do so, knowledge of the modifiable risk factors that include nutrition will need to grow in the profession as exercise did over the past five decades.

Modifiable Risk Factors, Implications for Practice

This study sought to understand how academic, personal, and professional experiences of social workers impact their readiness to adopt nutrition as a component of their treatment of clients who are depressed. Several questions were asked to best understand how academic

preparation and formal learning may impact a social worker's readiness to adopt nutrition as a modifiable risk factor in their treatment of depression. In the spirit of a phenomenological approach, these questions were asked in a way to obtain understanding of lived experience. Two questions from the semi-structured interview guide provide an example:

1. Can you share your academic experience where you learned/discussed modifiable risk factors with individuals who experience depression?
2. Can you share your clinical experience with modifiable risk factors with individuals experiencing depression? Please describe a specific experience.

As I prepared these questions, I believed participants would answer that they include psychoeducation on exercise, substance use, and perhaps alcohol cessation because it is widely known to be a depressant that exacerbates depression. All three are prominent modifiable risk factors known to improve client's depression scores when addressed as a component of treatment. I thought, as I wrote these questions, that no participant would mention diet or nutrition as a modifiable risk factor that they incorporated in their treatment of individuals experiencing depression. I hypothesized this because I believed the body of literature on dietary patterns known to improve depression outcomes, spanning just over a decade and a half, is too novel to be widely known among social workers. Data gathered from participants did reflect a lack of awareness of dietary patterns that influence depression, as expected. However, I was surprised that no participant readily recognized the term *modifiable risk factor*, a fundamental concept in the treatment of disease – including depression (Almeida et al., 2013; Cairns et al., 2014; Taylor et al., 1985; Vyas & Okereke, 2020; Worrall et al., 2020).

When prompted, all participants shared an understanding of the important role of exercise in the treatment of depression, despite being unfamiliar with the term modifiable risk factor.

There are several reasons why it is important to understand why the lack of familiarity with the actual term modifiable risk is important. This understanding has implications for readiness to adopt nutrition in clinical practice with depressed clients. Modifiable risk is a behavioral health practice term grounded in evidence that supports the inclusion of nutrition in social work practice. Social workers need **evidence** that supports the use of nutrition as a modifiable risk factor, and a **structure** to do so, **within our professional scope of practice to** increase readiness to adopt. Biopsychosocial and integrative practice frameworks can be useful on this front (Borrell-Carrió et al., 2004; Lehman et al., 2017; Lundy, 2008; *Preparing MSW Students for Integrative Mind–Body-Spirit Practice - University at Albany*, n.d.).

Second, a growing body of evidence supports the inclusion of nutrition in clinical practice as a modifiable risk factor in the treatment of depression. A **lack of awareness of the body of evidence on dietary patterns that support improved depression outcomes** will impact readiness to adopt. Third, a lack of language and **knowledge/awareness of modifiable risk factors** and how modifying risk can support improved outcomes for those who are depressed will impact readiness to adopt. Just as science has helped us understand how to modify risk for a host of other diseases like heart disease, diabetes, cancer, and Alzheimer's to name a few, science can aid us in understanding risk factors, including nutrition, that can be modified to improve outcomes for depressed clients.

It is important to understand modifiable risk factors and depression. Depression likely arises from a complex interplay of risk factors, including medical, physiologic, psychosocial, behavioral, and environmental factors (Chang et al., 2016). Thus, a comprehensive understanding of risk factors is necessary to inform prevention and intervention strategies. Modifiable risk factors are factors that a person can influence or change to improve outcomes for

a host of diseases, including depression. Risk factors are often categorized in three domains that include behavioral factors (exercise, sleep, diet, media use), social factors (activities and support), and environmental factors (greenspace and pollution) (Choi et al., 2020). Modifiable risk factors are essential components of preventive medicine as researchers and practitioners seek to improve outcomes for various illnesses and diseases.

There is a growing body of research on modifying risk for disease, including cardiovascular health, chronic disease, cancer, asthma, depression, Parkinson's disease, dementia, diabetes, and even COVID- 19 (Belvisi et al., 2020; Hempel, 2015; Ho et al., 2020; Murray et al., 2006; Ostergaard et al., 2015; Szoeke et al., 2017; Tappia, 2020; Yusuf et al., 2020). Almeida (2013) posits the identification of causal risk factors associated with health disorders offers an opportunity to modify the incidence and prevalence of that disease. As the largest provider of mental health services for depressed people, social workers are uniquely positioned to identify and address modifiable risk factors known to improve outcomes for them.

Modifiable risk is not without complexity. Modifiable risk factors may be associated with depression for reasons other than causality and may include confounding [cannot differentiate that variable's effects in isolation from its effects in conjunction with other variables] and reverse causation [mistaking cause for effect] (*APA Dictionary of Psychology*, n.d.; Choi et al., 2020). However, there is strong and growing evidence that supports social workers' inclusion of modifiable risk factors in their treatment of clients who are depressed (Blumenthal et al., 2007; MacPherson et al., 2010; Pfaff et al., 2014; Psaltopoulou et al., 2013; Zhao et al., 2009). In 2020, Choi (2020) conducted a randomized study to identify modifiable risk factors for the prevention of depression. This research sampled 123,974 adults of white British ancestry who enrolled in the UK Biobank. One hundred and six modifiable risk factors were assessed. Many factors

across social, sleep, media, diet, and exercise were prospectively associated with depression. A subset of factors was identified as having preventive qualities and they include social connection, television use, and daytime napping. Choi discussed the significance of newly available phenotypic and genomic data when he said:

> Some factors (e.g., specific nutrients or individual foods) that show statistically significant effects when studied alone may not prove robust or as clinically relevant when considered alongside other factors. Understanding the relative importance of different modifiable factors that could be integrated into prevention packages has been limited to date by modest sample sizes for multiple testing and lack of comprehensive measurements in a single study. The availability of large cohort studies, such as the UK Biobank,8 now make comprehensive and well-powered inquiries possible.

As our understanding of modifiable risk factors grows through research like Choi's, practitioners will be better equipped to incorporate those factors that demonstrate improved outcomes. Almeida (2013) conducted a retrospective cohort study of 4,636 men in later life and found body mass index (BMI), physical activity level, alcohol consumption, and smoking were modifiable factors that could affect depression incidence.

Worrall (2020) conducted a systematic review of research on factors associated with depression and community-dwelling older adults between 2006 and 2018. The purpose was to provide information for mental health practitioners to develop intervention strategies that effectively target those variables with the greatest potential to produce positive outcomes (Vyas & Okereke, 2020). Twenty-one factors were identified, and although the author cited the complexity of interrelationships between variables, interventions that built social support, improved self-rated health, and increased physical activity and sleep quality were considered to have potential to prevent or reduce depressive symptoms. Cairns (2014) conducted a similar systematic review focused on risk and protective factors of adolescent depression. This meta-analysis of longitudinal studies concluded that modifiable risk factors for adolescent depression

include substance use, dieting, negative coping strategies, weight, healthy diet, and sleep. This review adds to the body of research that increases our understanding of the complexity of depression and causation (Cairns et al., 2014; MacMahon, 1960).

These examples are a sample of literature on modifiable risk factors and depression. This empirical evidence recognizes acceptance of the ability of modifiable risk factors to impact pathology and acuity of depression. The research supports the inclusion of modifiable risk factors in clinical practice as a fundamental component of treatment. It is incorporated here in the discussion chapter to demonstrate the critical importance of modifying risk, in addition to standard social work treatment protocols for depression like Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, and Rapid Eye Movement Therapy, to achieve better outcomes with those experiencing depression. None of the participants in this study readily acknowledged an understanding of modifiable risk factors. To obtain better outcomes with depressed clients, it will be important for teachers, researchers, and practitioners to assess the body of literature on modifiable risk factors and depression and share that information widely. It will also be critical to demonstrate how nutrition, when incorporated in clinical practice as a component of modifying risk, is within social workers' scope of practice.

Until social workers are as comfortable including nutrition as a modifiable risk factor, as they are with exercise as evidenced in the findings chapter, this will be a barrier to adoption. This, in turn, will preclude our profession from developing and testing interventions that include nutrition to improve outcomes for depressed clients. As it stands now, social workers were very clear about their concern for scope of practice. Nine participants directly or indirectly acknowledged believing or feeling that nutrition is outside of the scope of practice in treatment

of individuals experiencing depression. Yet thirteen participants currently use exercise as a component of their clinical practice.

No scope of practice concern was cited by participants who incorporate exercise as a component of their treatment of clients who are depressed. Given that social workers demonstrated a commitment throughout the interviews to evidenced based practices, there is an opportunity to increase adoption readiness through awareness of this evidence-based practice. As awareness of the growing body of research on nutrition and depression matures and it becomes a known evidence-based practice, social workers will be more likely to adopt it into practice.

Bias and its Implications for Willingness to Adopt Nutrition as a Modifiable Risk Factor

The intention of this study, in part, was to learn from social workers themselves about the challenges they, and the profession, face in including diet and nutrition as a modifiable risk factor in their treatment of clients who are depressed. Understanding these challenges aids in understanding social work participants' readiness to adopt nutrition as a component of clinical practice. One of the barriers posited in Chapter 1 was that bias may present a barrier to social workers' willingness to adopt nutrition as a modifiable risk factor in the treatment of depressed clients. Interviews with the participants demonstrated how bias may increase or decrease their willingness to adopt nutrition as a component of treatment.

Discussions of the impact bias has on human behavior has gained the attention of American society as we work to better understand the affect implicit bias has on historically marginalized populations and communities (Banks et al., 2006; De Houwer, 2019; Kahn, 2017; Spencer et al., 2016; Turner et al., 2021; Warring, 2019). Bias has broader implications that include how social workers make decisions on their willingness to adopt nutrition as a modifiable risk factor in their treatment of depressed clients. I hypothesized that bias would

originate from beliefs and practices of social workers developed and reinforced over their life course. Data collected from participant interviews supports this conclusion and will be presented herein.

Evidence supports the assertion that cognitive biases are omnipresent in mental health professionals' decision-making and can reduce the accuracy of clinical judgments even among experienced social workers (Bowes et al., 2020). Donohue and Henderson (1999) suggest that understanding our proclivity towards cognitive bias is so critical to sound clinical judgment that learning about bias and its impacts is an epistemic requirement to ensure accurate and ethical practice. While many forms of bias impact daily decision-making, consciously and subconsciously, confirmation bias is important to understand for the purpose of this study. Confirmation bias is a propensity to accept information that aligns with one's beliefs and deny, dismiss, and distort information that does not (Nickerson, n.d.). People tend to treat evidence in a biased way when they are motivated by a desire to defend a belief they wish to maintain (Nickerson, n.d.).

Hypothesis-determined information seeking or interpretation connotates seeking information that supports an existing hypothesis or belief (Nickerson, n.d.). This form of confirmation bias has implications for the participants as well as for me. I began my dissertation seeking to understand how a plant-based diet can support positive mental health outcomes. I found what I was looking for. A growing body of research that supports a plant-based diet, does indeed, support improved mental health outcomes. While current evidence supports this belief of mine, it is important to acknowledge that this research is in its infancy and much more research is needed to build the body of evidence that supports or refutes that a plant-based diet can influence mental health outcomes.

Mid-way through the data collection process I experienced a health crisis that brought my hypotheses-determined information seeking to the forefront of my own consciousness. I recognized that I had an overzealous belief in a plant-based diet's ability to prevent disease and heal. This realization resulted in a more measured approach to data analysis and the resulting discussion. This is evidenced within my journal, customary of a phenomenological approach. It forced me to challenge myself to ensure I was not seeing in the data the patterns for which I was looking, regardless of whether they were there (Kelley & Kelley, 1950, p.).

Providing preferential treatment of evidence in support of a current belief or practice must be understood by researchers and social workers. This is necessary to wholly understand social workers' willingness to adopt nutrition as a component of their treatment with depressed clients. Determining how personal bias impacts decision making is essential to the process of gaining this understanding. The data from this study reflects evidence of bias as demonstrated by multiple themes that emerged and that were presented in Chapter 4.

This was especially notable where beliefs and practices were born in childhood and adolescent experiences (Huebner, 2016; Miller, 2015). Petty and colleagues (1981) note when a person must draw a conclusion on the basis of information acquired and integrated over time, the information learned early holds more weight. This concept demonstrates how childhood and familial beliefs and practices may harden and perpetuate bias in clinical practice. Social work participants' readiness to adopt research or incorporate a practice that pushes against long-held conscious or subconscious beliefs developed early in the life course may prove particularly intractable.

Once a belief or practice forms, evidence suggests that it can be very resistant to change, even in the face of compelling evidence (Freedman, 1964). For example, when Elenore was

asked, “Research is beginning to support that a diet centered on plants improves depression scores, how comfortable are you including nutrition as a component of your treatment with clients experiencing depression?” She said:

> I'm intrigued by it. I'm not at a point myself personally, where I could give up all meat and dairy. Yeah, I can I understand the concept of flavoring food with meat, like in Japan… It's sort of like that whole pyramids kind of shifted.

To clarify, I asked Elenore what a plant-based diet meant to her, and she responded, “One would be not eating meat, or dairy, which I've already said, I'm not ready to fully do…” Note that when Elenore was asked about incorporating nutrition in treatment with clients, she responded with how comfortable she was with her diet being centered around plants. This is evidence of cognitive bias.

Sylvia responded to the same question similarly. We were discussing research on a plant-based diet improving depression scores and the meaning of a plant-based diet. Sylvia responded:

> I have to say I grew up on meat and potatoes. So, it'd be like very hard. I'm a big proponent of whole milk. We grew up on whole milk. My mom grew up on a cow farm. That's not a plant-based diet, like its greens and veggies.

Again, the question Sylvia responded to did not ask about her willingness to adopt a plant-based diet. I asked how comfortable she was including nutrition as a component of her treatment with clients experiencing depression. An “I” response to a question not directed to the individual participant is indictive of cognitive bias. This is consistent with both Petty’s (1981) supposition that information learned early holds more weight and Nickerson’s (1998) belief that we provide preferential treatment of evidence in support of a current belief or practice.

Bias showed up in many forms during the participant interviews. Another response indicative of a bias formed early in the life course came from Marlee when she said, “I want to see my clients well fed, if they are not in a position to like feed themselves. They should not skip

meals at all." This response takes on a different context when we consider Marlee's experience with food insecurity as a child. She said earlier in the interview, "I grew up in an area whereby my parents are not all that well off. So, I think you'll miss out on food. So, at times, they even thought that foods was a luxury at the moment."

Two participants, Min, and Alona demonstrated how bias may impact decision making on adopting nutrition as a component of their clinical practice well. A conversation with Min was particularly insightful in understanding bias. When Min spoke of her family food traditions, she noted how important food was to her family culture. She said:

> But there's this focus on like, you know, trying to stay slim and trying to stay skinny. And that's the mentality I grew up around food. But at the same time, I think food is also a big piece of our family and culture. Like you gather around, you eat food, and you look forward to the next meal that has good food and looking around for new places to eat. Celebrations revolve around food.

When she spoke of her food traditions she talked about the importance of rice, meat, and vegetables. She said, "…I live with my parents so typically our meals are … rice, a meat dish, and then a vegetable dish. That's kind of the extent to how we break down food groups."

Min was enthusiastic about learning how diet can be included in clinical practice. When asked, "If science identified a certain pattern of eating as having the ability to improve outcomes for your clients who are depressed, how might that impact your work?" She said, "So I feel like that would really give me more confidence to kind of bring that into supporting them and planning their course of action and working towards more healthy eating to actually help their depression." However, she contradicted that answer when she learned that the research supported a plant-based diet. When I said, "Research is beginning to support a plant-based diet improves depression scores. How comfortable are you with including nutrition as a component of your treatment with clients experiencing depression?" Her response was conflicted:

> I think just hearing that it's a plant-based diet. And with my experience with eating disorders, I'm very wary of it because I feel like it can go…I feel like just hearing it, it seems like a slippery slope because some part like the sneaky part of eating disorders, too, can be like, well, I'm going to be vegan, because I'm, I care about the environment. But it's like you weren't vegan a year ago, though, and I think you know, this, especially with the teen population, right? I think it could easily be like, Well, my therapist says, a plant-based diet is good for my depression.

She concluded, "I would be wary about prescribing a certain diet or recommending a certain diet. That would seem very out of my scope." Evidence of cognitive bias can be seen as Min described her early childhood experiences and meal expectations with family, demonstrated enthusiasm for the role diet could play in clinical practice, and then recanted when she learned that the dietary pattern mentioned wasn't consistent with her beliefs and practices.

Alona, who identified as Native American, provided another example of how cognitive bias may impede readiness to adopt nutrition as a component of clinical practice when evidence supported a dietary pattern that contradicts beliefs and practices. We began talking about Alona's relationship with food and her dietary practices. She said:

> I would definitely say my relationship with foods always has been more complicated. Because I would, even from a young age, I was a very picky eater. Thankfully, later in my life, I discovered like seafood and like, you know, shrimp and sushi and all these things that my family doesn't necessarily cook. And so now I like to eat a lot more, I enjoy food a lot more…My current diet consists primarily of chicken, and like shrimp and various types of fish.

Alona works in a health clinic with individuals with diabetes, so food played a considerable role in her clinical practice. When asked about how she incorporates food in clinical practice she said:

> Yeah, initially, it was primarily diabetes. Now I don't, I don't, I don't really care. Whatever you're bringing to the table, I'm going to talk to you about it, because I know what you're eating is affecting what you have going on. Even if I feel like you're, you're eating pretty well. But if you're only having, for example, one meal a day, it's still you know, it's still concerning me that your blood sugar is going up and down drastically. And that could be affecting your mood, either depression or anxiety, which is primarily what I've seen patients for. And it's very different look, from when I previously, I worked at a mental health clinic.

Alona demonstrated how comfortable she was in her assessment practices around food including assessing frequency, access, quality, quantity, and even macronutrient analysis. When talking about assessment practices she said:

> Um, how often they're eating? Right? Because those are going to be red flags for me, if they're only eating once a day. What times are they eating, again, maybe they are eating, but let's say they wake up at 10. And they don't eat until three. And then they're eating at midnight, right? That's gonna affect their sleep. And then also the quality of their meals, right? So, when do you get to eat? What kind of food do you eat? Did you even have the space or availability to cook for yourself? If you don't? How? What kind of choices are you trying to make? So that you know you have even if you're not going to eat the healthiest thing, right? It's gonna be calorie dense. But can we throw some protein in there? Can we throw some lettuce in there? Like, what are you doing around your meals? Because it's very important for you to function throughout the day. And I do this with sleep as well. So that's when I'm talking to people about sleep. I throw in the stuff about food as well.

Alona continued to provide an enthusiastic response when asked if science identified a certain pattern of eating as having the ability to improve outcomes for clients, how might that impact your work? Alona said:

> Oh my god, incredibly, incredibly. Yeah. Just again, because I can see it in my patients that when something comes up, and it doesn't come up for all of them, but when something comes up when I hit on something about food, and then it like opens up, like this Pandora of like how it's affecting all these different places in their life, their emotions, their relationships, right? Their jobs.

She continued to support her enthusiastic response when asked, when it comes to adopting something new would she identify as an innovator, an early adopter, a late adopter, or a laggard? Alona readily responded, "Innovator, innovator. Absolutely. And I've heard this throughout my career. So, I just, my whole thing, but that's how I live my life, though. Right? So, I'm just a, what's the new thing? Hey, is that helpful?"

Based on these answers, I was astonished to hear her response to my final question. I said, "Research is beginning to support that a whole food plant-based diet improves depression scores, how comfortable are you with including nutrition as a component of your treatment with

clients experiencing depression? Her response, “Right now, I don't know that I feel I feel that comfortable. I rely a lot on our dietician. So, I think that if I had more access to our dietician, because I have access to them, but it's usually when again when there's a problem, right? I have, but if I had more access to them on a regular basis, I think that I would feel more comfortable doing that.”

The information presented in this section of Chapter 5 reinforces Freedman’s (Freedman, 1964) notion that once a belief or practice forms, evidence suggests that it can be very resistant to change, even in the face of compelling evidence. People are more likely to question information that conflicts with preexisting beliefs than information that is consistent with them and are more likely to see ambiguous information to be confirming of preexisting beliefs than contradicting them (Kahneman et al., 1982).

Confirmation bias provides a way of understanding the challenges we experience as we navigate everyday life and professionally as we learn of innovations that contradict our preexisting beliefs, practices, or cultural norms. The inclination to accept information that aligns with one’s beliefs and deny, dismiss, and distort information reflects the strength the role bias can play in our lives. There are no known trustworthy survey estimates of the prevalence of conscious or subconscious cognitive bias in clinical practice (Bowes et al., 2020). Evidence herein supports the impact it can have on clinical decision making. While there are many other factors that contribute to professional decision making, bias is a part of our human experience and is important for us to understand in all aspects of our life. Unearthing bias may be the most valuable contribution of this study because bias is a formidable barrier to the adoption of nutrition as a component of clinical practice with depressed clients, especially when that evidence contradicts culture, customs, beliefs, or practices.

Readiness to Adopt, Participant Reaction and Reflections: A Discussion

As noted in the findings chapter, thirteen of the fifteen participants were currently using exercise as a component of their clinical practice. Most responded enthusiastically about the positive benefits of exercise in their treatment of depression. No scope of practice concern was cited by participants who incorporate exercise as a component of their treatment of clients who are depressed. However, nine of the fifteen participants directly or indirectly acknowledged believing or feeling nutrition is outside of the scope of practice in treatment of individuals experiencing depression. Three of the nine specifically used the term *scope of practice*.

It is important to understand the divergence between these two modifiable risk factors so readiness to adopt nutrition as a modifiable risk factor with individuals who are depressed can be better understood. It is particularly important to understand why one modifiable risk factor has been widely adopted and viewed within scope of practice, while the other modifiable risk factor is seen as outside social work's scope of practice. To do so, a basic understanding of the history of the relationship between exercise and depression is necessary for parallels to be uncovered and conclusions drawn.

Taylor et al., (1985) conducted the first systematic review of the body of literature at that time on exercise and its psychological effects. Their paper sought to understand the evidence for the claim that vigorous physical activity had positive effects on mental health in both clinical and non-clinical populations. One of the psychological effects of exercise that they sought to understand was how exercise impacted depression. The authors determined that few studies reviewed met acceptable methodological standards but concluded that physical activity and exercise appear to alleviate symptoms associated with mild to moderate depression. Since then, thousands of studies and articles have been published.

Fast forward to 2019 for an example of how far the strength of literature on exercise and mental health has come where polygenic scores are being assessed to measure disease risk due to genes. Choi's (2020) asserted polygenic risk of depression was identified as being associated with increased odds of depression where physical activity showed protective factors after controlling for body mass index, employment status, education, and prior depression. Further demonstrating the strength of the body of literature since 1985, a 2022 systematic review and meta-analysis reported on the dose-response association between physical activity and incidents of depression from prospective studies of adults (Pearce et al., 2022). Those investigators concluded that there are significant mental health benefits from being physically active and suggested that health practitioners encourage clients to increase physical activity to improve mental health. The confidence in the conclusion is a stark difference from the review that occurred 37 years ago in 1985 that concluded the strongest evidence suggests that physical activity and exercise probably alleviate some symptoms associated with mild to moderate depression (Taylor et al., 1985).

In 1985, there is little doubt that the field of social work was widely unaware of the then fledgling body of research that suggested exercise may positively impact mental health, just as they appear today on the body of research on nutrition and depression. Parallels between the body of evidence and views of social workers on exercise in 1985 and those of nutrition in 2022 provide an uncanny resemblance. Kristina captures these parallels well when she acknowledges broad understanding of exercise's role in clinical social work:

> Much research has been done on how moderate exercise is comparable to an anti-depressant when one is dealing with mild or moderate symptoms of depression, so it is an easier topic to incorporate. However, along the same lines, I would never suggest to a client what types of exercise would suit them best as that is not within our scope of practice.

However, when it comes to nutrition in clinical practice she said, “I always refer to a nutritionist or a registered dietician, and typically the latter, on what foods or how much of it the client should be eating.”

As previously mentioned, despite the exponential growth in studies to understand dietary patterns and depression, the literature is still young and emerging. The oldest article cited in the literature review of this study was 2004, and most of the articles were published within the past decade. This totals barely 18 years of research on diet and depression vs 50 years of research on exercise and depression. Considering that it takes an average of 17 years for research findings to reach communities (Morris et al., 2011), it is not surprising that the social worker community is largely unaware of nutrition’s role in mental health outcomes. Natasha articulated this well when she compared exercise in the profession to nutrition, “I think it’s more common to see research/articles about the effect of exercise on depression than the effect of diet, at least in my experience,” she said. But when it came to nutrition she continued:

> It seems like more expertise is required in recommending specific nutrition as opposed to recommending general exercise. For example, I could suggest my client exercise daily, but leave it up to them as to how they do it. If I were to recommend a specific diet, it seems like I would be acting as a dietitian/nutritionist.

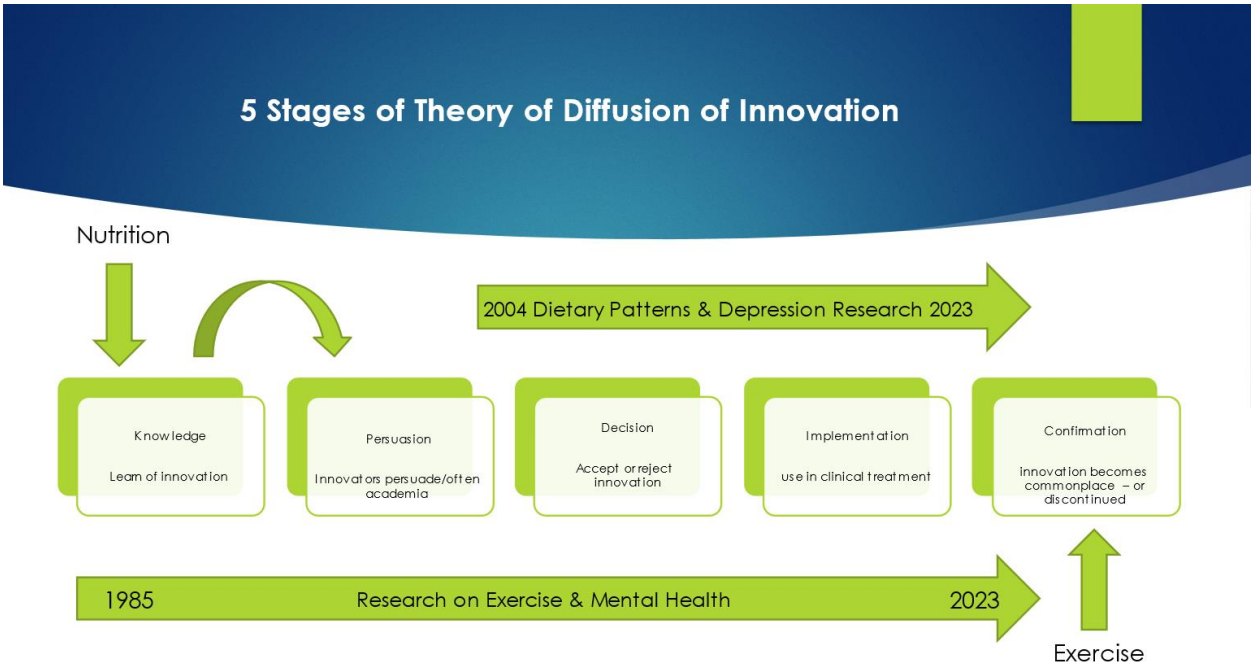
Natasha raises a valid point about the nuances of terminology. Prescribing a diet is outside of the scope of expertise of a social worker. However, just as Natasha can work with clients on psychoeducation and behavioral changes that increase movement, she can also work with clients on psychoeducation and create behavioral changes that increase their consumption of plant-based foods. Working with clients on behavioral interventions to increase movement and consumption of plant-based foods, with psychoeducation on other modifiable risk factors known to improve outcomes for depressed clients, in addition to traditional evidence-based treatment protocols, may offer a meaningful opportunity to decrease depression scores through the

modification of risk. Participants' dis-ease with nutrition must be overcome if it is to gain momentum in clinical practice as a modifiable risk factor. Understanding how innovative treatment approaches make their way into practice is equally important to understand as strategies are sought to increase readiness to adopt this modifiable risk in clinical practice. As previously discussed, Rogers (1962) offered a five-stage theory called "Diffusion of Innovation" to help us understand how novel treatment approaches enter practice.

The five stages of adoption according to Diffusion of Innovation theory are knowledge, persuasion, decision, implementation, and confirmation (Rogers, 1962). For an adoption of innovation, the first stage requires acquisition of knowledge about the innovation. Stage two requires persuasion to adopt the innovation, and stage three a decision regarding whether to accept and adopt the innovation. Implementation occurs when the new practice is used in clinical treatment. Confirmation is achieved when the new practice becomes commonplace. Based on the interviews for this study, no participant was aware of research on dietary patterns implications for improved mental health outcomes. This would place this cohort of participants in stage one of Roger's theory, whereas exercise would be classified in stage five given its common practice status in the field of social work and with these participants as depicted in the Table below.

Table 7

Nutrition and The Five Stages of Theory of Diffusion of Innovation



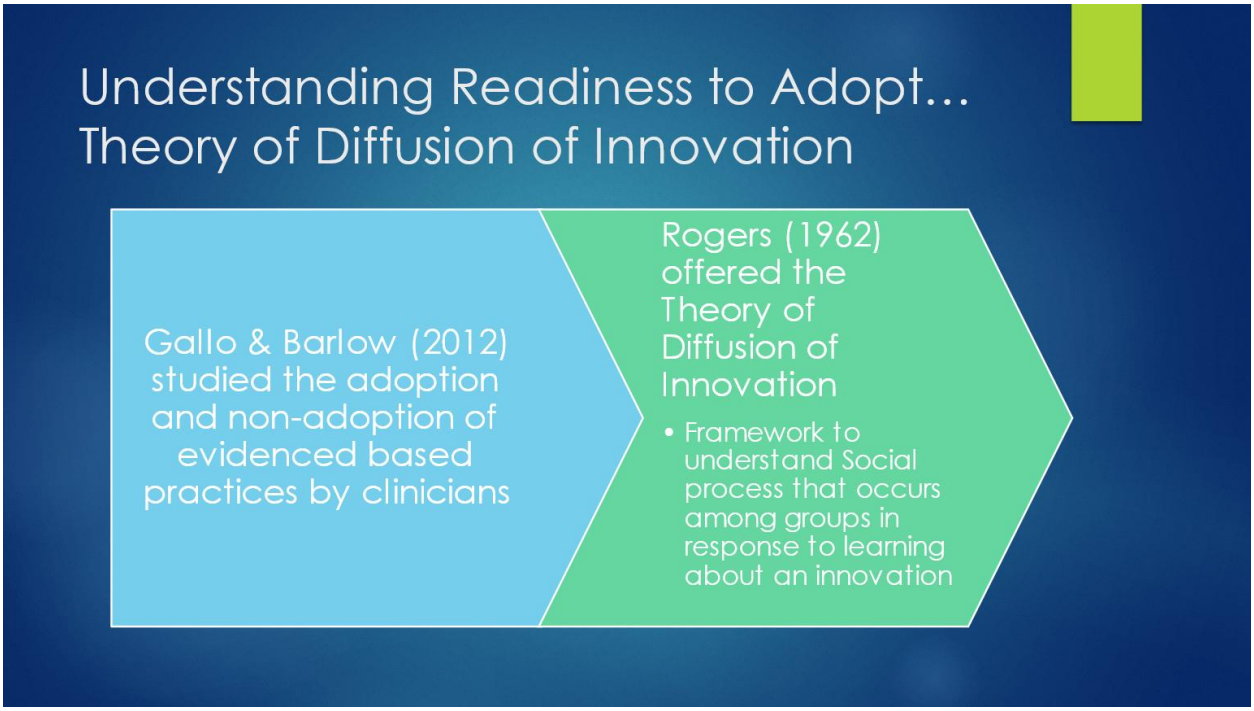
As revealed in the findings chapter, participants spoke of their knowledge of the body of research that espouses the symbiotic nature between exercise and depression, and this gave them confidence to address it with clients as a modifiable risk factor demonstrating stage five has been achieved. They accomplished this through psychoeducation to bring awareness to clients of this potential opportunity for them to incorporate movement to see if it helps alleviate their depression. Natasha, for example, stated, "I will usually mention studies about how important exercise is for depression specifically." Elenore spoke of the connection to endorphins and serotonin and Kelly talked about providing psychoeducation. Min acknowledged the importance of working with a physician, "I work with eating disorder patients so this is always a disclaimer, I have to throw in like exercise according to the doctors prescribed regimen, because that can be something they take completely overboard." Alona demonstrated how she works closely with a

physical therapist when she said, “Even when someone has recently had surgery and is limited, I will ask them about the exercises their physical therapist has recommended and reinforce this will also help them with their mental health symptoms. The goal is to move your body however you are able to.”

There is an opportunity for social workers to incorporate nutrition in the same way as a modifiable risk factor. Once aware of the literature on dietary patterns known to improve outcomes for depressed clients, social workers can use psychoeducation with clients. Clients then have an opportunity to discuss these findings with their physician or dietician to determine if a change in diet is right for them. From there, like the role social workers play with exercise, they can work with their clients to develop behavioral strategies to make those changes and assess the impact on their depression. Psychoeducation and working collaboratively with a dietician or medical doctor, provides clients with the best opportunity to explore this potential modifiable risk factor while ensuring the social worker remains comfortably within their professional scope of practice. A question remains; how might the Theory of Diffusion of Innovation provide insight to social workers readiness to adopt nutrition in clinical practice? Gallo and Barlow’s (2012) study of social workers adoption of evidenced based practices provides a framework for understanding. Table 8 provides graphic understanding.

Table 8

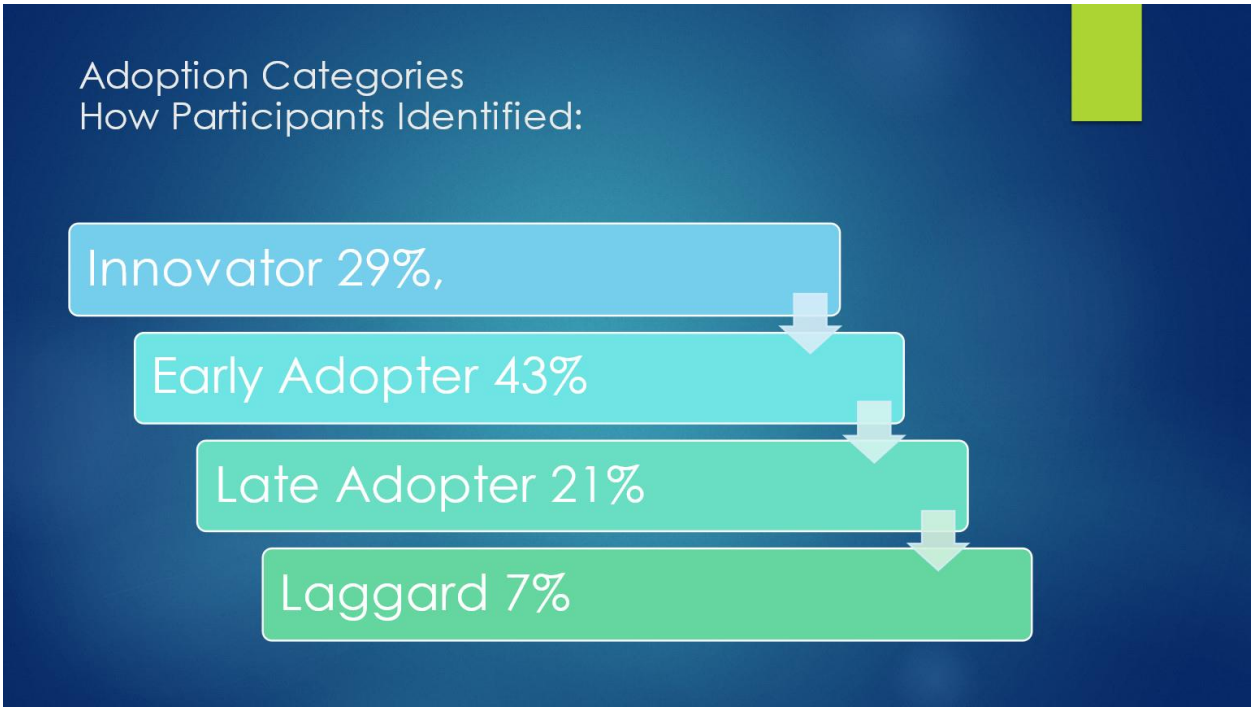
Understanding Readiness to Adopt



Rogers' (1962) theory identifies five adopter categories: innovators, early adopters, early majority, late majority, and laggards. Innovators are the trailblazers and the first to adopt new innovations. They are followed by the early adopters who are characterized as being highly educated and respected in their discipline. Early adopters are well positioned to diffuse innovation with the remaining adopters (Gallo & Barlow, 2012). Early majority and late majority adopters are earlier or later to accept and deploy the innovation as it becomes embraced by the larger majority. The laggards, bound by tradition, are skeptical and find it difficult to engage in trying something new. Table 9 provides a graphic depiction of adopter categories and how participants in this study self-identified.

Table 9

Roger's Adopter Categories Adapted



If knowledgeable of this new evidence-based practice, innovators and early adopters are likely to be persuaded to incorporate and test interventions using nutrition as a modifiable risk factor with clients who are depressed. In the context of readiness to adopt, most participants demonstrated curiosity about nutrition and depression, some were willing to incorporate, and most identified as an innovator or early adopter, and although this study group is small, adoption readiness is likely to increase with knowledge of this evidence-based practice.

Four primary reasons for nonadoption of evidence-based practices are an inability to remain current on new developments, perceived difficulties accessing training, selective adoption, and clinician's preconceptions and misconceptions (Gallo & Barlow, 2012). The results were discussed in the findings chapter. The Theory of the Diffusion of Innovation would support

that nutrition as a modifiable risk factor is in a pre-infancy stage with an overall lack of awareness of the literature on diet and depression. Furthermore, as this research matures and becomes accessible to the profession, learning how to incorporate it given its perceived complexity will be essential for social workers to be willing to adopt it as a modifiable risk factor in their clinical toolkit. There are parallels between exercise and nutrition, depicted in Table 7, and they can help draw conclusions for social workers readiness to adopt nutrition as a modifiable risk factor in their treatment of depression, in 1985 Taylor (1985) said:

> Our knowledge in the area can best be advanced through a variety of studies that both address a variety of populations and combine excellent psychological and physiological methodology with equally careful description and assessment of physical activity and exercise.

Making one fundamental change to Taylor's notion demonstrates a striking parallel. If the words physical activity and exercise are removed and replaced with nutrition and diet the comparison is uncanny.

> Our knowledge in the area can best be advanced through a variety of studies that both address a variety of populations and combine excellent psychological and physiological methodology with equally careful description and assessment of [nutrition and diet].

Implications for Practice, Research, Education, and Policy

Practice Implications

Social workers are skilled providers of clinical services for individuals who are depressed. As the largest mental health treatment provider group in the United States, social workers have an opportunity to positively support mental health with large numbers of individuals who are depressed using non-pharmaceutical approaches. As innovative, non-pharmaceutical approaches to treatment demonstrate positive effects with depressed clients, social workers have an opportunity to develop, test, and evaluate those novel interventions.

Although research on dietary patterns and depression is in its infancy compared to research on exercise and depression, a growing body of evidence suggests incorporating nutrition as a modifiable risk factor will improve results for clients who are depressed. Participants in this study demonstrated a curiosity and willingness to incorporate nutrition as a modifiable risk factor in the treatment of depression. They cited the need for appropriate tools to do so effectively. Ideally, these tools would build their scope of expertise pertaining to nutrition as a modifiable risk factor for depression and establish appropriate guardrails to ensure that social workers feel they remain within their scope of practice.

There is an opportunity to develop these tools and provide continuing education opportunities for social workers who work with depressed clients. Tools would include comprehensive continuing education material on modifiable risk factors known to improve depression when mitigated. This would include a review and dissemination of the literature on dietary patterns reported to improve depression. This study identified other key practice components including barriers to adoption like bias and how it may impact decision-making on the inclusion of nutrition in clinical practice as a modifiable risk factor. A component of a continuing education course on nutrition and depression would include how bias impacts clinical decision-making and identify ways to reduce bias in treatment (Featherston et al., 2019).

It is important to develop a shared language, and one that increases rather than hinders mutual understanding, among and between professionals, on modifiable risk and especially on nutrition as a modifiable risk factor. For example, the word “diet,” because it carries levels of complexity and has varied connotations, is one to be avoided. A phrase like ‘dietary patterns’ along with companion food types might better convey shared meanings and be reflective of available evidence and research. Dietary patterns known to positively impact depression are

simple – they involve the increase of fruits, vegetables, whole grains, beans, legumes, nuts, seeds.

Just as the term "movement" instead of "exercise" fostered a sense of comfort with participants in this study, referring to "increasing fruits and vegetables" rather than modifying "diet" could help to increase comfort level and adoption readiness and overcome scope of practice concerns. Furthermore, shared language for modifiable risk in general could open opportunities for a more comprehensive assessment of risk and provide an opportunity to discuss behavioral strategies that clients have control over at a time when they may feel much is out of their control.

Research Implications

Study continues, but current evidence supports the claim that dietary patterns rich in fruits, vegetables, beans, legumes, whole grains, nuts, and seeds may reduce the risk of developing depression (Akbaraly et al., 2009b; Almudena et al., 2009; Ángel Martínez-González, 2006; Kohatsu, 2005b; Lai et al., 2014b; Opie et al., 2017; Sanchez-Villegas & Martínez-González, 2013). It is necessary for the body of evidence to continue to develop and evolve through randomized controlled intervention studies with diverse populations. Further studies are required to confirm the causal relationship between dietary patterns and depression risk or at least that produce data to demonstrate a relationship. Dissemination of the ever-evolving body of evidence to practitioners, including social workers, is equally important for research to enter practice and improve outcomes for depressed clients. Dietary guidelines pertaining to optimal diet for improving depression that is grounded in scientific literature will be necessary for social workers to develop interventions as they work with clients to assess and modify risk factors known to negatively impact depression.

Education

Evidence presented within this study supports an emphasis on building understanding of modifiable risk factors and how they can be incorporated in clinical practice in the treatment of depression. This can be incorporated in clinical curriculum at the bachelors and master's level. Creating continuing education content, sanctioned by the National Association of Social Workers, may be another effective tool to build understanding of modifiable risk. This would provide clinicians working with clients who are depressed with another tool to aid in their treatment protocol. Content should include a better understanding of modifiable risk and mental health. It should also include an assessment of known risk factors, when modified, that can improve outcomes for depressed clients. It will be important to demonstrate techniques for modifying risk that social workers can use in treatment while maintaining fidelity to the profession's scope of practice.

Policy

Noncommunicable diseases (NCDs) are the largest burden of early mortality and unhealthy dietary habits are recognized as major contributors to many of the common NCDs, including cardiovascular disease, cancer, diabetes, and depression (Jacka et al., 2014). There is an opportunity to identify, develop, and encourage food policies that promote consumption of dietary patterns known to improve physical and mental health at the local, state, and national level. Mohawk Valley Food Action Network (MVFAN) was spawned by the participatory action research project called Rust 2 Green as discussed in the preamble of this study. It was the first food policy council in New York State, and it provides a holistic roadmap to understand the food system policy environment and how it can be shaped by community members to support positive mental health outcomes.

One of the most important outcomes of our work in evaluating the impacts of the food system in Oneida County, New York through Rust 2 Green and MVFAN was the development of a taxonomy of local food system enterprises pictured below. This included those directly involved in production, processing, distribution, consumption, and post consumption (waste) of food, as well as the supporting businesses essential to a healthy agricultural economy. When the graphic below is viewed through a policy lens, there is an opportunity to imagine policies that impact all components of a healthy food system to support the mental and physical health of people while also supporting a healthy economy and planet. This can be just as readily applied at the national level though the United States Department of Agriculture's Dietary Guidelines for Americans, for example, or at a local level through zoning boards who set policy on land use that impacts farmers and their ability to grow food for local markets.

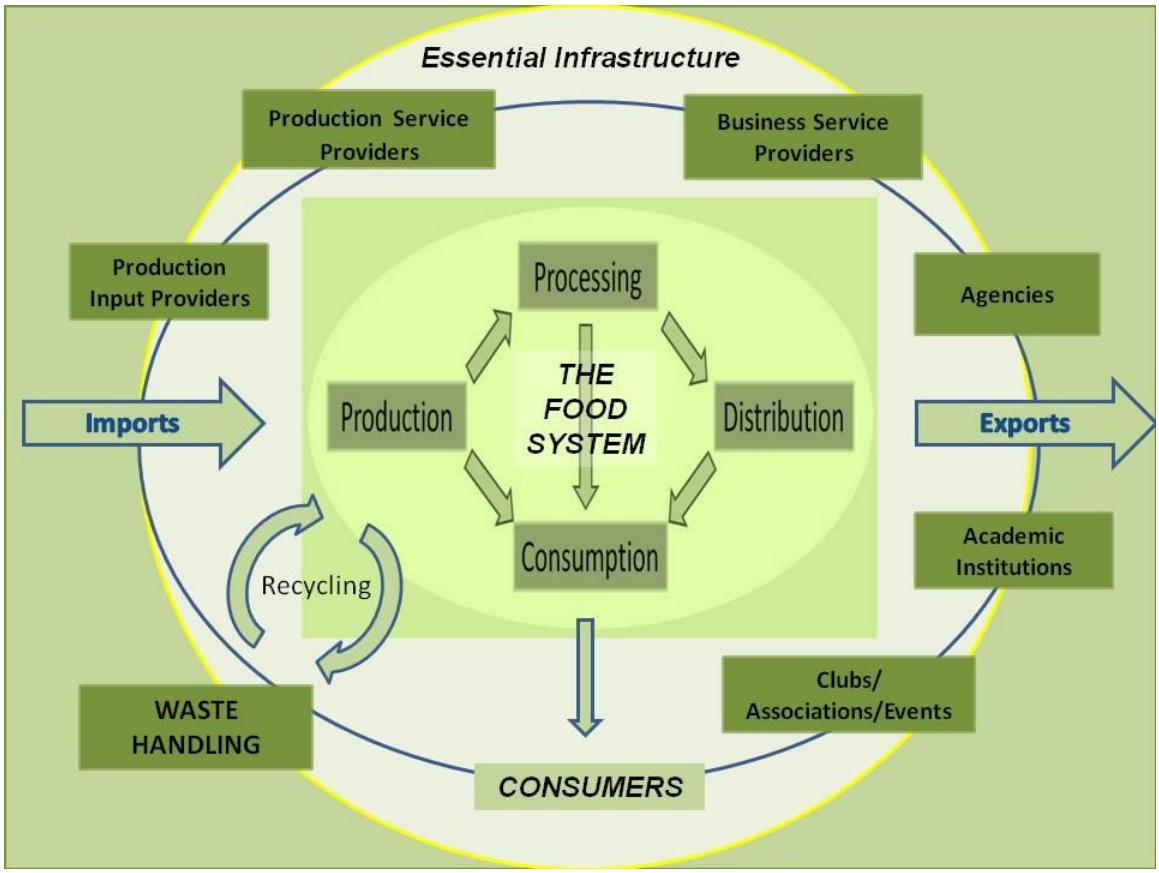


Figure 2: Final Report on activities funded by USDA Hunger-Free Communities Grant (CFDA #10.583) June 2013

The indicators of sound policy that promote positive mental health outcomes that should be considered include healthy people, a healthy environment, and a healthy economy as described and pictured below in Table 10.

Healthy people, can be measured by:

- Health outcomes
- Access to food
- Quality of food
- Healthy food choices

A healthy environment, can be measured by:

- Physical resources and productive capacity
- Agricultural diversity
- Supportive policy
- Physical infrastructure sufficiency, especially transportation
- Self-sufficiency

A healthy economy, can be measured by:

- Food sector economic impacts
- Food sector diversity
- Commitment to food sector economic development
- Food sector entrepreneurial opportunities

Table 10

Sound Food Policy

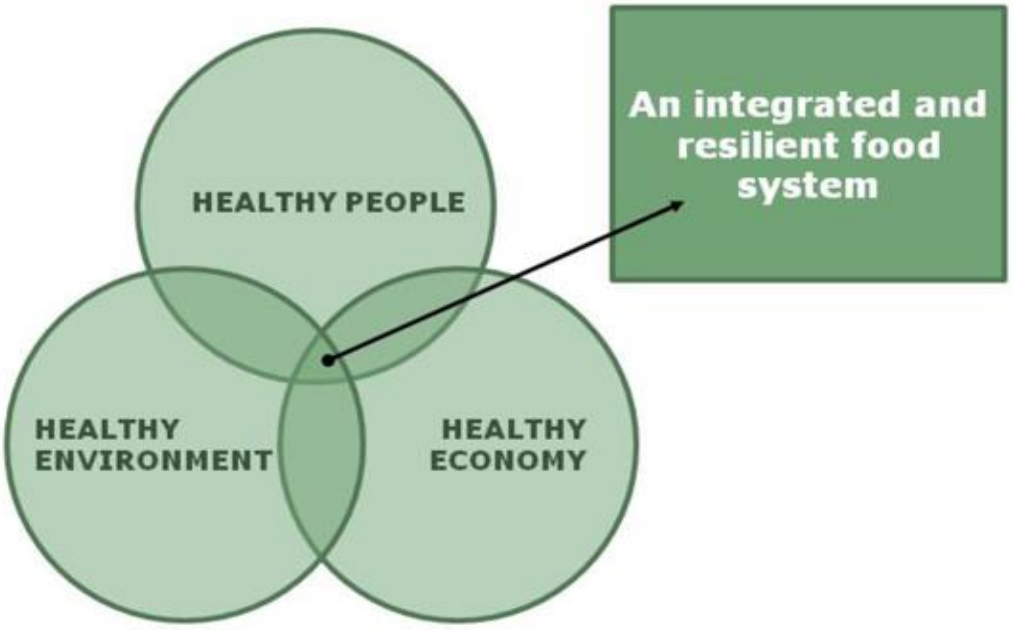
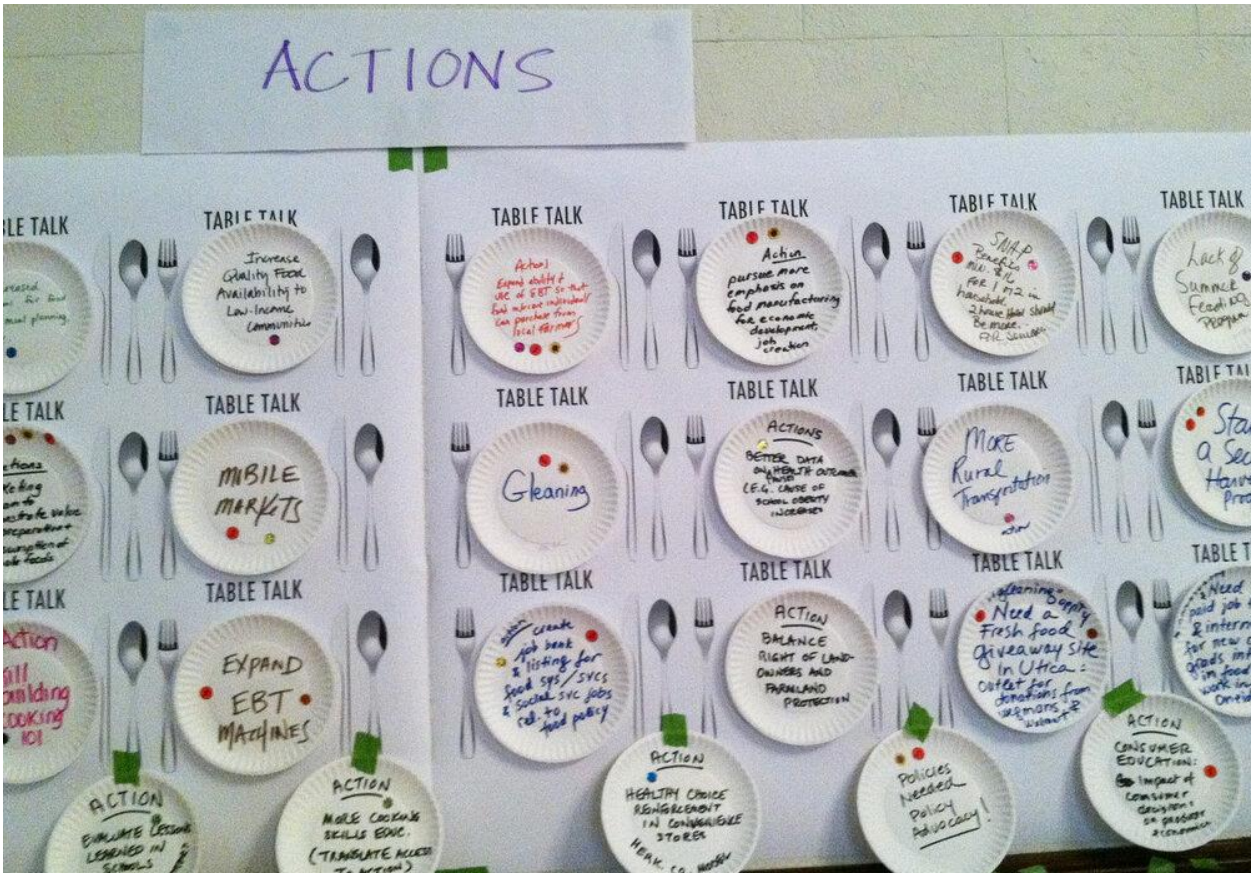


Figure 3: Final Report on activities funded by USDA Hunger-Free Communities Grant (CFDA #10.583) June 2013

The graphics below demonstrates one of those conversations where our community sought to shape the food system and food policy to improve the health of individuals, the economy, and the planet (*Food Policy Project*, n.d.). There remains an opportunity to extend the policy environment to include how food and food systems may impact mental health. As research continues to develop on dietary patterns known to improve mental health outcomes, the findings will inform food and health policy. When that policy is done well, it will run through the lens of an integrated and resilient food system that balances healthy people, a healthy environment, and a healthy economy. Most importantly, it will involve community members, like those in Utica who sought to shape and influence the local food system through active participation in community dialogue as captured below in one of the many Rust 2 Green projects and conversations.

(*Food Policy Project*, n.d.)



(*Food Policy Project*, n.d.)

Limitations of Study

There are limitations to the conclusions that can be drawn from this research. A phenomenological approach provided a methodology for understanding how the lived experience of social workers may impact their readiness to adopt food as a modifiable risk factor in their treatment of depressed clients. This methodology was especially strong in understanding how the personal lived experiences of social workers may present barriers to adoption readiness. It allowed an opportunity for social workers to reflect upon their customs, beliefs, and traditions and share those experiences with me. This allowed me an opportunity to understand their

experience with food and how that experience may impact their readiness to adopt nutrition as a modifiable risk factor in the treatment of depression. A phenomenological approach was particularly useful in unearthing bias within the personal experiences of participants.

This methodology demonstrated some challenges for understanding the academic and professional experiences of social workers with food and mood. For a phenomenological approach to be effective, the participant must have experience to draw from and share. Where no experience exists, an exploratory approach is more helpful. Because no social workers had academic or formal learning experience with food as a treatment component of depression that they could recall, it was challenging to understand how lived experience might impact their readiness to adopt nutrition in clinical practice. Furthermore, because social workers were not incorporating food in treatment as a modifiable risk factor, participants were unable to share that experience. However, much was learned from understanding the academic, personal, and professional lived experience where it existed. More important was what was learned from understanding where participants lacked experience and to draw conclusions for practice.

There are inherent limitations in the purposive and snowball sampling method. With any non-random sample, there is limited ability to draw conclusions beyond the sample of participants. Furthermore, I used email distribution lists through the New York State Clinical Society and the National Association of Social Workers in New York and California. This recruitment vehicle resulted in most of the participants residing in urban environments near large cities on the East and West Coast. There was little representation from rural social workers, whose lived experiences may be different from those in urban areas. However, despite the limited geographic representation, the sample was notably diverse.

Due to IRB COVID-19 guidelines, no meetings occurred in person, which may have impacted the depth of experiences shared. It was difficult to establish rapport with participants using an electronic platform. It was even more difficult on the two occasions where individuals participated with their camera off. In-person interviews would have been ideal, but use of a virtual platform offered convenience and timesaving for participants and allowed for inclusion of diverse participants from across the country.

Conclusion

This study sought to understand social workers' readiness to adopt nutrition as a modifiable risk factor with their clients who are depressed using a phenomenological approach to capture lived experience of the participants. The biopsychosocial and integrative social work models provided theoretical grounding for this study. I learned that social workers who participated in this study were curious and broadly open to learning more about diet and depression. Social worker participants are committed to evidence-based practices, and most noted that a healthy diet includes fruits and vegetables. These two factors offer potential strengths for the development of nutrition as a modifiable risk factor with their clients.

Several barriers exist. There is a lack of awareness of modifiable risk factors in general, and lack of awareness of dietary patterns known to improve depression scores. Personal bias impacted readiness to adopt, and social workers identified a perceived complexity in including nutrition in clinical practice compared with including exercise. A formidable barrier to overcome is a perceived breach in scope of practice to include nutrition as a modifiable risk factor. The Theory of Diffusion provides a framework for nutrition to be adopted as a modifiable risk factor as broadly as exercise is. While exercise as a modifiable risk factor is in the confirmation stage

of the five stages of diffusion of innovation, nutrition as a modifiable risk factor is at the first stage where knowledge of the innovation is necessary.

The body of evidence on dietary patterns known to improve depression must mature and strengthen. There is a need to develop continuing education on modifiable risk, bias in clinical practice, and dietary patterns known to improve mental health outcomes. This will aid in addressing the scope of practice concerns identified by participants. Parallels can be identified and used between the appropriate use of psychoeducation and exercise to improve depression outcomes and psychoeducation on nutrition and depression outcomes. As barriers to adoption are addressed, and the body of research on dietary patterns known to improve depression outcomes strengthens, those who suffer from depression may have one more option in their journey towards optimal mental health.

I have now spent a decade of my life searching to understand food and mood and how the social work profession might legitimately incorporate it into practice. While I am confident that research will continue to develop on the positive impact nutrition has on our mental health, I recognize much remains to be learned. Like my participants, my relationship with food is complicated and I too have much to learn still. While I do subscribe to the value of a diet rich in fruits, vegetables, beans, legumes, whole grains, nuts, and seeds, I do not personally exclude foods, nutrients, or food groups from my diet.

I am not immune to bias despite my years of research either, and I am certain I have bias to address *because* of my research. I no longer hold the idiosyncratic belief that food heals, but I do believe it is an inextricable component of healing. It took a heart attack while this study was underway to force my own bias into the light. My journey with food and health will continue as

my grandmothers whisper often in my ear to remind me of all that they taught me. And so, I will continue to explore my food culture and healing as I am inspired and reminded of them…`

Buon appetito! Na zdrowie!

References

2015-2020 Dietary Guidelines—Health.gov. (n.d.). Retrieved November 27, 2018, from https://health.gov/dietaryguidelines/2015/guidelines/

Adjibade, M., Assmann, K. E., Andreeva, V. A., Lemogne, C., Hercberg, S., Galan, P., & Kesse-Guyot, E. (2018). Prospective association between adherence to the Mediterranean diet and risk of depressive symptoms in the French SU.VI.MAX cohort. *European Journal Of Nutrition*, *57*(3), 1225–1235. https://doi.org/10.1007/s00394-017-1405-3

Akbaraly, T. N., Brunner, E. J., Ferrie, J. E., Marmot, M. G., Kivimaki, M., & Singh-Manoux, A. (2009a). Dietary pattern and depressive symptoms in middle age. *The British Journal Of Psychiatry: The Journal Of Mental Science*, *195*(5), 408–413. mnh. https://doi.org/10.1192/bjp.bp.108.058925

Akbaraly, T. N., Brunner, E. J., Ferrie, J. E., Marmot, M. G., Kivimaki, M., & Singh-Manoux, A. (2009b). Dietary pattern and depressive symptoms in middle age. *British Journal of Psychiatry*, *195*(5), 408–413. https://doi.org/10.1192/bjp.bp.108.058925

Akbaraly, T. N., Kerleau, C., Wyart, M., Chevallier, N., Ndiaye, L., Shivappa, N., Hébert, J. R., & Kivimäki, M. (2016). Dietary Inflammatory Index and Recurrence of Depressive Symptoms: Results From the Whitehall II Study. *Clinical Psychological Science*, *4*(6), 1125. edo.

Akbaraly TN, Kivimäki M, Brunner EJ, Chandola T, Marmot MG, Singh-Manoux A, Ferrie JE, Akbaraly, T. N., Kivimäki, M., Brunner, E. J., Chandola, T., Marmot, M. G., Singh-Manoux, A., & Ferrie, J. E. (2009). Association between metabolic syndrome and depressive symptoms in middle-aged adults: Results from the Whitehall II study. *Diabetes Care*, *32*(3), 499–504. https://doi.org/10.2337/dc08-1358

Almeida, O. P., Hankey, G. J., Yeap, B. B., Golledge, J., McCaul, K., & Flicker, L. (2013). A risk table to assist health practitioners assess and prevent the onset of depression in later life. *Preventive Medicine*, *57*(6), 878–882. https://doi.org/10.1016/j.ypmed.2013.09.021

Almudena, S.-V., Miguel, D.-R., Alvaro, A., Javier, S., Francisca, L., Lluis Serra, M., & Miguel Angel, M.-G. (2009). Association of the Mediterranean Dietary Pattern With the Incidence of Depression: The Seguimiento Universidad de Navarra/University of Navarra Follow-up (SUN) Cohort. *Archives of General Psychiatry*, *10*, 1090. edsovi. https://doi.org/10.1001/archgenpsychiatry.2009.129

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., Dube, S. R., & Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, *256*(3), 174–186. https://doi.org/10.1007/s00406-005-0624-4

Ángel Martínez-González, M. (2006). The SUN cohort study (Seguimiento University of Navarra). *Public Health Nutrition*, *9*(1a). https://doi.org/10.1079/PHN2005935

APA Dictionary of Psychology. (n.d.). Retrieved March 5, 2023, from https://dictionary.apa.org/

Astorg, P., Couthouis, A., Bertrais, S., Arnault, N., Meneton, P., Guesnet, P., Alessandri, J.-M., Galan, P., & Hercberg, S. (2008). Association of fish and long-chain n-3 polyunsaturated fatty acid intakes with the occurrence of depressive episodes in middle-aged French men and women. *Prostaglandins, Leukotrienes and Essential Fatty Acids (PLEFA)*, *78*, 171–182. edselp.

Banks, R. R., Eberhardt, J. L., & Ross, L. (2006). Discrimination and Implicit Bias in a Racially Unequal Society. *California Law Review, 94*(4), 1169–1190. https://doi.org/10.2307/20439061

Beezhold, B. L., Johnston, C. S., & Daigle, D. R. (2010). Vegetarian diets are associated with healthy mood states: A cross-sectional study in Seventh Day Adventist adults. *Nutrition Journal*, *9*, 26–32. a9h.

Behavioral Health Barometer: New York, 2015. (n.d.). 25.

Belvisi, D., Pellicciari, R., Fabbrini, G., Tinazzi, M., Berardelli, A., & Defazio, G. (2020). Modifiable risk and protective factors in disease development, progression and clinical subtypes of Parkinson's disease: What do prospective studies suggest? *Neurobiology of Disease*, *134*, 104671–104671. https://doi.org/10.1016/j.nbd.2019.104671

Beyer, C. (2020). Edmund Husserl. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2020). Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/win2020/entries/husserl/

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member Checking: A Tool to Enhance Trustworthiness or Merely a Nod to Validation? *Qualitative Health Research*, *26*(13), 1802–1811. https://doi.org/10.1177/1049732316654870

Blumenthal, J. A., Babyak, M. A., Doraiswamy, P. M., Watkins, L., Hoffman, B. M., Barbour, K. A., Herman, S., Craighead, W. E., Brosse, A. L., Waugh, R., Hinderliter, A., & Sherwood, A. (2007). Exercise and pharmacotherapy in the treatment of major depressive disorder. *Psychosomatic Medicine*, *69*(7), 587–596. https://doi.org/10.1097/PSY.0b013e318148c19a

Bogdan, R. (1982). *Qualitative research for education: An introduction to theory and methods*. Allyn and Bacon.

Borrell-Carrió, F., Suchman, A. L., & Epstein, R. M. (2004). The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry. *Annals of Family Medicine*, *2*(6), 576–582. https://doi.org/10.1370/afm.245

Bowes, S. M., Ammirati, R. J., Costello, T. H., Link to external site, this link will open in a new window, Basterfield, C., & Lilienfeld, S. O. (2020). Cognitive biases, heuristics, and logical fallacies in clinical practice: A brief field guide for practicing clinicians and supervisors. *Professional Psychology: Research and Practice*, *51*(5), 435–445. https://doi.org/10.1037/pro0000309

Brody, D. J. (2018). *Prevalence of Depression Among Adults Aged 20 and Over: United States, 2013–2016*. *303*, 8.

Cairns, K. E., Yap, M. B. H., Pilkington, P. D., & Jorm, A. F. (2014). Risk and protective factors for depression that adolescents can modify: A systematic review and meta-analysis of longitudinal studies. *Journal of Affective Disorders*, *169*, 61–75. https://doi.org/10.1016/j.jad.2014.08.006

Chang, S.-C., Pan, A., Kawachi, I., & Okereke, O. I. (2016). Risk factors for late-life depression: A prospective cohort study among older women. *Preventive Medicine*, *91*, 144–151. https://doi.org/10.1016/j.ypmed.2016.08.014

Choi, K. W., Stein, M. B., Nishimi, K. M., Ge, T., Coleman, J. R., Chen, C.-Y., Ratanatharathorn, A., Zheutlin, A. B., Dunn, E. C., Breen, G., Koenen, K. C., & Smoller, J. W. (2020). An Exposure-Wide and Mendelian Randomization Approach to Identifying

Modifiable Factors for the Prevention of Depression. *The American Journal of Psychiatry*, *177*(10), 944–954. https://doi.org/10.1176/appi.ajp.2020.19111158

Christensen, L., & Somers, S. (1996). Comparison of nutrient intake among depressed and nondepressed individuals. *International Journal of Eating Disorders*, *20*(1), 105–109. https://doi.org/10.1002/(SICI)1098-108X(199607)20:1<105::AID-EAT12>3.0.CO;2-3

Cipriani, A., Furukawa, T. A., Salanti, G., Chaimani, A., Atkinson, L. Z., Ogawa, Y., Leucht, S., Ruhe, H. G., Turner, E. H., Higgins, J. P. T., Egger, M., Takeshima, N., Hayasaka, Y., Imai, H., Shinohara, K., Tajika, A., Ioannidis, J. P. A., & Geddes, J. R. (2018). Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: A systematic review and network meta-analysis. *The Lancet*, *391*(10128), 1357–1366. https://doi.org/10.1016/S0140-6736(17)32802-7

Clark Moustakas. (1994). *Phenomenological research methods*. SAGE Publications, Inc.; edsrem. https://doi.org/10.4135/9781412995658

Costarelli, V., Koretsi, E., & Georgitsogianni, E. (2013). Health-related quality of life of Greek adolescents: The role of the Mediterranean diet. *Quality of Life Research*, *22*(5), 951–956. https://doi.org/10.1007/s11136-012-0219-2

Creswell, J. W. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (Fourth edition.). SAGE.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage Publications.

Current Understandings of Major Depression – Biopsychosocial Model. (n.d.). Retrieved June 28, 2020, from https://www.mentalhelp.net/depression/biopsychosocial-model/

De Houwer, J. (2019). Implicit Bias Is Behavior: A Functional-Cognitive Perspective on Implicit Bias. *Perspectives on Psychological Science, 14*(5), 835–840. https://doi.org/10.1177/1745691619855638

Dearing, J. W. (2009). Applying Diffusion of Innovation Theory to Intervention Development. *Research on Social Work Practice, 19*(5), 503–518. https://doi.org/10.1177/1049731509335569

Dearing, J. W., & Cox, J. G. (2018). Diffusion Of Innovations Theory, Principles, And Practice. *Health Affairs Web Exclusive, 37*(2), 183–190. https://doi.org/10.1377/hlthaff.2017.1104

Definition of veganism. (n.d.). The Vegan Society. Retrieved March 1, 2022, from https://www.vegansociety.com/go-vegan/definition-veganism

Depression. (n.d.). Retrieved October 21, 2021, from https://www.who.int/news-room/fact-sheets/detail/depression

Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., Williamson, D. F., & Giles, W. H. (2001). Childhood Abuse, Household Dysfunction, and the Risk of Attempted Suicide Throughout the Life Span: Findings From the Adverse Childhood Experiences Study. *JAMA : The Journal of the American Medical Association, 286*(24), 3089–3096. https://doi.org/10.1001/jama.286.24.3089

Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science (New York, N.Y.), 196*(4286), 129–136. https://doi.org/10.1126/science.847460

Fang Li, Xiaoqin Liu, & Dongfeng Zhang. (2016). Fish consumption and risk of depression: A meta-analysis. *Journal of Epidemiology & Community Health, 70*(3), 299. edb.

Featherston, R. J., Shlonsky, A., Lewis, C., Luong, M.-L., Downie, L. E., Vogel, A. P., Granger, C., Hamilton, B., & Galvin, K. (2019). Interventions to Mitigate Bias in Social Work

Decision-Making: A Systematic Review. *Research on Social Work Practice*, *29*(7), 741–752. https://doi.org/10.1177/1049731518819160

Felice N., J., Julie A., P., Arnstein, M., Lana J., W., Allison M., H., Sharleen Linette, O., Geoffrey C., N., Mark A., K., & Michael, B. (2010). Association of Western and Traditional Diets With Depression and Anxiety in Women. *The American Journal of Psychiatry*, *3*, 305. edsovi.

Food Policy Project. (n.d.). Rust2Green Utica. Retrieved May 1, 2023, from https://www.rust2greenutica.org/food-policy-project

Fortune, A. E., & Reid, W. J. (1999). *Research in social work.* (Dewey Library HV 11 F678 1999). New York : Columbia University Press, 1999.; cat00007a. https://libproxy.albany.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat00007a&AN=sunyalb.001068844&site=eds-live&scope=site

Frantk, L. K. (1961). *INTERPROFESSIONAL COMMUNICATION*. 7.

Freedman, J. L. (1964). Involvement, discrepancy, and change. *The Journal of Abnormal and Social Psychology*, *69*(3), 290–295. https://doi.org/10.1037/h0042717

Gallo, K. P., & Barlow, D. H. (2012). Factors involved in clinician adoption and nonadoption of evidence-based interventions in mental health. *Clinical Psychology: Science and Practice*, *19*(1), 93–106. http://dx.doi.org/10.1111/j.1468-2850.2012.01276.x

Gangwisch, J. E., Hale, L., Garcia, L., Malaspina, D., Opler, M. G., Payne, M. E., Rossom, R. C., & Lane, D. (2015). High glycemic index diet as a risk factor for depression: Analyses from the Women's Health Initiative. *American Journal of Clinical Nutrition*, *102*(2), 454–463. eih.

Gentles, S., Charles, C., Ploeg, J., & McKibbon, K. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The Qualitative Report*, *20*, 1772–1789.

Get Involved | NAMI: National Alliance on Mental Illness. (n.d.). Retrieved November 8, 2018, from https://www.nami.org/Get-Involved/Awareness-Events/Suicide-Prevention-Awareness-Month

Global Definition of Social Work – International Federation of Social Workers. (n.d.). Retrieved February 28, 2022, from https://www.ifsw.org/what-is-social-work/global-definition-of-social-work/

Gould, E., Parkar, S., Crawford, K., Forbes, D., Skinner, M., & Scheepens, A. (2008). Plant based 'mood foods'—Targeting anxiety. *CURRENT TOPICS IN NUTRACEUTICAL RESEARCH*, *6*(1), 29–40.

Gratzer, W. B. (2005). *Terrors of the table: The curious history of nutrition*. Oxford University Press.

Grbich, C. (2007). *Qualitative data analysis: An introduction*. SAGE Publications.

Greenberg, P. E., Fournier, A.-A., Sisitsky, T., Pike, C. T., & Kessler, R. C. (2015). The economic burden of adults with major depressive disorder in the United States (2005 and 2010). *The Journal of Clinical Psychiatry*, *76*(2), 155–162. https://doi.org/10.4088/JCP.14m09298

Heidegger, M. (1971). *Poetry, language, thought* (1st ed.). Harper & Row.

Hempel, S. (2015). *Modifiable risk factors in the progression of multiple sclerosis: A systematic review of the epidemiology and treatment*. Department of Veterans Affairs, Veterans

Health Administration, Quality Enhancement Research Initiative, Health Services Research & Development Service.

Hibbeln, J. R., Northstone, K., Evans, J., & Golding, J. (2018). Vegetarian diets and depressive symptoms among men. *JOURNAL OF AFFECTIVE DISORDERS*, *225*, 13–17. EDSWSS. https://doi.org/10.1016/j.jad.2017.07.051

Ho, F. K., Celis-Morales, C. A., Gray, S. R., Katikireddi, S. V., Niedzwiedz, C. L., Hastie, C., Ferguson, L. D., Berry, C., Mackay, D. F., Gill, J. M., Pell, J. P., Sattar, N., & Welsh, P. (2020). Modifiable and non-modifiable risk factors for COVID-19, and comparison to risk factors for influenza and pneumonia: Results from a UK Biobank prospective cohort study. *BMJ Open*, *10*(11), e040402–e040402. https://doi.org/10.1136/bmjopen-2020-040402

Huebner, B. (2016). Implicit Bias, Reinforcement Learning, and Scaffolded Moral Cognition. In M. Brownstein & J. Saul (Eds.), *Implicit Bias and Philosophy, Volume 1* (pp. 47–79). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198713241.003.0003

Ioannidis, J. P. A. (2008). Effectiveness of antidepressants: An evidence myth constructed from a thousand randomized trials? *Philosophy, Ethics, And Humanities In Medicine: PEHM*, *3*, 14–14. mnh. https://doi.org/10.1186/1747-5341-3-14

Is Social Work A Profession? (1915). (2012, April 30). Social Welfare History Project. https://socialwelfare.library.vcu.edu/social-work/is-social-work-a-profession-1915/

Jacka, F. N., Sacks, G., Berk, M., & Allender, S. (2014). Food policies for physical and mental health. *BMC Psychiatry*, *14*(1), 1–12. https://doi.org/10.1186/1471-244X-14-132

Kahn, J. (2017). *Race on the brain: Racism, implicit bias, and social justice*. Columbia University Press.

Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgment under uncertainty: Heuristics and biases*. Cambridge University Press.

Kelley, H. H., & Kelley, H. H. (1950). The warm-cold variable in first impressions of persons. *Journal of Personality*, *18*(4), 431–439. https://doi.org/10.1111/j.1467-6494.1950.tb01260.x

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, *62*(6), 593–602. https://doi.org/10.1001/archpsyc.62.6.593

Kohatsu, W. (2005a). Nutrition and Depression. *Explore: The Journal of Science and Healing*, *6*, 474.

Kohatsu, W. (2005b). Nutrition and Depression. *Explore: The Journal of Science and Healing*, *6*, 474. edsgao.

Lai, J. S., Hiles, S., Bisquera, A., Hure, A. J., McEvoy, M., & Attia, J. (2014a). A systematic review and meta-analysis of dietary patterns and depression in community-dwelling adults. *American Journal of Clinical Nutrition*, *99*(1), 181–197. rzh. https://doi.org/10.3945/ajcn.113.069880

Lai, J. S., Hiles, S., Bisquera, A., Hure, A. J., McEvoy, M., & Attia, J. (2014b). A systematic review and meta-analysis of dietary patterns and depression in community-dwelling adults. *The American Journal of Clinical Nutrition*, *99*(1), 181–197. https://doi.org/10.3945/ajcn.113.069880

Lassale, C., Batty, G. D., Baghdadli, A., Jacka, F., Sánchez-Villegas, A., Kivimäki, M., & Akbaraly, T. (2019). Healthy dietary indices and risk of depressive outcomes: A

systematic review and meta-analysis of observational studies. *Molecular Psychiatry*, *24*(7), 965–986. https://doi.org/10.1038/s41380-018-0237-8

Le Port, A., Gueguen, A., Kesse-Guyot, E., Melchior, M., Lemogne, C., Nabi, H., Goldberg, M., Zins, M., & Czernichow, S. (2012). Association between Dietary Patterns and Depressive Symptoms Over Time: A 10-Year Follow-Up Study of the GAZEL Cohort. *PLoS ONE*, *12*. https://doi.org/10.1371/journal.pone.0051593

Lee, M. Y., Chan, C. C. H. Y., Chan, C. L. W., Leung, P. P. Y., & Ng, S.-M. (2018). *Integrative Body-Mind-Spirit Social Work: An Empirically Based Approach to Assessment and Treatment*. Oxford University Press, Incorporated. http://ebookcentral.proquest.com/lib/albanyedu-ebooks/detail.action?docID=5305662

Lehman, B. J., David, D. M., & Gruber, J. A. (2017). Rethinking the biopsychosocial model of health: Understanding health as a dynamic system. *Social and Personality Psychology Compass*, *11*(8), e12328. https://doi.org/10.1111/spc3.12328

Li, X., Cao, H., Xie, S., Li, K., Tao, F., Yang, L., Zhang, J., & Bao, Y. (2019). Adhering to a vegetarian diet may create a greater risk of depressive symptoms in the elderly male Chinese population. *Journal of Affective Disorders*. edsgao. https://doi.org/10.1016/j.jad.2018.09.033

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

Liu, X., Yan, Y., Li, F., & Zhang, D. (2016). Fruit and vegetable consumption and the risk of depression: A meta-analysis. *Nutrition (Burbank, Los Angeles County, Calif.)*, *32*(3), 296–302. mnh. https://doi.org/10.1016/j.nut.2015.09.009

Low Dog, T. (2010a). The role of nutrition in mental health. *Alternative Therapies in Health & Medicine*, *16*(2), 42–46. rzh.

Low Dog, T. (2010b). The role of nutrition in mental health. *Alternative Therapies In Health And Medicine*, *16*(2), 42–46. mnh.

Lundy, M. (2008). An integrative model for social work practice—A multi-systemic, multi-theoretical approach. *Families in Society*, *89*(3), 394–406. https://doi.org/10.1606/1044-3894.3765

M Trigo. (2021). Therapeutic use of psychedelic drugs in depression disorders. *European Psychiatry*, *64*(S1), S779–S779. https://doi.org/10.1192/j.eurpsy.2021.2062

MacMahon, B. (1960). *Epidemiologic methods* (1st ed.].). Little, Brown.

MacPherson, L., Tull, M. T., Matusiewicz, A. K., Rodman, S., Strong, D. R., Kahler, C. W., Hopko, D. R., Zvolensky, M. J., Brown, R. A., & Lejuez, C. W. (2010). Randomized Controlled Trial of Behavioral Activation Smoking Cessation Treatment for Smokers With Elevated Depressive Symptoms. *Journal of Consulting and Clinical Psychology*, *78*(1), 55–61. https://doi.org/10.1037/a0017939

Manzano-Nieves, G., & Liston, C. (2021). Psychedelics revamped. *Nature (London)*, *589*(7842), 358–358.

Masana, M. F., Haro, J. M., Mariolis, A., Piscopo, S., Valacchi, G., Bountziouka, V., Anastasiou, F., Zeimbekis, A., Tyrovola, D., Gotsis, E., Metallinos, G., Polystipioti, A., Tur, J.-A., Matalas, A.-L., Lionis, C., Polychronopoulos, E., Sidossis, L. S., Tyrovolas, S., & Panagiotakos, D. B. (2018). Mediterranean diet and depression among older individuals: The multinational MEDIS study. *Experimental Gerontology*, *110*, 67–72. https://doi.org/10.1016/j.exger.2018.05.012

Mediterranean diet for heart health. (n.d.). Mayo Clinic. Retrieved February 28, 2022, from https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/mediterranean-diet/art-20047801

Meng, X., Brunet, A., Turecki, G., Liu, A., D'Arcy, C., & Caron, J. (2017). Risk factor modifications and depression incidence: A 4-year longitudinal Canadian cohort of the Montreal Catchment Area Study. *BMJ Open, 7*(6), e015156. https://doi.org/10.1136/bmjopen-2016-015156

Mersky, J. P., Topitzes, J., & Reynolds, A. J. (2013). Impacts of adverse childhood experiences on health, mental health, and substance use in early adulthood: A cohort study of an urban, minority sample in the U.S. *Child Abuse & Neglect*, *37*(11), 917–925. https://doi.org/10.1016/j.chiabu.2013.07.011

Miki, T., Eguchi, M., Akter, S., Kochi, T., Kuwahara, K., Kashino, I., Hu, H., Kabe, I., Kawakami, N., Nanri, A., & Mizoue, T. (2018). Longitudinal adherence to a dietary pattern and risk of depressive symptoms: The Furukawa Nutrition and Health Study. *Nutrition*, *48*, 48–54. https://doi.org/10.1016/j.nut.2017.10.023

Miller, E. T. (2015). Discourses of whiteness and blackness: An ethnographic study of three young children learning to be white. *Ethnography & Education*, *10*(2), 137–153. https://doi.org/10.1080/17457823.2014.960437

Mood Food | Preventing Depression Through Food. (n.d.). Retrieved January 4, 2023, from https://moodfood-vu.eu/

Morris, Z. S., Wooding, S., & Grant, J. (2011). The answer is 17 years, what is the question: Understanding time lags in translational research. *Journal of the Royal Society of Medicine*, *104*(12), 510–520. https://doi.org/10.1258/jrsm.2011.110180

Murray, C. S., Poletti, G., Kebadze, T., Morris, J., Woodcock, A., Johnston, S. L., & Custovic, A. (2006). Study of modifiable risk factors for asthma exacerbations: Virus infection and allergen exposure increase the risk of asthma hospital admissions in children. *Thorax, 61*(5), 376–382. https://doi.org/10.1136/thx.2005.042523

Myles, I. A. (2014). Fast food fever: Reviewing the impacts of the Western diet on immunity. *Nutrition Journal*, *13*, 61. https://doi.org/10.1186/1475-2891-13-61

Nahas, R., & Sheikh, O. (2011). Complementary and alternative medicine for the treatment of major depressive disorder. *Canadian Family Physician*, *57*(6), 659–663.

New Report Provides Insights into New Social Workers' Demographics, Income, and Job Satisfaction. (n.d.). Retrieved October 10, 2022, from https://www.socialworkers.org/News/News-Releases/ID/2262/New-Report-Provides-Insights-into-New-Social-Workers-Demographics-Income-and-Job-Satisfaction

Nickerson, R. S. (n.d.). *Confirmation Bias: A Ubiquitous Phenomenon in Many Guises*. 48.

NIMH » Antidepressants: A complicated picture. (n.d.). Retrieved November 8, 2018, from https://www.nimh.nih.gov/about/directors/thomas-insel/blog/2011/antidepressants-a-complicated-picture.shtml

Nurses' Health Study |. (n.d.). Retrieved May 19, 2017, from http://nurseshealthstudy.org/

NYS Social Work Psychotherapy R Privilege. (n.d.). Retrieved November 6, 2022, from http://www.op.nysed.gov/prof/sw/lcswprivilege.htm

O'Donohue, W., & Henderson, D. (1999). Epistemic and Ethical Duties in Clinical Decision-making. *Behaviour Change*, *16*(1), 10–19. https://doi.org/10.1375/bech.16.1.10

Opie, R. S., Itsiopoulos, C., Parletta, N., Sanchez-Villegas, A., Akbaraly, T. N., Ruusunen, A., & Jacka, F. N. (2017). Dietary recommendations for the prevention of depression.

Nutritional Neuroscience, *20*(3), 161–171. https://doi.org/10.1179/1476830515Y.0000000043

Ostergaard, S. D., Mukherjee, S., Sharp, S. J., Proitsi, P., Lotta, L. A., Day, F., Perry, J. R. B., Boehme, K. L., Walter, S., Kauwe, J. S., Gibbons, L. E., Larson, E. B., Powell, J. F., Langenberg, C., Crane, P. K., Wareham, N. J., Scott, R. A., & van der Schouw, Y. T. (2015). Associations between Potentially Modifiable Risk Factors and Alzheimer Disease: A Mendelian Randomization Study. *PLoS Medicine*, *12*(6), e1001841; discussion e1001841-e1001841; discussion e1001841. https://doi.org/10.1371/journal.pmed.1001841

Palhano-Fontes, F., Barreto, D., Onias, H., Andrade, K. C., Novaes, M. M., Pessoa, J. A., Mota-Rolim, S. A., Osório, F. L., Sanches, R., dos Santos, R. G., Tófoli, L. F., de Oliveira Silveira, G., Yonamine, M., Riba, J., Santos, F. R., Silva-Junior, A. A., Alchieri, J. C., Galvão-Coelho, N. L., Lobão-Soares, B., … Araújo, D. B. (2019). Rapid antidepressant effects of the psychedelic ayahuasca in treatment-resistant depression: A randomized placebo-controlled trial. *Psychological Medicine*, *49*(4), 655–663. https://doi.org/10.1017/S0033291718001356

Pearce, M., Garcia, L., Abbas, A., Strain, T., Schuch, F. B., Golubic, R., Kelly, P., Khan, S., Utukuri, M., Laird, Y., Mok, A., Smith, A., Tainio, M., Brage, S., & Woodcock, J. (2022). Association Between Physical Activity and Risk of Depression: A Systematic Review and Meta-analysis. *JAMA Psychiatry*, *79*(6), 550–559. https://doi.org/10.1001/jamapsychiatry.2022.0609

Peoples, Katarzyna. (2021). *How to Write a Phenomenological Dissertation*. SAGE Publications, Inc.

Petty, R. E., Ostrom, T. M., & Brock, T. C. (1981). *Cognitive responses in persuasion*. L. Erlbaum Associates.

Pfaff, J. J., Alfonso, H., Newton, R. U., Sim, M., Flicker, L., & Almeida, O. P. (2014). ACTIVEDEP: A randomised, controlled trial of a home-based exercise intervention to alleviate depression in middle-aged and older adults. *British Journal of Sports Medicine*, *48*(3), 226–232. https://doi.org/10.1136/bjsports-2013-092510

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology*, *52*(2), 137–145. http://dx.doi.org.libproxy.albany.edu/10.1037/0022-0167.52.2.137

Pollan, M. (2018). *How to change your mind: What the new science of psychedelics teaches us about consciousness, dying, addiction, depression, and transcendence*. Penguin Press.

Preparing MSW Students for Integrative Mind–Body-Spirit Practice—University at Albany. (n.d.). Retrieved March 8, 2023, from https://search.library.albany.edu/discovery/fulldisplay?docid=cdi_proquest_miscellaneous_1680149830&context=PC&vid=01SUNY_ALB:01SUNY_ALB&lang=en&search_scope=MyInst_and_CI&adaptor=Primo%20Central&tab=Everything&query=any,contains,integrative%20social%20work%20practice&mode=basic&offset=10

Processed foods What you should know. (n.d.). Mayo Clinic Health System. Retrieved February 28, 2022, from https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/processed-foods-what-you-should-know

Psaltopoulou, T., Sergentanis, T. N., Panagiotakos, D. B., Sergentanis, I. N., Kosti, R., & Scarmeas, N. (2013). Mediterranean diet, stroke, cognitive impairment, and depression:

A meta-analysis. *Annals Of Neurology*, *74*(4), 580–591. mnh. https://doi.org/10.1002/ana.23944

Radloff, L. S. (1977). The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Applied Psychological Measurement*, *1*(3), 385–401. https://doi.org/10.1177/014662167700100306

Reiff, C. M., Richman, E. E., Nemeroff, C. B., Carpenter, L. L., Widge, A. S., Rodriguez, C. I., Kalin, N. H., & McDonald, W. M. (2020). Psychedelics and Psychedelic-Assisted Psychotherapy. *The American Journal of Psychiatry*, *177*(5), 391–410. https://doi.org/10.1176/appi.ajp.2019.19010035

Rogers, E. M. (1962). *Diffusion of innovations*. Free Press of Glencoe.

Ruxton, C. H. S., Gardner, E. J., & McNulty, H. M. (2009). Is Sugar Consumption Detrimental to Health? A Review of the Evidence 1995—2006. *Critical Reviews in Food Science and Nutrition*, *50*(1), 1–19. https://doi.org/10.1080/10408390802248569

Sánchez-Villegas, A., Álvarez-Pérez, J., Toledo, E., Salas-Salvadó, J., Ortega-Azorín, C., Zomeño, M. D., Vioque, J., Martínez, J. A., Romaguera, D., Pérez-López, J., López-Miranda, J., Estruch, R., Bueno-Cavanillas, A., Arós, F., Tur, J. A., Tinahones, F. J., Lecea, O., Martín, V., Ortega-Calvo, M., … Serra-Majem, L. (2018). Seafood Consumption, Omega-3 Fatty Acids Intake, and Life-Time Prevalence of Depression in the PREDIMED-Plus Trial. *Nutrients*, *10*(12), Article 12. https://doi.org/10.3390/nu10122000

Sánchez-Villegas, A., Cabrera-Suárez, B., Molero, P., González-Pinto, A., Chiclana-Actis, C., Cabrera, C., Lahortiga-Ramos, F., Florido-Rodríguez, M., Vega-Pérez, P., Vega-Pérez, R., Pla, J., Calviño-Cabada, M. J., Ortuño, F., Navarro, S., Almeida, Y., & Hernández-

Fleta, J. L. (2019). Preventing the recurrence of depression with a Mediterranean diet supplemented with extra-virgin olive oil. The PREDI-DEP trial: Study protocol. *BMC Psychiatry*, *19*(1), 63. https://doi.org/10.1186/s12888-019-2036-4

Sánchez-Villegas, A., Delgado-Rodríguez, M., Alonso, A., Schlatter, J., Lahortiga, F., Majem, L. S., & Martínez-González, M. A. (2009). Association of the Mediterranean Dietary Pattern With the Incidence of Depression: The Seguimiento Universidad de Navarra/University of Navarra Follow-up (SUN) Cohort. *Archives of General Psychiatry*, *66*(10), 1090–1098. https://doi.org/10.1001/archgenpsychiatry.2009.129

Sánchez-Villegas, A., Delgado-Rodríguez, M., Alonso, A., Schlatter, J., Lahortiga, F., Serra Majem, L., & Martínez-González, M. A. (2009). Association of the Mediterranean dietary pattern with the incidence of depression: The Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. *Archives of General Psychiatry*, *66*(10), 1090–1098. https://doi.org/10.1001/archgenpsychiatry.2009.129

Sánchez-Villegas, A., Henríquez-Sánchez, P., Ruiz-Canela, M., Lahortiga, F., Molero, P., Toledo, E., & Martínez-González, M. A. (2015). A longitudinal analysis of diet quality scores and the risk of incident depression in the SUN Project. *BMC Medicine*, *13*, 197–197. mnh. https://doi.org/10.1186/s12916-015-0428-y

Sanchez-Villegas, A., & Martínez-González, M. A. (2013). Diet, a new target to prevent depression? *BMC Medicine*, *11*(1), 1–4. a9h.

Sánchez-Villegas, A., Martínez-González, M. A., Estruch, R., Salas-Salvadó, J., Corella, D., Covas, M. I., Arós, F., Romaguera, D., Gómez-Gracia, E., Lapetra, J., Pintó, X., Martínez, J. A., Lamuela-Raventós, R. M., Ros, E., Gea, A., Wärnberg, J., & Serra-Majem, L. (2013a). Mediterranean dietary pattern and depression: The PREDIMED

randomized trial. *BMC Medicine*, *11*, 208–208. mnh. https://doi.org/10.1186/1741-7015-11-208

Sánchez-Villegas, A., Martínez-González, M. A., Estruch, R., Salas-Salvadó, J., Corella, D., Covas, M. I., Arós, F., Romaguera, D., Gómez-Gracia, E., Lapetra, J., Pintó, X., Martínez, J. A., Lamuela-Raventós, R. M., Ros, E., Gea, A., Wärnberg, J., & Serra-Majem, L. (2013b). Mediterranean dietary pattern and depression: The PREDIMED randomized trial. *BMC Medicine*, *11*(1), 1–12. a9h.

Sánchez-Villegas, A., Pérez-Cornago, A., Zazpe, I., Santiago, S., Lahortiga, F., & Martínez-González, M. A. (2018). Micronutrient intake adequacy and depression risk in the SUN cohort study. *European Journal of Nutrition*, *57*(7), 2409–2419. https://doi.org/10.1007/s00394-017-1514-z

Sánchez-Villegas, A., Toledo, E., de Irala, J., Ruiz-Canela, M., Pla-Vidal, J., & Martínez-González, M. A. (2012). Fast-food and commercial baked goods consumption and the risk of depression. *Public Health Nutrition*, *15*(3), 424–432. mnh. https://doi.org/10.1017/S1368980011001856

Sánchez-Villegas, A., Verberne, L., De Irala, J., Ruíz-Canela, M., Toledo, E., Serra-Majem, L., & Martínez-González, M. A. (2011). Dietary Fat Intake and the Risk of Depression: The SUN. *PLoS ONE*, *6*(1), 1. edb.

Sanchez-Villegas, A., Zazpe, I., Santiago, S., Perez-Cornago, A., Martinez-Gonzalez, M. A., & Lahortiga-Ramos, F. (2018). Added sugars and sugar-sweetened beverage consumption, dietary carbohydrate index and depression risk in the Seguimiento Universidad de Navarra (SUN) Project. *British Journal of Nutrition*, *119*(2), 211–221. rzh. https://doi.org/10.1017/S0007114517003361

Santomauro, D. F., Herrera, A. M. M., Shadid, J., Zheng, P., Ashbaugh, C., Pigott, D. M., Abbafati, C., Adolph, C., Amlag, J. O., Aravkin, A. Y., Bang-Jensen, B. L., Bertolacci, G. J., Bloom, S. S., Castellano, R., Castro, E., Chakrabarti, S., Chattopadhyay, J., Cogen, R. M., Collins, J. K., … Ferrari, A. J. (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet*, *0*(0). https://doi.org/10.1016/S0140-6736(21)02143-7

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907. https://doi.org/10.1007/s11135-017-0574-8

Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation*, *2007*(114), 11–25. https://doi.org/10.1002/ev.223

Segal, D. L., Coolidge, F. L., & Marty, M. A. (2017). *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*. edsgvr. https://libproxy.albany.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=edsgvr&AN=edsgcl.6070800416&site=eds-live&scope=site

Silverstein, B. (1984). *Fed up: The food forces that make you fat, sick, and poor*. South End Press.

Skarupski, K. A., Tangney, C. C., Li, H., Evans, D. A., & Morris, M. C. (2013). Mediterranean diet and depressive symptoms among older adults over time. *The Journal Of Nutrition, Health & Aging*, *17*(5), 441–445. mnh. https://doi.org/10.1007/s12603-012-0437-x

Smith, D. W. (2018a). Phenomenology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2018). Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/sum2018/entries/phenomenology/

Smith, D. W. (2018b). Phenomenology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2018). Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/sum2018/entries/phenomenology/

Social Workers: Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics. (n.d.). Retrieved November 1, 2018, from https://www.bls.gov/ooh/community-and-social-service/social-workers.htm#tab-8

Spencer, K. B., Charbonneau, A. K., & Glaser, J. (2016). Implicit Bias and Policing. *Social and Personality Psychology Compass*, *10*(1), 50–63. https://doi.org/10.1111/spc3.12210

Sugawara Norio, Yasui-Furukori Norio, Tsuchimine Shoko, Kaneda Ayako, Tsuruga Koji, Iwane Kaori, Okubo Noriyuki, Takahashi Ippei, & Kaneko Sunao. (2012). No association between dietary patterns and depressive symptoms among a community-dwelling population in Japan. *Annals of General Psychiatry, Vol 11, Iss 1, p 24 (2012)*, *1*, 24. edsdoj. https://doi.org/10.1186/1744-859X-11-24

Summary_Diffusion_Theory.pdf. (n.d.). Retrieved October 25, 2021, from https://twut.nd.edu/PDF/Summary_Diffusion_Theory.pdf

Sun, J., Patel, F., Rose-Jacobs, R., Frank, D. A., Black, M. M., & Chilton, M. (2017). Mothers' Adverse Childhood Experiences and Their Young Children's Development. *American Journal of Preventive Medicine*, *53*(6), 882–891. https://doi.org/10.1016/j.amepre.2017.07.015

Szoeke, C., Dang, C., Lehert, P., Hickey, M., Morris, M. E., Dennerstein, L., & Campbell, S. (2017). Unhealthy habits persist: The ongoing presence of modifiable risk factors for disease in women. *PloS One*, *12*(4), e0173603–e0173603. https://doi.org/10.1371/journal.pone.0173603

Tangenberg, K. M., & Kemp, S. (2002). Embodied Practice: Claiming the Body's Experience, Agency, and Knowledge for Social Work. *Social Work*, *47*(1), 9–18. https://doi.org/10.1093/sw/47.1.9

Tappia, P. S. (2020). *Nutrition and Cardiovascular Health*. MDPI - Multidisciplinary Digital Publishing Institute.

Taylor, C. B., Sallis, J. F., & Needle, R. (1985). The relation of physical activity and exercise to mental health. *Public Health Reports*, *100*(2), 195–202.

Technology Adoption Curve—Everything that you need to know. (n.d.). Retrieved April 29, 2023, from https://mdevelopers.com/blog/technology-adoption-curve-everything-that-you-need-to-know

Turner, J., Higgins, R., & Childs, E. (2021). Microaggression and Implicit Bias. *The American Surgeon*, *87*(11), 1727–1731. https://doi.org/10.1177/00031348211023418

U.S. Census Bureau QuickFacts: United States. (n.d.). Retrieved October 22, 2021, from https://www.census.gov/quickfacts/fact/table/US/PST045219

USDA Food Patterns | Center for Nutrition Policy and Promotion. (n.d.). Retrieved November 27, 2018, from https://www.cnpp.usda.gov/USDAFoodPatterns

V. Costarelli, E. Koretsi, & E. Georgitsogianni. (2013). Health-related quality of life of Greek adolescents: The role of the Mediterranean diet. *Quality of Life Research, 5*, 951. edsjsr.

Vermeulen, E., Stronks, K., Visser, M., Brouwer, I. A., Schene, A. H., Mocking, R. J. T., Colpo, M., Bandinelli, S., Ferrucci, L., & Nicolaou, M. (2016). The association between dietary patterns derived by reduced rank regression and depressive symptoms over time: The Invecchiare in Chianti (InCHIANTI) study. *British Journal of Nutrition*, *115*(12), 2145. edb.

Vyas, C. M., & Okereke, O. I. (2020). Late-Life Depression: A Narrative Review on Risk Factors and Prevention. *Harvard Review of Psychiatry*, *28*(2), 72–99. https://doi.org/10.1097/HRP.0000000000000240

Warring, J. (2019). *Implicit Bias in the 21st Century American Legal System* [ProQuest Dissertations Publishing]. https://search.proquest.com/docview/2037233353?pq-origsite=primo

Wheeler, M. (2020). Martin Heidegger. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Fall 2020). Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/fall2020/entries/heidegger/

WHO-MSD-MER-2017.2-eng.pdf. (n.d.). Retrieved November 8, 2018, from http://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf;jsessionid=B2ECBFC64D68707CE22DEC0ECC4F82D4?sequence=1

Wilber, K. (2000). *Integral psychology: Consciousness, spirit, psychology, therapy* (1st pbk. ed.). Shambhala.

Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., De Vries, W., Majele Sibanda, L., … Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets

from sustainable food systems. *The Lancet (British Edition)*, *393*(10170), 447–492. https://doi.org/10.1016/S0140-6736(18)31788-4

Wong, L. (2008). Data Analysis in Qualitative Research: A Brief Guide to Using Nvivo. *Malaysian Family Physician : The Official Journal of the Academy of Family Physicians of Malaysia*, *3*(1), 14–20.

Worrall, C., Jongenelis, M., & Pettigrew, S. (2020). Modifiable Protective and Risk Factors for Depressive Symptoms among Older Community-dwelling Adults: A Systematic Review. *Journal of Affective Disorders*, *272*, 305–317. https://doi.org/10.1016/j.jad.2020.03.119

Xia, Y., Wang, N., Yu, B., Zhang, Q., Liu, L., Meng, G., Wu, H., Du, H., Shi, H., Guo, X., Liu, X., Li, C., Han, P., Dong, R., Wang, X., Bao, X., Su, Q., Gu, Y., Fang, L., & Yu, F. (2017). Dietary patterns are associated with depressive symptoms among Chinese adults: A case-control study with propensity score matching. *European Journal of Nutrition*, *56*(8), 2577–2587. https://doi.org/10.1007/s00394-016-1293-y

Ximenes, R. de B. B., Ximenes, J. C. M., Nascimento, S. L., Roddy, S. M., & Leite, Á. J. M. (2019). Relationship between maternal adverse childhood experiences and infant development: A systematic review (protocol). *Medicine (Baltimore)*, *98*(10), e14644–e14644. https://doi.org/10.1097/MD.0000000000014644

Yusuf, S., Joseph, P., Rangarajan, S., Islam, S., Mente, A., Hystad, P., Brauer, M., Kutty, V. R., Gupta, R., Wielgosz, A., AlHabib, K. F., Dans, A., Lopez-Jaramillo, P., Avezum, A., Lanas, F., Oguz, A., Kruger, I. M., Diaz, R., Yusoff, K., … Dagenais, G. (2020). Modifiable risk factors, cardiovascular disease, and mortality in 155 722 individuals from 21 high-income, middle-income, and low-income countries (PURE): A prospective

cohort study. *The Lancet (British Edition)*, *395*(10226), 795–808. https://doi.org/10.1016/S0140-6736(19)32008-2

Zhao, G., Ford, E. S., Dhingra, S., Li, C., Strine, T. W., & Mokdad, A. H. (2009). Depression and anxiety among US adults: Associations with body mass index. *International Journal of Obesity*, *33*(2), 257–266. https://doi.org/10.1038/ijo.2008.268

Appendix A; Interview Protocol

Pre-Interview: Review IRB requirements with participant

- Purpose
- Review informed consent
- Confidentiality
- Risk & benefit
- Contact information

1. Demographic information
    a. Name
    b. Date of birth
    c. Male/Female/Non-binary
    d. Race/Ethnicity
    e. Location
    f. Date
    g. Length in minutes
    h. Age
    i. Education level
    j. Occupation and brief career/work history
    k. Number of years of social work experience
    l. Current therapeutic protocol with depressed clients
    m. Family status
    n. How did the interviewee appear to me?
    o. Atmosphere

p. Other observations

(RQ1) How do social workers personal, professional, and academic experiences impact their readiness to include diet and nutrition in their treatment of individuals who are depressed?

Personal:

- Can you discuss your experience with family traditions around food?
- Tell me of an experience that would help me understand your family's relationship with food.
- Share an experience that will help me understand your relationship with food.
- Describe your experience (yours, a client, or a close friend/relative) with a:
    - Vegan diet
    - Vegetarian
    - Meat as a component of a healthy diet
- Describe an experience where someone said your diet was "unhealthy"
- Help me understand your experience with a healthy diet.
    - What is your experience with how you feel and a healthy diet?
- Help me understand your experience with an unhealthy diet.
    - What is your experience with how you feel and an unhealthy diet?
- Describe how you know you are eating a healthy diet. (Social media? Literature?)
- What has been your experience with clients and their eating patterns?
- Have you had an experience where you felt like what you ate was healing? If so, tell me about that experience.

Academic:

- Can you share your academic experience where you learned/discussed modifiable risk factors with individuals experiencing depression?
- Can you share your clinical experience with modifiable risk factors with individuals experiencing depression? Please describe a specific experience.
- What does an integrative approach mean to you?
- Describe a professional experience where you used an integrative approach to treatment of depression.
- Share an experience where you incorporated a modifiable risk factor in your treatment of individuals experiencing depression and you believed it was effective.
- Describe an experience where food was a component of your clinical intervention with individuals experiencing depression. Think for a moment of a specific client and situation to share.
- Describe your experience with science and a healthy diet.
- Have you had an experience where "the experts" identified a new approach to improving outcomes for clients?
- If science identified a keto diet as having the ability to improve outcomes for clients, how might you experience that? Vegetarian? Vegan?

Professional:

- How likely are you to try a new treatment for depression that you know little about?
    - On a scale of 1-10 with 1 being unlikely to 10 being very likely

    - When it comes to adopting something new would you call yourself an innovator, early adopter, late adopter, or laggard?
- Tell me about a time when you used a new method of treatment with a client?
- What has been your experience with how the food your clients consume impacts their body? their mood?
- Describe an experience where food was a part of your work with a client.
- How do you experience your client's bodies as it relates to oppression? Poverty? Race? Mental Illness?
- Tell me of an experience where you incorporated the body in healing with a client.
- How do you experience client's bodies in society and in the dominant culture?
- How do you experience the wisdom of the body in social work practice?
- How do you experience your body's influence on the mind? Your clients?
- Tell me of an experience where food was a core part of your treatment relationship.
    - Have you had an experience where you needed to help a client manage their ***illness*** through their relationship with food? Describe.
    - Have you had an experience where you helped a client manage health and ***wellness*** through food? Describe.
- How do you experience food and your body?
- Describe how the body is part of your clinical practice.
- Describe how diet and nutrition is a part of your clinical practice. Share and experience if any.

Appendix B; Recruitment Letter

Dear <Social Worker>:

My name is Ron Bunce, and I am a Ph. D. candidate at the University of Albany. I am writing to invite you to participate in my research study about the role of food in the treatment of depression. I am looking for social work clinicians who treat individuals experiencing depression and who are interested in sharing their experience with food, their body and healing. I obtained your contact information from XXXXX.

The study is designed to help us better understand how one's experience with food impacts their readiness to adopt research on food and mood in their clinical practice treating depression. If you give me permission to implement the study, I will set up convenient times for us to meet for a 1.5-2-hour interview where you will be asked to respond to short answer questions. One follow up interview may be requested should questions arise after reading a transcript of your interview. We would meet via Zoom or Go-to-Meeting. Confidentiality will be carefully maintained and further details about the study are described on the enclosed consent form.

If you would like additional information about the project, please contact me at (518)903-3178. If you would be willing to participate in this study, please email me at ronbunce1970@gamil.com or call me and I will answer any questions and forward you a consent form for your review.

Thank you for your consideration. I look forward to hearing from you and hope to work with you.

Appendix C; Recruitment Flyer 1 Through 5

SUNY Albany Research Study

Volunteers Needed!

Social Workers, Food, & Mood

You are being invited to participate* in a research study that wants to investigate social workers' lived experience with food, mood, their body, and healing. You will be asked to participate in one 1.5 to 2-hour interview via a virtual video call. A shorter ½-hour to 1-hour follow up interview may be requested. The topic of both interviews will be food, mood, the body, and healing in your personal and professional life. The interviews will be audio/videotaped for later transcription. You will receive a $25.00 visa gift card to use at your favorite market as a token of my appreciation for participating.

* Participants must be a Masters level social work clinician, have experience treating individuals with depression, and be willing to share their experience with food, mood, the body and healing in their personal and professional life.

Contact: Ron Bunce, LMSW
Ph.D. Candidate
Call or Text: 518-903-3178
Abunce@albany.edu

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Social Workers, Food, & Mood

You are being invited to participate* in a research study that wants to investigate social workers' lived experience with food, mood, their body, and healing. You will be asked to participate in one 1.5 to 2-hour interview via a virtual video call. A shorter ½-hour to 1-hour follow up interview may be requested. The topic of both interviews will be food, mood, the body, and healing in your personal and professional life. The interviews will be audio/videotaped for later transcription. You will receive a $25.00 visa gift card to use at your favorite market as a token of my appreciation for participating.

* Participants must be a Masters level social work clinician, have experience treating individuals with depression, and be willing to share their experience with food, mood, the body and healing in their personal and professional life.

Contact: Ron Bunce, LMSW
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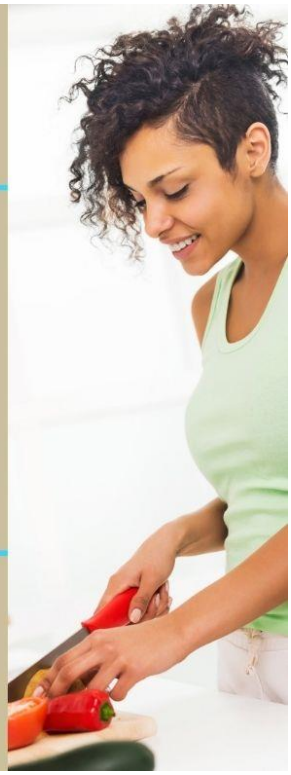

SUNY Albany Research Study

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Social Workers, Food, & Mood

You are being invited to participate in a research study that seeks to investigate social workers lived experience with food, mood, their body, and healing. You will be asked to participate in one 1.5-2-hour interview via Zoom or another similar platform. A shorter ½ hour to one hour follow up interview may be requested. The topic of both interviews is food, mood, the body, and healing. The interviews will be audio/videotaped for later transcription. You will receive a $25.00 visa gift card to use at your favorite market as a token of my appreciation for participating.

To Participate you must be a master's level social work clinician, have experience treating individuals with depression, and be willing to share their experience with food, mood, the body, and healing in their personal and professional life.

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Appendix D; Glossary of Key Terms

Bias: Cause to feel or show inclination or prejudice for or against someone or something.

Biopsychosocial Model: suggests that biological, psychological, and social domains or factors interconnect with one another to influence an individual's mental health (Engel, 1977).

Depression: is a common mental disorder and is characterized by persistent sadness and a lack of interest or pleasure in previously rewarding or enjoyable activities. Depression is a leading cause of disability around the world and contributes greatly to the global burden of disease. The effects of depression can be long-lasting or recurrent and can dramatically affect a person's ability to function and live a rewarding life (*Depression*, n.d.).

Dietary Patterns: are the quantities, proportions, variety, or combination of different foods, drinks, and nutrients in diets, and the frequency with which they are habitually consumed (*USDA Food Patterns | Center for Nutrition Policy and Promotion*, n.d.).

Integrative Social Work Practice: distinguishes mental illness and physical illnesses as a combination of psychosocial, spiritual, and physical influences while recognizing the importance of both eastern and Western healing traditions.

Mediterranean Diet Pattern: is a way of eating that's based on the traditional cuisines of Greece, Italy and other countries that border the Mediterranean Sea. Plant-based foods, such as whole grains, vegetables, legumes, fruits, nuts, seeds, herbs, and spices, are the foundation of the diet. Olive oil is the main source of added fat. Fish, seafood, dairy and poultry are included in moderation. Red meat and sweets are eaten only occasionally (*Mediterranean Diet for Heart Health*, n.d.).

Modifiable Risk Factors: are biological, physiological, sociological, and other factors that can be influenced or changed to improve outcomes for individuals experiencing depression. Examples include exercise, smoking, and nutrition.

Plant Based Diet Pattern: It is important to note that there is not a consensus on the definition of a plant-based diet. Some plant-based diets exclude all animal products, some exclude certain animal products, and others minimize the use of animal-based products. Definitions of plant-based diets consistently emphasis fruits, vegetables, whole grains, beans, legumes, nuts and seeds, herbs, and spices and minimize or eliminate animal products.

Processed Food: is defined as any raw agricultural commodity that has been subject to washing, cleaning, milling, cutting, chopping, heating, pasteurizing, blanching, cooking, canning, freezing, drying, dehydrating, mixing, packaging, or other procedures that alter the food from its natural state. This may include the addition of other ingredients to the food, such as preservatives, flavors, nutrients and other food additives or substances approved for use in food products, such as salt, sugars and fats (Processed Foods What You Should Know, n.d.).

Social Work(er): is a practice-based profession and an academic discipline that promotes social change and development, social cohesion, and the empowerment and liberation of people. Principles of social justice, human rights, collective responsibility, and respect for diversities are central to social work. Underpinned by theories of social work, social sciences, humanities and indigenous knowledges, social work engages people and structures to address life challenges and enhance wellbeing (*Global Definition of Social Work – International Federation of Social Workers*, n.d.).

Standard American Diet Pattern: is characterized by high amounts of processed foods, refined carbohydrates and added sugars, refined fats, high fat dairy products and red meat. As a result, it is also typically low in a healthy variety of minimally processed vegetables, fruits, legumes, and whole grains.

Veganism: is a philosophy and way of living which seeks to exclude, as far as is possible and practicable, all forms of exploitation of, and cruelty to, animals for food, clothing, or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans, and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals (*Definition of Veganism*, n.d.).

Appendix E; Participant Bio-sketches

Participant 1: "Lena" was interviewed using the platform Zoom on 03/14/2022 and 03/24/2022 and identified as a 70-year-old Female of White Jewish descent. They identified parents as first-generation US and their father's ethnicity as Russian, and their mother's as Ukrainian. She is a New York State Licensed Clinical Social Worker (LCSW) with 47 years of social work experience who is currently working as a psychotherapist in private practice. Leana's current place of residence is Manhattan, New York

Participant 2: "Min" was interviewed using the platform Zoom on 03/27/2022 and identified as a 28-year-old female of Asian descent, specifically, Cantonese Chinese. Min was born in Hong Kong. They identified their father's birth country as Macau, and their mothers as Hong Kong. She is a master's level clinician with 2000 hours towards her clinical license and 1.5 years of social work experience. Min is currently working as a child and family therapist in an outpatient mental health clinic. She works in both an eating disorder clinic and intensive outpatient within the overall clinic. Her current place of residence is San Jose, California.

Participant 3: "Kelly" was interviewed using the platform Zoom on 03/14/22 and identified as a 46-year-old White female. They identified their father's country of birth as U.S., and their ethnicity as Sicilian, and their mother's country of birth as Holland and their ethnicity as Irish. She is a master's level clinician with 3 of years of social work experience who is currently working as a private practice clinician in a group private practice. Kelly's current place of residence is Palisades, New York.

Participant 4: "Chase" was interviewed using the platform Zoom on 03/13/2022 and identified as a 73-year-old male of Caucasian descent. They identified their father's country of origin as the U.S., but first generation Italian and their mother's country of origin as U.S. He is a New York State Licensed Clinical Social Worker with the R privilege (LCSW-R) with 43 years of experience. Chase identified as a Vietnam veteran who has worked all but 6 years of his professional career as a private practice clinician. His current place of residence is Eastport, New York.

Participant 5: "Natasha" was interviewed using the platform Zoom on 05/02/2022 and identified as a 38-year-old Caucasian female who was born in Russia. They identified their father's ethnicity as Russian, and their mother's as Russian; both are currently living in Russia. She is a master's level clinician with 9 months of social work experience who is currently working as psychotherapist in a private practice. Natasha's current place of residence is Northglenn, Colorado.

Participant 6: "Thao" was interviewed using the platform Zoom on 04/24/2022 and identified as a 40-year-old Vietnamese American female who was born in the US. They identified their father's birth country as Vietnam, and their mother's also as Vietnam. She is a California Licensed Clinical Social Worker (LCSW) with 10 years of social work experience. Thao is currently working as an Orange County Mental Health completing intakes for the severe and persistent mentally ill. She has worked part time in a private practice for the past two years. Her current place of residence is Orange, California.

Participant 7: "Zendaya" was interviewed using the platform Zoom on 03/08/2022 and identified as a 31-year-old black Muslim female. They identified their father's home country as

the U.S., and their mother's as the U.S. She is a California Licensed Clinical Social Worker (LCSW) with 17 years of social work experience who is currently working for the Los Angeles County Department of Mental Health with a focus on juvenile justice and foster care. Zendaya's current place of residence is Los Angeles, California.

Participant 8: "Marlee" was interviewed using the platform Zoom on 03/04/2022 (with the camera off) and identified as a 30-year-old Black female. Their birth country is unknown, but Marlee spoke with an accent believed to be African, but I was unable to confirm. She is a master's level clinician with 3 of years of social work experience who is currently working in a faith-based NGO. Marlee's current place of residence is Brooklyn, New York.

Participant 9: "Nia" was interviewed using the platform Zoom on 03/24/2022 (with the camera off) and identified as a 30-year-old Black female born in the U.S. They identified their father's birth country as the U.S., and their mother's as Senegal. She is a master's level clinician with 4 years of social work experience who is currently working as counselor in a community-based NGO. Nia's current place of residence is Brooklyn, New York.

Participant 10: "Kristina" was interviewed using the platform Zoom on 03/10/2022 and identified as a 49-year-old Caucasian female who was born in the U.S. They identified their father's birth country as the U.S., and their mother's as the U.S. She is a New York State Licensed Clinical Social Worker (LCSW). She has 25 years of social work experience and has been working as a private practice clinician for the past 10 years where a significant portion of her work is with bariatric clients. Kristina's current place of residence is Holtsville, a Hamlet on Long Island, New York.

Participant 11: "Emma" was interviewed using the platform Zoom on 03/27/2022, and identified as a 40-year-old Caucasian female born in the U.S. They identified their father's birth country as the U.S. and their mother's as the U.S. She is a California Licensed Clinical Social Worker (LCSW) with over 10 years of social work experience who is currently working at UC-Davis as a hospital-based social worker. Emma's current place of residence is Sacramento, California.

Participant 12: "Alona" was interviewed using the platform Zoom on 04/25/2022 and identified as a 33-year-old American Indian female who was born in Guatemala. They identified their father's birth country as Mexico, and their mother's as Guatemala. She is a California Licensed Clinical Social Worker (LCSW). Alona has been working for a federally qualified health clinic as a therapist for approximately 5 years. Alona's current place of residence is Los Angeles, California.

Participant 13: "Aliyah" was interviewed using the platform Zoom on 04/05/2022 and identified as a White Jewish 28-year-old (LGBTQ) female who was born in the US. They identified their father's birth country as England, but he migrated to England from Germany because of the Holocaust. Aliyah's mother was born in the U.S. She is a masters level clinician with 1 year of social work experience who is currently working in a small group practice. Aliyah's current place of residence is Denver, Colorado.

Participant 14: "Elenore" was interviewed using the platform Zoom on 03/02/2022 and identified as a 74-year-old Caucasian female who was born in the U.S. They identified their father's country of origin as the U.S., and their mother's as Canada. She is a New York State Licensed Clinical Social Worker (LCSW), has a Doctorate degree and has 52 years of social

work experience. Elenore has been a private practice clinician for 25 years and lives in Glen Cove, Long Island.

Participant 15: "Sylvia" was interviewed using the platform Zoom on 05/20/2022 and identified as a 27-year-old Caucasian female who was born in the United States. They identified their father's country of birth as the U.S. and their mother's country of birth as the U.S. She is a master's level clinician with 4 years of social work experience who is currently working as a school social worker. Sylvia's current place of residence is Gasport, New York.

Appendix F; Code Book

Social Workers, Food, & Mood

Name	Description
Academic	
Modifiable Risk Factors	The participant states or alludes to their familiarity with the term modifiable risk factors. These are factors that can be influenced to improve outcomes for clients who are depressed.
Personal	
Culture, Belief, Practice	
Healthy	Participant states or alludes to their beliefs about the meaning of a healthy diet.
Healing	Participant states or alludes to their beliefs about foods ability to heal.
Beliefs	Participant states, alludes to, or describes a belief or practice about diet and nutrition.
Weight and Body Image	Participant discusses their personal or familial experience with weight or uses terms that reflect feelings of their body or body image.
Poverty	Participant makes direct, indirect, or general reference to theirs or their family's experience of poverty and its impact on food, nutrition, or diet.
Professional	
Scope of Practice/Nutrition	Participant directly or indirectly acknowledges believing or feeling nutrition is outside of the scope of practice in treatment of individuals experiencing depression.
Scope of Practice/Exercise	Participant directly or indirectly acknowledges the use of exercise as a component of their treatment of clients who are depressed affirming their belief that exercise is within their scope of practice.
Nutrition in Clinical Practice	Participant states or describes how they incorporate nutrition in their clinical work with clients.
Biological	Participant states, alludes to, or describes the way they incorporate nutrition as a component of their biological assessment of a biopsychosocial.

Name	Description
Psychological	Participant states, alludes to, or describes the way they incorporate nutrition as a component of their psychological assessment of a biopsychosocial.
Sociological	Participant states, alludes to, or describes the way they incorporate nutrition as a component of their sociological assessment of a biopsychosocial.
Treatment Protocol	Participant states or alludes to the use of a standard depression treatment protocol characteristic of the evidenced based practice movement with no indication of the inclusion of integrative approaches.
Adoption Willingness	Participant states, alludes to, or describes their willingness to include nutrition as a component of their treatment with depressed clients.

Appendix G; Table 3 Analytics

Research Question and Themes by Category

Theme	%	#
Academic Theme 1: Modifiable risk factor understanding	.93	14
Personal subtheme 1: Meaning ascribed to healthy diet	.93	14
Personal subtheme 2: Meaning ascribed to food and healing	.60	9
Personal subtheme 3: Dietary beliefs and practices	.73	11
Personal Theme 2: Weight and body image	.60	9
Personal Theme 3: Poverty implications for diet	.60	9
Professional Theme 1: Nutrition outside scope of practice	.60	9
Professional Theme 2: Exercise embedded in scope of practice	.87	13
Professional subtheme 1: Meaning suggests use in biological assessment	.87	13
Professional subtheme 2: Meaning suggests use in psychological assessment	.67	10
Professional subtheme 3: Meaning suggests use in sociological assessment	.53	8
Professional Theme 4: Non integrative method to treatment of depression	.80	12
Professional Theme 5: Willingness to adopt	.87	13