

AN EXAMINATION OF THE RELATIONSHIP BETWEEN FOOD SECURITY STATUS,
PSYCHOLOGICAL WELL-BEING, AND FAMILY FUNCTIONING: AN
ECOLOGICAL PERSPECTIVE WITH IMPLICATIONS FOR CLINICAL PRACTICE

By

JACQUELINE ROBINSON

A Dissertation Submitted to the Faculty
in the Counselor Education and Supervision Program
of The College of Professional Advancement
at Mercer University
in Partial Fulfillment of the
Requirements for the Degree

DOCTOR OF PHILOSOPHY

Atlanta, GA

2022

AN EXAMINATION OF THE RELATIONSHIP BETWEEN FOOD SECURITY STATUS,
PSYCHOLOGICAL WELL-BEING, AND FAMILY FUNCTIONING: AN
ECOLOGICAL PERSPECTIVE WITH IMPLICATIONS FOR CLINICAL PRACTICE

By

JACQUELINE ROBINSON

Approved:

Tyler Wilkinson, Ph.D. Date
Dissertation Committee Chair
Counselor Education and Supervision Ph.D. Program Coordinator

W. David Lane, Ph.D. Date
Dissertation Committee Member

Thommi Lawson, Ph.D. Date
Dissertation Committee Member

Priscilla Danheiser, Ph. D. Date
Dean, College of Professional Advancement

©2022

JACQUELINE ROBINSON

All Rights Reserved

DEDICATION

This dissertation research is dedicated to my beautiful children, Isaiah, Rhema, and Caleb thank you for being who you are. Thank you for allowing me to step away from you at times to complete this work. My prayer is that as a result of seeing me complete this dissertation will fuel your dreams and confidence. I also dedicate this work to my mother, and I am because of you. From as far back as I can remember, you always made sure that I knew I was smart. You were my very first teacher. You sparked in me a passion for learning and teaching. Thank you for giving me everything that you never had. Finally, to my love, Brandon Eric Robinson, I know this took me away from you; thank you for being my best friend and allowing me to do this. Thank you for being a man of prayer whom I can always rely on to help me see God's perspective.

ACKNOWLEDGEMENTS

I would like to acknowledge the following people for inspiring and impacting my academic journey: Dr. Deanne Terrell- Your passion for this work resonated with me. Thank you for being an example of how to bring God's Holy Spirit into the session when sitting with people in the deepest pain. Your impact on me during my time under your tutelage is immeasurable.

Vilda S. Brannen- Tears come to my eyes as I think of you. As the founder and director of Trillium Springs Counseling, you have left a legacy in the counseling field in me and so many others. Thank you for hiring a young black novice therapist all those years ago; it changed my life. Working for you ignited in me a passion for the bipolar population that I never saw coming.

Dr. Kenyon Knapp- Your friendship opened my eyes to how kind people can be. You have taught me virtually everything I know about navigating academia as a Counselor Educator. Thank you for always making sure that I had a place "at the table". Thank you for your kindness and incomparable leadership.

Dr. Tyler Wilkinson, thank you for stepping in on this research when needed. I appreciate your assistance and approachability throughout the culmination of this doctoral program.

Dr. Karen Rowland- You are what I hope to be one day, powerful, intelligent, confident, poised, and Christian. Thank you for being someone other black women can emulate. Thank you for your faith in Jesus Christ and in me.

Finally, my very best friends: My husband Brandon, Dr. Erin Watson, Amber Harrison, Dana Holmes, Brittney Lyle, Deana Hamilton, Ebony Mills, Aja Duncan, Farah Saintable-James, and Charmaine Simmons. You refused to let me give up. When I couldn't believe in myself you each believed in me. I could never repay you for the way you each have uplifted, corrected, and encouraged me over the years.

TABLE OF CONTENTS

	Page
DEDICATION	iv
ACKNOWLEDGMENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER	
1. INTRODUCTION.....	1
Food Security Status: Understanding Food Insecurity	5
Theoretical Framework	8
Ecological Systems Theory.....	9
McMaster Model of Family Functioning	16
Statement of the Problem.....	21
Rationale and Purpose.....	25
Significance of the Study	27
Definition of Terms.....	29
Limitations	36
Delimitations.....	37
Summary	39
2. REVIEW OF LITERATURE	38
Food Security and Public Health	39
Family Functioning and Food Insecurity	42
Family Functioning Models and Research	49
Psychological Wellbeing	53
Food Insecurity as a Social Determinant of Mental Health	55

TABLE OF CONTENTS (Continued)

Psychological Wellbeing and Family Functioning.....	58
Food Insecure Families as Hard-to-Reach	58
3. METHODOLOGY	60
Purpose.....	61
Research Questions	62
Research Hypotheses	62
Research Design.....	63
Sample Description	64
Instrumentation.	65
Demographic Survey.	66
McMaster Family Assessment Device (GF-12)	66
Household Food Security Survey-SF.....	70
Patient Health Questionnaire-4 (PHQ-4)	71
Data Collection	73
Data Analysis	74
Summary	76
4. RESULTS OF DATA ANALYSIS.....	77
Descriptive Statistics.....	77
Age and Ethnicity	78
Household size and Marital status	79
Food Security Status, Psychological Wellbeing, Family	81
Inferential Statistics	82
Research Question 1 and Hypothesis.....	83
Relationship Among Variables	87
Research Question 1A Hypothesis 1A.....	89
Research Question 1B.....	91

TABLE OF CONTENTS (Continued)

5. SUMMARY, DISCUSSION, AND IMPLICATIONS	95
Review of Findings	96
Discussion	99
Limitations	100
Theoretical and Practical Implications.....	101
Future Research	102
Summary	104
REFERENCES	105
APPENDICES	129
APPENDIX A IRB APPROVAL	130
APPENDIX B RECRUITMENT LETTER	132
APPENDIX C INFORMED CONSENT	134
APPENDIX D MCMASTER PERMISSION LETTER.....	137
APPENDIX E PHQ-4.....	139
APPENDIX F HFSS	141
APPENDIX G MCMASTER GENERAL FUNCTIONING-12	144
APPENDIX H DEMOGRAPHIC SURVEY	147

LIST OF TABLES

Table	Page
1. Participant Age.....	79
2. Participant Ethnicity.....	79
3. Participant Household Size.....	80
4. Marital Status.....	80
5. Psychological Distress.....	81
6. Independent and Dependent Variable Descriptive Statics.....	82
7. Model Summary.....	84
8. Research Question 1 ANOVA.....	85
9. Correlations.....	89
10. Research Question 1A Coefficients.....	90
11. Food Security Status.....	91
12. Tests of Homogeneity of Variances.....	92
13. Family Functioning Score ANOVA.....	93

LIST OF FIGURES

Figure	Page
1. Normal Q Plot.....	84
2. Food Security and Family Functioning Correlation	86
3. Psychological Wellbeing and Family Functioning Correlation.....	87
4. Estimated Marginal Means	92

ABSTRACT

JACQUELINE ROBINSON

AN EXAMINATION OF THE RELATIONSHIP BETWEEN FOOD SECURITY STATUS,
PSYCHOLOGICAL WELL-BEING, AND FAMILY FUNCTIONING: AN
ECOLOGICAL PERSPECTIVE WITH IMPLICATIONS FOR CLINICAL PRACTICE

Under the direction of Tyler Wilkinson, Ph.D., and Karen Rowland, Ph. D.

Food insecurity exists in every American congressional district and has been shown to be a significant factor impacting various areas of mental health. There has been minimal mental health research examining the relationship that food insecurity and psychological well-being have on the general functioning of family systems. This study examines food security status and psychological well-being as potential predictors of family functioning. The investigation was conducted on a sample of 119 participants. An analysis of survey data collected revealed that food security status and psychological well-being are significant predictors of general family functioning. This finding suggests that as food insecurity and psychological distress increase, it can be expected that family functioning will become increasingly unhealthy. The study further revealed that food security status is a stronger predictor of food family functioning than psychological well-being. The findings underscore the importance of addressing insecurity and psychological well-being in the clinical treatment of families. This study contributes to the growing body of literature on the intersection between food insecurity and various psychosocial factors.

CHAPTER 1

INTRODUCTION

Researchers have noted the family institution as the most influential entity in the development of the human being and a fundamental building block in American society (Anderson, 2014; Bogenschneider & Corbett, 2004; Bronfenbrenner, McClelland, Wethington, Moen, & Ceci, 1996). Bogenschneider (2006) asserts that families are significant in American society. Bogenschneider (2006) further says that within culture, a collective goal is to strengthen and support families. As early as 1948, the family was recognized by the United Nations' Universal Declaration of Human Rights as the "natural and fundamental group unit of society...entitled to protection by society and the state" (United Nations, 1948, Article 16(3)). Berger (1998) suggests that the family is considered the basic building block of society because societal macro institutions, including the economy, politics, education, and law (and the principles by which these institutions operate), are built upon familial nuclear patterns. For example, it has been stated that the democratic and capitalistic environments within Western society mimic the organizational morals of nuclear families (Berger, 1998).

There is a consensus among social scientists that the family is the institution that underlies the infrastructure of human existence and functioning across the world (Anderson, 2014; Bogenschneider & Corbett, 2004; Bronfenbrenner, Fagan, 2007, McClelland, Wethington, Moen, & Ceci, 1996; Saad, 2007). Fagan (2007, p.36) identifies the family as "not only" the "building block of all societies, but of the individual." Saad (2007) provides several important examples of why the family is considered "the basic unit of society," bringing attention to the family's primary functions to meet the individual's need for shelter, food, education, health, and welfare. Furthermore, the family is the basis for healthy communities and societies (Saad, 2007).

Marriage and Family Therapists are charged to contribute to the local community and embody family advocacy through research, treatment, service, and public participation (American Association of Marriage and Family Therapy, 2015). Gehart & Lucas (2007) pose the question if family therapists are not positioned to intervene in social justice issues, then how is a clinician to respond when these types of problems are brought into the session by clients experiencing injustice and challenges due to their ethnicity, race, gender, sexual orientation, socio-economic class or similar factors. The implication of the Gehart & Lucas (2007) investigation of client advocacy in Marriage and Family Therapy is that just as the family is the basic unit of society, the Marriage and Family Therapist can impact social change through advocacy.

Transitioning into greater client advocacy entails a practical shift for professionals treating families from awareness to advocacy action (Gehart & Lucas, 2007). Gehart & Lucas (2007) propose an operationally defined model for client advocacy in Marriage and Family Therapy that includes clinicians being flexible with service delivery and maintaining an overall attitude of advocacy in their treatment of clients. Similarly, Holyoak, McPhee, Hall, & Fife (2020) suggest that microlevel client advocacy in Marriage and Family Therapy must be integrated into the very being of the therapist. Micro-level client advocacy is advocacy that is easy to implement as it occurs during sessions and may include actions like administering assessments and assertiveness training for communicating with superiors (Holyoak et al., 2020).

The Multicultural and Social Justice Counseling Competencies of the American Counseling Association mandates that counselor advocacy include interventions at multiple levels, including intrapersonal, interpersonal, institutional, community, public policy, and international/global (Ratts, Singh, Nassar-McMilla, Butler, & McCullough, 2016). Therefore,

this researcher believes that family advocacy entails considering the Marriage and Family Therapist's (MFT's) roles in strengthening family functionality through assessing the relationship between various aspects of family social context like food insecurity and functionality.

There is a growing body of research spanning decades that suggests an ominous impact of the changing American society on the institution of the family (Anderson, 2014; Bowlby, 1988; Bronfenbrenner et al., 1996; Feise, Rhodes & Beardslee, 2013; Mandara & Murray, 2006 Meurs, Breaux, Perrew, 2008). Bronfenbrenner et al. (1996) Poole-DiSalvo et al. (2016), & Voisin et al. (2017) site growing rates of violence, rebellion, delinquency, and apathy among the potentially pervasive outcomes of American familial struggles.

Additionally, Logan (2014) posits that higher rates of cohabitation and childbearing out of wedlock paired with rising divorce rates can be attributed to weakening bonds between parents and their children. Changes in American families that have been cited in Bronfenbrenner's research include an increase in the number of children being raised by single unmarried parents, minor student achievement test scores fluctuating with family structure, declining remarriage rates, and the finding that the family an individual grows up in dramatically impacts the family the individual creates (Bronfenbrenner et al., 1996).

Due to the changing American society previously described. Treating families from a culturally competent perspective requires therapists to consider the family's general context and the relationship between that context and family functioning (Ettelkal & Mahoney, 2017).

Considering families in context allows researchers and clinicians to acknowledge the influence of various phenomena on interactions within the family. The success of the family counseling

process depends heavily upon how well the clinician understands the social contextual factors impacting the family (Peavy, 2003).

Changing demographics in the U.S. Population has made it highly likely that therapists will treat families with a culturally diverse heritage. The 2016 U.S. Census data indicated an increase in multiracial and multiethnic households in the United States, from 7.4 percent in 2000 to 10.2 percent in 2016 (Rico, Kreider, & Anderson, 2018). In addition, all fifty states experienced an increase in the number of households identifying as multiethnic or multiracial (Rico et al., 2018). This increase suggests a greater need for family therapists to be multiculturally competent and apt to pioneer in advocacy in the lives of their clients. The Multicultural and Social Justice Counseling Competencies of the American Counseling Association require that all counselors exhibit multicultural and social justice competence in and through: (1) counselor self-awareness, (2) client worldview, (3) counseling relationship, and (4) counseling and advocacy interventions.

In addition to advocating for the family, marriage and family therapists and clinical mental health treatment providers have an ethical responsibility to promote client welfare and operate with beneficence (American Counseling Association, 2014; American Association of Marriage and Family Therapy, 2015); empirical evaluation of factors that may impact the functionality of individuals and families can serve as, adherence to this ethical imperative. Secondly, the American Counseling Association charges researchers to “contribute to the profession's knowledge base and promote a clearer understanding of the conditions that lead to a healthier and more just society” (ACA, 2014, p. 15). This epidemic is well known in some countries, as it spreads throughout indigenous communities and takes lives (FAO, IFAD, UNICEF, WFP, WHO, 2018). In other countries, this epidemic robs children of the joys of

experiencing an energetic carefree childhood (Tan et al., 2019). It robs caregivers of long life and the intrinsic self-efficacy that comes from providing basic needs for the offspring they have produced (Martin, Colantonio, Pichom & Boyle, 2016). This epidemic is known as hunger.

The type of hunger characterized by small children with emaciated bodies and rib cages bulging through dehydrated skin is less prevalent in American society (Kogan, 2015). However, a hidden hunger-related epidemic within American culture impacts psychological and physical health and may threaten the overall health of families and individuals (CDC, 2019; Maynard et al., 2018). This epidemic is food insecurity. According to Feeding America (2019), the largest hunger-relief organization in the United States, food insecurity occurs in every community in the United States. Dr. Amy Hiller, associate professor of city and regional planning at the University of Pennsylvania, highlights that in America, chronic hunger and food insecurity are frequently misunderstood as a phenomenon that happens in other countries but occurs daily in the United States (Putvinski, 2013). The fact that food insecurity exists in every American community suggests a need for marriage and family therapists to know how families and individuals are impacted by food insecurity (Coleman-Jensen et al., 2018). The present study is an ecologically based examination of the relationship between food security status, psychological well-being, and family functioning with implications for clinical practice.

Food Security Status: Understanding Food Insecurity

The U.S. Department of Agriculture Economic Research Service (USDA), the entity responsible for monitoring American food security status, defines food security as “access by all people at all times to enough food for an active, healthy life” (Coleman-Jensen, Rabbit, & Singh, 2018, p.2). In contrast, food insecurity is defined by the USDA as uncertain access or risk of uncertain access to the food necessary for an active and healthy lifestyle (Coleman-Jensen,

Rabbit, Singh, 2016). Food insecurity also exists when the ability of household members to acquire food in socially acceptable ways is limited or uncertain (Life Sciences Research Office, 1990, as cited in Haering & Syed, 2009). Barrett (2010) highlights that food insecurity is an “elusive concept,” and a common misconception is that conditions of uncertain access to food must be consistent or ongoing for households to be considered food insecure (Putvinski, 2013). The current USDA household food security status classification criterion asserts that if a household has experienced uncertain access or an inability to access food “at some time during the previous year” that household is classified as food insecure (Coleman-Jansen, Rabbit, Singh, 2018; Haering & Syed, 2009). Food security status is measured at varying societal levels, including individual level, household level, community level, national level, and global level (FAO, IFAD, UNICEF, WFP & WHO, 2019).

The State of Food Security 2018, a report generated by the Food and Agriculture Organization of the United Nations (FAO) on global food security, reported that at the global level, recent FAO estimates suggest that close to 10 percent of the world’s population experiences severe food insecurity (FAO, 2018). This equates to about 770 million people worldwide experiencing food insecurity (FAO, 2018). National and household-level statistics on food security status suggest that specific empirical attention should be given to psychosocial variables related to household food security status (Colmen-Jensen, Rabbit, Singh, 2018). Unfortunately, psychosocial variables like family functioning and psychological well-being are not addressed in current national and household food security data reports by the USDA and national hunger relief organizations like Feeding America.

Food security status is measured on a spectrum including two broad categories (food secure and food insecure), which each include two subcategories of food security totaling four

levels of food security status: Food secure individuals are individuals who, based on the U.S. Department of Agriculture Household Food Security Survey Module, report high or marginal food security (USDA, 2016). Households with high food security report no food access problems or limitations (USDA, 2016). Households classified as having marginal food security report one or two indications of anxiety over food sufficiency and shortage of food in the house with minimal or no changes in diet or food intake (Coleman-Jensen, Rabbit, Singh, 2018).

Food insecure households are classified as experiencing low or very low food security (USDA, 2016). The USDA asserts that households that report low or very low food security vary based on the degree and types of changes made to diet and food intake due to inconsistent resources or access to food (Coleman-Jensen, Rabbit, Singh, 2018). Households are considered to experience low food security when they have reported multiple problems with acquiring food and reduced quality of diet but have yet to experience a decrease in food intake (Coleman-Jensen, Rabbit, Singh, 2018). Very low food security is the most severe form of food insecurity, with individuals reporting that at some point during the year, someone in the household was hungry but did not eat because there was not enough food (Coleman-Jensen, Rabbit, Singh, 2018). In households with very low food security conditions, balanced meals are sometimes unaffordable; food may run out without access to resources to obtain more food.

Associations have been made between food insecurity, depression, and increased suicidal ideations in adults (Davey, Flamm, Kassa, & Latkin, 2014; Davison, Marshall-Fabien, & Tecson, 2015; Jones, 2017; Leunf, Epel, Willett, Rimm, Laraia, 2015). The State of Food Security (2018) reports that children and adults without reliable access to food experience higher rates of depression, anxiety, stress, stigma, alienation, and interpersonal tensions. Issues resulting from food insecurity impact the overall health of individuals, contribute to social isolation, cause poor

cognitive development, and as a result, impact the communities within which clinical mental health professionals practice (Martin, Maddocks, Chen, Gillman, & Coleman, 2016). What has not been previously investigated is the relationship between food security status, family functioning, and psychological well-being.

Theoretical Framework

The theoretical framework for the present study supports a process-context model research paradigm, wherein family interactions are considered concerning the external context in which the interactions occur (Bronfenbrenner 1986). Following a process-context model research paradigm, this study adopts a meta-theoretical framework, integrating two theoretical perspectives. Neukrug (2018 & Smith & Southern (2005) suggest that contemporary perspectives on evaluating and treating individuals, couples, and families support using meta-theoretical approaches, suggesting that using a single theoretical framework is insufficient to meet the needs of all clients. For this reason, the present research is based on integrating two theoretical approaches.

The theoretical framework of the present study integrates Ecological Systems Theory (Bronfenbrenner, 1979) with the McMaster approach to theory, assessment, and treatment of families (Miller, Ryan, Keltner, Bishop, and Epstein, 2000). The McMaster approach emphasizes the processes within-participant families and Ecological Systems Theory (EST) emphasizes the family context. To operate within a process-context model paradigm, both perspectives are presented and integrated to serve as the theoretical foundation of the research. The theoretical framework portion of this chapter provides an overview of Ecological Systems Theory and the McMaster Approach to theory, assessment, and treatment of families, including

each theory's application to the present study and the researcher's rationale for integrating the two theories in the theoretical foundation of the present study.

Ecological Systems Theory

Co-founder of the United States federal Head Start Program, which supports school readiness for low-income families, Urie Bronfenbrenner, was positioned as one of America's foremost authorities on the psychology of human development in the 1960s. Woo (2005) noted Bronfenbrenner's belief that the greatest difficulty for Americans is maintaining intact family systems through spending consistent rather than sporadic time with children. As an advisor regarding family policy, education, and poverty for U.S. presidents, Lyndon Johnson and Richard Nixon, Bronfenbrenner used his work to convey the implications of social and socioeconomic demands on children and families experiencing poverty.

Historically, EST is applied to understanding human development. In the present study, Ecological Systems Theory is explicitly used for the institution of the family, taking Bronfenbrenner's research a step further and evaluating the relationship of the ecological environment to interactions within the family system as mediated by parent psychological well-being. The primary purpose of considering the ecological environment in the present study is to provide a rationale for the clinical use of family-centered interventions, which can lead to greater family satisfaction with family intervention services (Mandak et al., 2017).

Ellaway, Bates, & Teunissen (2017) support the use of ecological theories and the theories' consideration of contextual changes and responses in healthcare education to inform both theory and practice. EST is vital in understanding the theoretical linkage between food security status, psychological well-being, and family functioning.

In this study, family functioning refers to a multidimensional understanding of the family level of effectiveness with respect to six dimensions of family functioning: Problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control (Miller et al., 2000). Family functioning evaluated as “most effective” on any dimension represents optimal family functioning (Ryan et al., 2005). In the current study, psychological well-being is defined as depression or anxiety as assessed by scores on the Patient Health Questionnaire-4 (PHQ-4)(Kroenke, K., Spitzer, R. L., Williams, J. B. W., Löwe, B., 2009). In accordance with the aforementioned process-context model research paradigm, Bronfenbrenner’s research suggested that external influences often affect the “capacity of families to foster healthy development in their children” (Bronfenbrenner, 1986 p.723), and this researcher hypothesizes that this inadvertently influences family functioning.

The influence of social context on individuals and families has long been the object of empirical scrutiny (Bronfenbrenner, 1979; Bronfenbrenner, McClelland, Wethington, Moen, and CeCi, 1996; Grzywacz, J. & Marks, N. 2000). Ecological Systems Theory brings necessary attention to the impact of extrafamilial conditions on intrafamilial processes (Bronfenbrenner, 1986; Meyers, Varkey, Aguirre, 2002). Specifically, Ecological Systems Theory brings attention to the quality of the environment and how that quality impacts behavior. Meyers, Varkey, & Aguirre (2002) found statistically significant linkages between family functioning and several ecological correlates, including stressful life events, family income, maternal maturity, family of origin difficulties, depression, and social support. These findings bring into question whether there are other undetected ecological influences impacting family functioning. In this study, food security status represents the individual's environmental environment. Examining the relationship between food security status, parent psychological well-being, and family

functioning brings under potential evaluation differences between food-secure and food-insecure families while making ecological systems theory the basis for suggesting an interplay between food security status, parent psychological well-being, and family functioning.

Ecological Systems Theory places the individual at the core of a complex system of structures, each existing within another (Bronfenbrenner, 1979). According to Ecological Systems Theory, each individual's ecological environment exists as an extensive system of smaller concentric systems, including what Bronfenbrenner refers to as the microsystem, mesosystem, exosystem, and macrosystem (Bronfenbrenner, 1986). Empirical research supports the existence of each ecological system (Grzywacz, J. & Marks, N., 2000). Ecological Systems theory is graphically depicted as concentric circles, each representing one of the aforementioned systems. The present study investigates family functioning; thus, the ecological system that is the direct focus of this study is the microsystem. The core of an ecological system is the individual, with the following immediate concentric circle representing the microsystem. The microsystem consists of the activities, roles, and interpersonal relationships experienced by the individual (Bronfenbrenner, 1979). Families and schools are the primary microsystems of developing individuals (Ettekal & Mahoney, 2017). Tolan & Larson (2014) highlight a recursive relationship between external systems, individual behavior, and the microsystem; in essence, the external systems impact the individual, and the personal impact the microsystem. This observation is also an underlying premise of the present research study.

When considering the individual in the context of their ecological microsystem, Bronfenbrenner believed that human behavior is seldom a result of that person's experiences with the environment alone, instead human behavior is the result of how the individual subjectively interprets the experiences that they have with the environment (Bronfenbrenner, 1979). This

view of the ecological microsystem has highlighted the significance of situationally derived meaning in human development and family interactions. Observing the relationship between psychological well-being to family functioning integrates the individual's microsystem experience with the impact of that experience on behaviors within the context of the nuclear family. Additionally, the family interactions assessed via family functioning are also a microsystem under scrutiny in the present study.

The following structure in the ecological system is the mesosystem. Although the mesosystem is not an explicit focus of the present study the reader needs to understand the mesosystem and the indirect mesosystem mechanisms apparent in this study. The mesosystem houses the relationships between the various settings that each person is a part of (Bronfenbrenner, 1979). Ettekal & Mahoney (2017) suggest that the mesosystem refers specifically to processes that take place between microsystems. The mesosystem is a system of microsystems like school, work, home, church, and peer groups (Bronfenbrenner, 1979). The key to understanding the mesosystem is the “interrelations” between the various settings in which the individual exists (Bronfenbrenner, 1979). In the microsystem, the individual lives in each neighborhood alone; however, the mesosystem considers multiple systems within which the individual simultaneously exists (Bronfenbrenner, 1986). McIntosh, Lyon, Carlson, Everette, & Loera (2008) posit that mesosystem research may include research that examines the way that multiple roles are managed under conditions of stress. An example in this research study is the researchers’ attempt to delineate the relationship between participants' food security status, which is indicative of their position in their work and societal settings, and family functioning, which is representative of role management in the family setting. The mesosystem effect in this study is the observance of the interaction between the predictor variables (food security status

and psychological well-being) and the criterion variable (family functioning), which each represents a setting or system within which the research participant exists.

Bronfenbrenner (1979) identifies four types of interrelations between settings that may occur within the mesosystem: 1) multi-setting participation wherein the individual engages in activities in more than one setting, for example, when an adult spends time at work and home; 2) indirect linkage wherein the same person does not actively participate in both settings, but a relationship or connection is made between the setting and the individual by a third party. For example, when a child is part of a family and is impacted by the parent's income earned in their occupational, this is an indirect linkage setting; 3) interesting communications are communications that are intended to send informational messages from one setting to another 4) Intersetting Knowledge refers to the information or experience that occurs in one setting regarding another setting, as in when a high school graduate gets the message from their family that they either would best benefit from attending college or joining the workforce.

The mesosystem interrelations of relevance in the present research study are the indirect linkages between family functioning and food security status and multi-setting participation represented by participants' participation in their families and larger societal systems. The question underlying the mesosystemic concerns assessed in the present study (food security status, psychological well-being, and family functioning) is, how does parental involvement and position in the larger societal setting as represented by food security status, impact the participants' psychological well-being and their family functioning.

The ecological exosystem is the term used to describe settings that do not involve the developing person as an active participant but involve events that occur in these systems that impact the setting containing the developing person (Bronfenbrenner, 1979). An example of the

exosystem of a child can be a sibling's classroom or the activities of the community school board (Bronfenbrenner, 1979). As previously stated, the focus of the present study is ecological.

Though the exosystem is not necessarily the system of focus in the present ecological theory-based study, it holds relevance for the study participants. The present study differs from studies of the past in that social class, which in this study is represented as food security status, has been considered a linear variable (Bronfenbrenner, 1979). In the present study, a systemic approach is introduced to evaluate the impact social issues have on the individual and family. In this systemic approach to the current research study, the researcher considers multiple constructs within the ecological system that may impact family functioning. For example, a parent's demanding work schedule can be viewed as an exosystem. Though the developing child is not directly involved in this environment, decisions made in that environment (a parent's work schedule and wages earned) impact the child and family.

The ecological macrosystem is the outermost concentric system experienced by individuals in the ecological environment and is not a focus of the present study. Bronfenbrenner (1977) states that the macrosystem refers to cultural or subcultural patterns in the legal, educational, political, and social systems. Social class and culture are significant macrosystems (Ettekal & Mahoney, 2017). In ecological systems terms, the micro-, meso-, and exosystems are believed to reflect the *macrosystem*. The macrosystem also incorporates the belief systems derived from broader cultural systems (Bronfenbrenner, 1979).

Ettekal & Mahoney (2017) identify societal views on the importance of sports activities as an example of a macro systemic influence. Comparable examples in the present study are societal views on the importance of various dimensions of family functioning, like communication. The inference herein is that societal views impact the family in relevant and

observable ways that can be seen in the family's interactions. The underlying premise of Ecological Systems theory is that changes in any one of the systems influence or are related to, direct and indirect changes in the other systems. This is a perspective maintained in the present study.

Theorists across multiple disciplines have agreed to adopt an ecological approach to understanding families (Durden & Witt, 2010; Ettekal & Mahoney, 2017; Trzcinski, E., 1995). Research has also supported using an ecological framework when treating families from a specifically family-centered perspective (Mandak, O'Neill, Light, & Fosco, 2017).

Developmental psychologists that subscribe to an ecological perspective of human development have noted that problems that families and children face are caused by a metaphorical conflict between the workplace and family life as individuals ultimately develop within systems rather than in isolation (Grzywacz, J. & Marks, N., 2000). Without an ecological framework that identifies internal mechanisms and external effects of the environment on families, it is challenging to draw a definitive association between food security status, psychological well-being, and family functioning. However, with an ecological understanding, future researchers can begin to draw associations among constructs that have not previously been simultaneously evaluated and may appear to be unrelated, like food security status, psychological well-being, and family functioning (McIntosh et al., 2008). In the counseling field, researchers' consideration of ecological systems individuals exist within has the potential to yield the development of more efficacious family treatment models, ultimately benefiting clients and advancing progress in the counseling field.

McMaster Model of Family Functioning

A review of current research literature indicated that family functioning is a broad construct described in varying terms based on the researcher's theoretical approach to understanding families. The theoretical framework for the present study integrates an underlying Ecological Systems approach to understanding families with the McMaster Model of Family Functioning (Miller, Ryan, Keitner, Bishop, and Epstein, 2000). The McMaster Model of family functioning is the underlying theoretical framework for the McMaster Approach to assessing and treating families (Miller et., al.). The McMaster Approach is considered a comprehensive approach to treating families inclusive of three components, (1) A theoretical model for understanding family functioning (2) Assessment tools that measure multiple dimensions of family functioning, and (3) a family treatment model for clinical application (Miller et., al.). Miller, Ryan, Keitner, Bishop, and Epstein (2000) reported that a primary goal of developing the McMaster Approach to families was clearly defining the basic concepts of family functioning. The expectation in developing the McMaster Approach was that practitioners would be able to provide effective treatment with clearly defined foundational family functioning concepts (Miller et al., 2000).

The present research study draws from the McMaster Approach to apply the McMaster Model of Family Functioning in the current metatheoretical framework. The McMaster Model of Family Functioning defines family functioning based on the multidimensional McMaster Model of Family Functioning. From the McMaster perspective, Family Functioning refers to a family's level of effectiveness with respect to six dimensions of family functioning: Problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control (Miller et al., 2000). The McMaster model places family functioning on a continuum regarding

effectiveness in each dimension of family functioning. Functionality evaluated as “most effective” on any dimension of family functioning is considered to represent optimal family functioning while family functioning assessed to be “most ineffective” is considered dysfunctional (Ryan et al., 2005).

The following six MMFF dimensions are assessed in the current study to delineate the functionality of participant families: Problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control. Ryan et al. (2005) highlight that the McMaster model does not cover all areas of family functioning but rather only the dimensions of family functioning that are considered to have the most significant influence on the emotional health and physical health of the family and its members.

Comparable to an ecological approach, the MMFF is based on a systems approach to family. The family is viewed as an open system, consisting of systems within systems relating to other systems (e.g., school, work, church) (Ryan et al. 2005). In completing the present study, the researcher reviewed multiple theoretical conceptualizations of family functioning, including the Circumplex Model of Family Functioning (Craddock, 2001; Olson & Gorall, 2006; Olson, 2000), the Process Model of Family Functioning (Skinner & Steinhauer, 2000), The McMaster Model of Family Functioning (Ryan et al., 2005) and the Beavers Systems Model of Family Functioning (Beavers & Hampson, 2000). The present researcher found that several basic assumptions of the MMFF are consistent with the rationale for including family functioning as a variable herein, including: (1) the transactional patterns of family systems are important and shape the behavior of family members, (2) one part of the family cannot be understood in isolation from other parts of the family, (3) family functioning cannot be understood by simply understanding each of the parts of the family (4) Structure and organization are essential

considerations in determining the behavior of family members, and (5) all parts of the family are interrelated (Ryan et al., 2005; Miller et al., 2000).

Assessment of the six dimensions of the MMFF gives clinicians insight into the family's effectiveness in relating to each other. Problem-solving refers to the family's ability to resolve problems (Miller et al., 2000). The MMFF asserts that as families become less effective, their problem-solving behaviors become less calculated (Ryan et al., 2005). Family problems in the MMFF are categorized as either instrumental or affective. Instrumental problems pertain to activities of everyday life, including obtaining food, managing money, and providing housing. In comparison, affective problems pertain to emotion (Ryan et al., 2005). The observation of participant responses on the problem-solving dimension in the present study indirectly assesses participant families' ability to address problems with food insecurity systematically.

Functional families may have a few issues that remain unresolved; however, the unresolved conflicts do not cause a rift in the family (Ryan et al., 2005). Ryan et al. (2005) highlight that functional families can discuss problems openly and include any affective component that may be a factor. Through discussion, functional families can brainstorm resolutions, make decisions regarding action to be taken, and carry out decisions (Ryan et al., 2005).

The McMaster model views family communication as solely referencing the verbal exchanges that occur within families (Ryan et al., 2005). Communication is considered on two continuums: Clear versus masked and direct versus indirect (Ryan et al., 2005). Healthy families communicate in both clear and direct manners regarding instrumental areas (e.g., food insecurity) and affective areas (e.g. addressing feelings regarding familial concerns) (Ryan et al., 2005). The family has five necessary functions: provision of resources, nurturing and support, adult sexual

gratification, personal development, maintenance, and management of the family system (Ryan et al., 2005). The roles dimension of family functioning is how families determine how the five necessary functions are accomplished. Role allocation and role accountability are considered when clinicians assess family effectiveness on the roles dimension of functioning (Miller et al., 2000). On the roles dimension, healthy families do not experience trouble with resource provision, and when the family deviates from effective role functioning, there is no conflict around that deviation (Ryan et al., 2005). It is essential to highlight here that family roles may differ based on ethnicity, religious practice, or lifestyle of adult members (Ryan et al., 2005).

Miller et al. (2000) describe the affective responsiveness dimension of the family functioning ability as the family's to respond to a range of stimuli with the appropriate feelings. Healthy families respond affectively with a full range of emotions, and the quality and quantity of those emotions are congruent to the stimuli evoking the emotion (Miller et al., 2000). Therefore, in utilizing the MMFF in clinical treatment with families when assessing affective responses, the clinician pays close attention to the spectrum of emotion displayed within a family and the over and under-responsiveness of the family (Miller et al., 2000).

Affective involvement is the dimension of family functioning that refers to the extent to which the family expresses interest in the activities of individual family members (Ryan et al., 2005). The MMFF identifies six potential types of affective involvement, including lack of involvement (family members showing minimal interest or investment in each other), involvement devoid of feelings (family members showing minimal involvement with little investment of the self), narcissistic involvement (self-centered or self-serving interest or involvement), empathic involvement (actual care for others), over-involvement (lacks boundaries of empathic involvement the family member becomes protective or intrusive), and symbiotic

involvement (unhealthy, boundaryless, enmeshed involvement with other members) (Ryan et al., 2005).

Finally, the behavior control dimension of family functioning refers to the pattern the family uses when handling physically dangerous situations, situations involving meeting psychobiological needs (eating, sleeping, sex, aggression), and situations involving the family's mode of socialization with each other and with people outside the family (Ryan et al., 2005). The behavior control dimension of family functioning introduces four potential styles of behavior control that families may exercise, rigid behavior control, flexible behavior control, Laissez-faire behavior control, and chaotic behavior control. (Ryan et al., 2005).

The MMFF posits that the primary function of the family is to provide a setting wherein members can develop socially, psychologically, and biologically (Ryan et al., 2005). Ryan et al., (2005) highlight that while attempting to serve this primary function, families encounter problems in different task areas categorized into three overall groups: basic, developmental, and hazardous. In this study, the relationships among food insecurity, parent psychological well-being, and family functioning are assessed to determine if participant families are achieving this primary function and thereby identify task area problems based on observed functionality. The McMaster Family Assessment Device is the measure used in this study to assess family functioning and has been supported as "well-established" by contemporary researchers (Alderfer, Fiese, Gold, Cutuli, Holmbeck, & Goldbeck, 2008). There is more information about the McMaster Family Assessment Device and its application in the present research in chapter three of this study.

Statement of the Problem

The Feeding America (2019) report on county and congressional district food insecurity used by the U.S. Department of Agriculture found that 13 percent of Americans live in food-insecure households. This rate of food insecurity translates to roughly 16 million families and nearly 40 million individuals (including 12 million children) living in homes with an insufficient amount of food or unsure and inconsistent access to food necessary for a healthy lifestyle (Colmen-Jensen, Rabbit, Gregory & Singh, 2016;). More recently, the Economic Research Service of the USDA reported that in 2020 the rate of households remaining food insecure is 10.5 percent, which translates to 13.8 million households (Coleman-Jensen, Rabbit, Gregory, & Singh, 2020). Current American statistical trends indicate that roughly one in eight adults and one in six children live in food-insecure households (Feeding America, 2019). These staggering statistics on food insecurity suggest a need for human rights advocates, human services professionals, mental health professionals, and medical professionals to begin gaining more knowledge about the impact of food insecurity on families and ways to adequately support families who are food insecure and those who may become food insecure.

Food insecurity, also known as “low” to “very low” food security, has been widely researched in both developed and third-world countries (Department of Agriculture Economic Resource Services, 2016). Food insecurity has been linked to mental health concerns, parenting, medical conditions, poor nutrient intake, and an array of other psychosocial factors (Davison & Kaplan, 2015; Lohman, Gillette, & Nepple, 2016; Pryor et al., 2016). Despite increasing amounts of economic, mental health, and medical research being produced about food-insecure populations, the problem remains and continues to negatively impact individuals and families. According to the U.S. Department of Agriculture Economic Resource Service (2016), US

population trends in food security suggest minimal declines in food insecurity between 2014 and 2016, after reaching record highs during the 2008 economic recession. Despite these declines, rates of food insecurity across the United States remain higher than prior to the beginning of the recession in 2007 (Feeding America, 2019).

Although there is a general American awareness of the existence of indigent populations and hunger within the country, there is much more to be understood about food insecurity and how it differs from hunger. Further, there is little known about the relationship of food insecurity to family functioning. Family functioning research literature has heavily focused on associations with socio-economic status, yet there is scarce research that identifies whether there are associations between repercussions of socioeconomic status, like food insecurity, and family functioning (Clark, Barrett, & Kolvin, 2000; Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007). Although the impact of food insecurity on individuals is well established in the research literature, the impact of food insecurity on a family's ability to function healthily has not been adequately described through empirical means (Anema, Vogenthaler, Frongillo, Kadiyala, & Weiser, 2009; Ashiabi & O'Neal, 2008; Gundersen & Ziliak, 2018; Muldon, Duff, Fielden, & Anema, 2013;). Slopen, Fitzmaurice, Williams, & Gilman, 2010).

Leading family systems researchers emphasized the impact of interactions between individuals within families and identified interdependence between family members as one of the greatest clinical concerns for family therapists (Gehart & Tuttle, 2003). However, contemporary postmodern approaches to family therapy have emphasized the significance of family members' interactions with people and environments outside of the family and the socially constructed meaning derived from those interactions (Boston, 2000). Drawing upon a postmodern perspective, this researcher posits that a major problem in the marriage and family therapy field

is that food insecurity and parent psychological well-being may have an undetected (thus under-researched) impact on subsystem interactions within families. Family therapy researchers have given minimal attention to the struggle to meet basic needs for food that many American families experience, indicating the necessity for quantitative analysis of associations between food security status and family functioning for the purpose of providing statistically informed and efficacious treatment to all families, including those that may be food insecure.

A common misconception is that most food insecure individuals are those who are unemployed, have low income or fall below the poverty threshold identified by Federal Poverty Guidelines (FPG). These perceptions do not consider that poverty level is measured based on pre-tax or gross income, which must be less than 125% of the Federal Poverty Guidelines (FPG), for families to be considered “indigent” and deemed eligible to receive federal assistance attaining the food necessary to feed their families (Federal Register, 2019).

FPG negatively impacts families’ eligibility for government food assistance programs, like the Supplemental Nutrition Assistance Program (SNAP), as some families have gross income higher than the national poverty threshold, resulting in a denial of government food assistance.

Oberholser & Tuttle (2004) affirm that there is a deficit that exists between SNAP or “food stamp” support provided for some families and their household nutritional and economic needs. This ineligibility for SNAP assistance for some can lead to food insecurity as families and parents are faced with making tradeoffs or deciding between purchasing food and paying for other necessary household expenses (Knowles, Rabinowich, Ettinger de Cuban Cutts & Chilton, 2016). It is important to note here that the most comprehensive studies on hunger in the United States indicate that many food-insecure households are above the poverty threshold, therefore, are not considered low-income (Feeding America, 2015).

In 2013, 26 percent of food-insecure households were 185 percent above the national poverty line, receiving too much monthly household income to be considered eligible for federal food assistance (Feeding America, 2015). This makes clear that food insecurity is not an issue specific to low-income families, and it certainly is not an issue that only the American indigent population endure, suggesting a need for family therapists to have the skills necessary to assess the families they treat to determine if food insecurity is present and determine if low or marginal food security status has bearing on family functioning. Knowles, Rabinowich, Ettinger de Cubam Cutts, and Chilton (2016) found strong associations between parents' self-reported mental health and making trade-offs between food and other necessities due to food insecurity. The Hunger in America (HIA) (2014) report highlights that 80,600 people are served weekly by programs supported by the Atlanta Community Food Bank. Taken together, the implications for the metro Atlanta and North Georgia area (which are served by the Atlanta Community Food Bank) are that the rates of food insecure individuals may coincide with the occurrence of mental health conditions or psychological wellbeing of individuals living in Atlanta, North Georgia, and surrounding suburbs. Though the impact of food insecurity on various constructs of psychological well-being has been previously empirically established (Davey, Flamm, Kassa, Latkin, 2014; Knowles et, al., 2016; Weaver & Hadley, 2009), there has been no comparison known to the researcher, of the psychological well-being of food insecure parents and food secure parents and the relationship of each to family functioning.

The food insecure population includes but is not limited to individuals who are active-duty military, disabled veterans, those who have taken in additional dependents to help others (ex: children of family members), and an estimated three-fourths of the food insecure population are households with an employed individual in them (US Department of Agriculture Economic

Research Service, 2016). This American food disparity in access to adequate food is one that impacts mental health, nutritional health, family relational health, and ultimately the health of the country. In a 2011 House of Representatives address, Massachusetts representative Jim McGovern, a forerunner in the American fight against food insecurity, highlighted that “Not a single congressional district in the United States of America is hunger-free”. Representative McGovern further highlighted that food banks and food pantries have reached capacity with the assistance that they can provide to communities. It is this researcher's opinion that, in light of this information, the question for clinical mental health counselors and marriage and family therapists becomes, “what could this mean for individuals and families treated in counseling settings”. The proceeding research questions, rationale, and study will shed light on this question and further equip individual and family counseling professionals to provide comprehensive treatment for families that are food insecure or are headed by parents with compromised psychological well-being.

Rationale and Purpose for the Study

National-level food security status research began to gain public attention in the 1960s when television network CBS first aired the program *Hunger in America*, alerting the American public and, thereby, policymakers, to the need to collect data on food security status to determine the effectiveness of federal nutrition assistance programs (Haering & Syed, 2009). Empirically established food security status associations include poorer child health, psychological distress, poor mental health, and diabetes (Carter, Kruse, Blakely, & Collings, 2011; Casey, Goolsby, Berkowitz, Cook, Cutts, Black, Zaldivar Levenson, Heeren, Meyers; 2004; Tevie & Shaya, 2018; Seligman, Laraia, Kushel, 2007). A review of research literature indicated that for roughly 60 years since the airing of *Hunger in America*, various national and international researchers,

including the U.S. Department of Agriculture's Economic Research Service and the Food and Agriculture Organization of the United Nations (FAO), have collected data on food security status, little of which examines the impact of food insecurity on the family, and none of which examines specific associations between family functioning, psychological well-being, and food security status (Coleman-Jensen, Rabbit, Singh, 2018; Daniel, Nepomnyaschy, Ibarra, Garasku; 2014; Feeding America, 2015; Haering & Syed, 2009 Oberholser & Tuttle, 2004).

Salkind (2010) suggests that the significance of examining associations among variables is that it can help researchers predict changes in an outcome variable based on participant exposure to predictor variable conditions. The present study adds to the existing body of literature on family functioning and food security status by venturing to quantify potential associations between food security status, parent psychological well-being, and family functioning. This study identifies existing differences and/or associations in the family functioning of food-insecure families, food-secure families, and families with parents who have poor psychological well-being and those that do not, as indicated by anxiety and depression assessment (Kroenke, Spitzer, Williams, Löwe, 2009).

The current study is presented with the goal of strengthening and supporting families at its core. The specific purpose of this study is to investigate the relationship between food security status, parent psychological well-being, and family functioning using the McMaster Model of Family Functioning and simultaneous multiple regression analysis. The study assesses associations between food security status and the six McMaster model dimensions of family functioning: Problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control (Ryan, Epstein, Keitner, Miller, Bishop, 2005). Secondly, the study explores the relationship between parents' psychological well-being and family

functioning. The interaction of demographic factors with the criterion variable, family functioning, is considered. Simultaneous multiple regression analysis is used to determine the relationship between food security status, psychological well-being, and family functioning.

Significance of the Study

Identifying psychological well-being and food security status as preliminary predictors of family functioning may prove essential to the initial clinical assessment process, as clinicians will have an ecological basis for projecting treatment outcomes for families. Meyers, Varkey, Soji, & Aguirre (2002) found that ecological influences like parental depression, stressful life events, and income, are significantly associated with family functioning, suggesting a need for further research on other ecological circumstances that may impact the ability of families to function healthily. Although food insecurity has been minimally examined in relation to mental health problems in multiple studies, the consideration of mental health conditions of parents has not been simultaneously considered in conjunction with food security status and family functioning (Pryor, Lioret, Waerden, Fombonne, Falissard, & Melchoir, 2016). Many of those impacted by food insecurity in the United States are families (Coleman-Jensen, et, al., 2018).

Current family therapy research and treatment modalities fail to consider the relationship between food security status specifically and family functioning, leaving much unknown to family therapists and the general population about whether parents' psychological well-being or socioeconomic factors like food security status have a stronger relationship with family functioning. The findings give an important opportunity for families in the community to utilize this study to gain knowledge about their risk factors for unhealthy family functioning and take measures to proactively safeguard their families from falling below functionality in or within

ineffective range in the McMaster model dimensions problem-solving, communication, roles, behavioral control, affective responsiveness, and affective involvement.

The results of this study have implications for professionals across multiple human services disciplines. Determining if food security status or parental psychological wellbeing has a stronger relationship with family functioning may assist marriage family therapists with treatment planning, outcome projections, and identifying resources for families seeking treatment. Family policymakers may use the results of this study as a rationale for proposing much-needed childcare programs; family leave laws, family mental health care, and nutrition assistance legislation.

Social workers may utilize the outcomes of this study as justification for referring food-insecure families for Intensive Family Intervention Services, marital therapy, and other therapeutic family support services in conjunction with the reception of SNAP. Food pantry program directors may utilize the results of this study as a basis to determine the necessity to onboard additional staff to meet the non-food needs of pantry clients. School counselors, entry-level, and administrative-level educators may utilize the results of this study to gain further insight into factors impacting student developmental trajectories and academic decline, as microsystem relationship influences have been previously linked to a drop-off in academic engagement, emotional wellbeing, and student behavior (Tolan & Larson, 2014). The aim of this study is to contribute to the growing body of food security status research conducted and collected by USDA's Economic Research Service. The results herein can be reviewed by the USDA Economic Research Service to explore the associations of food insecurity to family functioning and potentially add a mental health component to the annual report on Household Food Security.

The outcomes of this study may also contribute to the local community by serving as a catalyst for future nonprofit and philanthropic efforts to serve food-insecure families and parents with diminished psychological well-being. The researcher in the present study ventures to add a Clinical Mental Health Counseling and Marriage and Family Therapy perspective to the existing body of research literature on food insecurity in the United States. An underlying premise of the present research is that some families' ability to achieve optimal functionality may be limited due to unmet basic needs.

Ecological Systems Theory and the McMaster Model of Family Functioning aid in providing a systemic understanding of the interplay among food insecurity, psychological well-being, and family functioning. The results may implicate a need for clinicians to address areas of disparity for clients as an antecedent to effective clinical care of families rather than a secondary concern.

Definition of Key Terms

Definitions of terms used throughout the present study are provided in this section for the purpose of aiding the reader in understanding concepts associated with food security status, psychological well-being, family functioning, and general family therapy.

- *Affective Involvement*: One of the six McMaster Model of Family Functioning dimensions references the extent to which the family expresses interest and value regarding the ventures of individual family members (Ryan et al., 2005).
- *Affective Responsiveness*: One of the six McMaster Model of Family Functioning dimensions referencing family members' ability to respond with a full spectrum of emotions and whether the emotion is congruent to the situational context or stimulus (Ryan, et al., 2005)

- *Basic Task Area:* the most fundamental task area in the McMaster Model of Family Functioning involves basic family needs-based issues such as providing food, money, shelter, and transportation (Ryan et al., 2005). If the family is unable to operate effectively in this task area, then the family may be more susceptible to developing maladaptive behaviors and clinically significant familial concerns (Ryan et al., 2005).
- *Behavior Control:* One of the six McMaster Model of Family Functioning dimensions referencing a family's adopted pattern for handling behavior in the following three areas: physically dangerous situations, situations meeting and expressing psychobiological needs and drives, and situations involving socializing behavior between family members and with people outside the family system (Ryan et al., 2005).
- *Communication:* The pattern of verbal exchange of information within a family (Ryan et al., 2005).
- *Context:* the social, economic, cultural, political, and geographical environments in which the family operates.
- *Developmental Task Area:* McMaster Model of Family Functioning task area involves issues that arise over the course of the developmental stages at the individual and family level (Ryan et al., 2005)
- *Effectiveness:* Effects of therapy conducted in the field in normal circumstances (Weisz, J. R., Weiss, B., & Donenberg, G. R., 1992) as cited in Pinsof, W. M., & Wynne, L. C. (1995).
- *Extrafamilial:* Lying outside a family or its control.

- *Exosystem*: One or more settings that do not involve the developing person as an active participant, but in which events occur that effect, or are affected by, what happens in the setting containing the developing person (Bronfenbrenner, 1979, P. 25).
- *Family*: A family is a group of two people or more (one of whom is the householder) related by birth, marriage, or adoption and residing together; all such people (including related subfamily members) are considered as members of one family (U.S. Census Bureau, 2019).
- *Family Centered Intervention Services*- Family-centered intervention services- include both beliefs and practices that treat families with respect and dignity; are individualized, flexible, and responsive to family situations; include information sharing to allow families to make informed decisions; provide families with choices regarding practices and intervention options; involve parent-professional collaboration and partnerships; and provide resources and supports for families to care for their child to support optimal outcomes (Mandak, O’Neill, Light, Fosco, 2017).
- *Family Functioning (McMaster Model)*: A multidimensional understanding of the family level of effectiveness with respect to six dimensions of family functioning: *Problem-solving, communication, roles, affective responsiveness, affective involvement, and behavior control* (Miller et al., 2000). Family functioning evaluated as “*most effective*” on any dimension of family functioning is considered to represent optimal family functioning (Ryan et al., 2005).
- *Federal Poverty guidelines*- a term synonymous with “federal poverty level”, used by the United States Government to determine individuals' and families' eligibility for subsidies, programs, and benefits.

- *Food insecurity*: The USDA's measure of lack of access at times to enough food for an active, healthy life for all members of a household and limited or uncertain availability of nutritionally adequate foods, uncertain ability to acquire food in socially acceptable ways (FAO, 2012 as cited in Davison & Kaplan, 2015). Food-insecure households are not necessarily food insecure all the time. Food insecurity may reflect a household's need to make trade-offs between important basic needs, such as housing or medical bills, and purchasing nutritionally adequate foods (Feeding America, 2019).
- *Food Security*- "Access by all people at all times to enough food for an active, healthy life. Food security includes at a minimum: (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing, or other coping strategies). " Food security is being measured by the U.S. Household Food Security Survey (HFSS) (USDA, Economic Research Service, 2012).
- *Food Security Survey Module Short Form*- 6-item questionnaire created by the USDA Economic Research Service to determine levels of food security within American households. The FSSM can be administered when it is not feasible for the longer 18-item Household Food Security Survey Module cannot be used. Can be administered to individuals 12 or older (Blumberg, Bialostosky, Hamilton, Briefel R. (1999).
- *Functioning Continuum*: Used to describe the family functioning within each McMaster Model dimension (Ryan et al., 2005). The functioning continuum ranges from "most effective to most ineffective" (Ryan et al., 2005).

- *General Functioning*: A term used in the McMaster Model of Family Functioning to refer to a family's overall level of functioning. General Functioning is also a subscale of the McMaster Family Assessment Device (Ryan et al., 2005).
- *Hazardous Task Area*: McMaster Model of Family Functioning task area involves the family's handling of acute crises like accidents, loss of income, and illness (Ryan et al., 2005).
- *High food security/Food Security*: reporting no indications of food access problems or limitations (USDA Economic Research Service, 2016).
- *Household*: living quarters of all individuals that are considered to be a family unit (U.S. Census Bureau, 2019).
- *Indigent*: The Georgia Department of Community Health's Office of Health Planning defines an indigent patient as being a patient who is income tested and found to be at or below 125% of the Federal Poverty Guidelines.
- *Intrafamilial*: Occurring within a family.
- *Low food security/ Food insecurity without hunger*: reduced quality, variety, or desirability of food. Little to no indication of reduced food intake (Coleman-Jensen, Rabbit, & Singh 2016).
- *Low Income*: Individuals and families making less than two times the federal poverty threshold indicated for an individual's household size (USDA Economic Research Service, 2017).
- *McMaster Model of Family Functioning*: A theoretical approach to understanding families that places family functioning on a continuum in terms of the family's effectiveness on six dimensions of family functioning: problem-solving, communication,

roles, affective responsiveness, affective involvement, and behavior control. (Ryan et al., 2005).

- *Microsystem*: A microsystem is a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given setting with particular physical and material characteristics (Bronfenbrenner 1986, p. 22)
- Marginal food security/Food security: one or two reported indications of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake (USDA Economic Research Service, 2016).
- *Macrosystem*: Refers to the overarching institutional patterns of the culture or subculture such as the economic, social, educational, legal, and political systems (Bronfenbrenner, 1986).
- *Mesosystem*: The interrelations among two or more settings in which the developing person actively participates (such as, for a child, the relations among home, school, and neighborhood peer group; for an adult, among family, work, and social life). A mesosystem is thus a system of microsystems. It is formed or extended whenever the developing person moves into a new setting (Bronfenbrenner 1986, p.25).
- *Metatheory*: defines the theoretical basis of a clinician's work and combines elements from multiple theories (Neukrug, 2018).
- *Problem Solving*: One of the six dimensions of the McMaster Model dimension of family functioning that assesses the family's ability to solve problems (Ryan, et al., 2005).
- *Process context model*: Research paradigm based on Urie Bronfenbrenner's Ecological theory that explicitly assesses the impact of the external environment on family processes (Bronfenbrenner, 1986).

- *Respondent fatigue*: Occurs when survey participants become tired of the survey task, and the quality of the data they provide begins to deteriorate. It occurs when survey participants' attention and motivation drop toward later sections of a questionnaire (Lavrakas, 2008).
- *Roles*: One of the six McMaster model dimensions of family functioning refers to repetitive patterns of behavior used by the family to fulfill family functions (Ryan et al., 2005).
- *Supplemental Nutrition Assistance Program (SNAP)*: A government-funded program offering grocery assistance to individuals that fall below the federal poverty threshold for their household.

Limitations

Several demographic factors are measured in the present study, including race/ethnicity, number of people in the household related by the USDA criterion for “family” identification, and marital status. An identifiable limitation of this study is that the demographic components measured may serve as extraneous variables impacting family functioning scores and thereby weakening the internal and external validity of the study results. The recent COVID-19 pandemic may have an impact on the number of individuals reporting food insecurity.

It is beyond the scope of this study to include minors (individuals under age 18) in participant households; as a result, the measured family functioning is based solely on household adults' self-reported perceptions of family functioning and psychological well-being. Additionally, utilizing a self-report measure of family functioning (the McMaster Family Assessment Device) may increase response acquiescence as adults who “lead” families may be

inclined to erroneously report higher favorable family functionality or psychological wellbeing, yielding unreliable results on the family functioning and psychological well-being measures.

The high number of items in the survey creates a high risk for respondent fatigue. It is possible that data collected from items that are placed toward the end of the survey are inaccurately reported due to waning attention spans and decreasing interest in the survey. Egelston, Miller, & Meropol (2011) highlight that respondent fatigue may yield measurement error or misclassification errors, impacting the power of the research results. Means of controlling for response fatigue are discussed in Chapter 3 of this study.

The respondent burden in this study does not permit the use of a comprehensive measure of food security status. Therefore, a short form of the USDA's Household Food Security Survey Module was used. The Household Food Security Survey Module-Six item short form used to measure food security status does not take into account the specific food security of children in participant households. Therefore, the most severe forms of food insecurity (wherein the food intake of children is decreased due to insufficient access to food) are not measured in this study. The family functioning of participants who may fall into this category may be accurately assessed, while the food security status may be assessed as "low food security" when they experience "very low food security," as evidenced by decreased food intake of children.

Delimitations

The U.S. Census Bureau (2017) describes a "family" as two or more individuals living together who are related by birth, marriage, or adoption. This study is delimited to individuals who reside in a household with people to whom they are related by birth, marriage, or adoption to ensure that participants are considered a "family" based on the U.S. Census Bureau definition. The study is also delimited to individuals who are 18 years of age or older.

Summary

This chapter is an introduction to the proceeding research study on the relationship between family functioning, parent psychological well-being, and food insecurity. Chapter one outlines the metatheoretical framework for the study and describes the problem that is the basis of the study rationale. The purpose and rationale of the present research are stated, along with limitations and delimitations. Key terms related to the research study are also defined.

CHAPTER 2

LITERATURE REVIEW

Slopen, Fitzmaurice, Williams, & Gillman (2010) suggest that food insecurity may have an impact on multiple aspects of family life, including family processes and parent well-being. Research regarding the relationship between social variables and family functioning has focused on factors such as socioeconomic status, family structure, and the ages of household members (Gundersen, Ziliak, & Haist, 2008). While food insecurity research on populations within the United States has given close attention to patterns, prevalence data, and risk factors of food insecurity (Garner, 2016; Hake, Engelhard, & Dewey, 2022; Martinez, Webb, Frongillo, Ritchie, 2018; Smith & Meade, 2019). Meanwhile, Ecological Systems Theory has been applied traditionally to the study of child development. In this chapter, the author will provide a thorough review of the current research literature regarding family functioning, food insecurity, parent psychological well-being, and ecological systems theory.

The literature discussed throughout this chapter is a conglomerate of writings collected from peer-reviewed journals, academic textbooks, and public record data provided by the USDA Economic Research Service and various USDA-compliant hunger relief agencies. This review of literature includes data collected from the 1960s to 2022. Taken together, the literature findings presented in this chapter will provide the reader with a further understanding of the rationale for the present study.

Food Security, Psychological Well-Being, and Family Functioning: A Public health Concern

The Centers for Disease Control and Prevention is the branch of The U.S. Department of Health and Human Services responsible for surveilling American public health. In the early 1920s, the term “public health” was defined by Charles Edward Winslow, as the science and art of preventing disease, prolonging life, and promoting health and efficiency (Centers for Disease Control and Prevention, 2014), through various community efforts relevant to that time. Historically efforts at improving public health centered on the intervention and prevention of contagious diseases and chronic health conditions (Shern et al., 2016). More recently, it has been encouraged that practitioners begin to “think family” in relation to the prevention and treatment of public health-related conditions (Hanson, Crandall, Barnes, Magnusson, Novilla, & King, 2019).

Food insecurity and mental health have each been increasingly recognized as public health challenges in contemporary American Society (Baker, 2018; CDC, 2019; Food Insecurity: A Public Health Issue, 2016; Shern, Steverman, & Blanch, 2016). The Centers for Disease Control and Prevention (CDC) (2018) define mental illness as occasional or chronic conditions that affect an individual’s mood, behavior, feelings, ability to relate socially, and daily functioning. Mental health includes conditions like depression, anxiety, and schizophrenia (CDC, 2018). The CDC (2018) further characterizes mental health as including the emotional, social, and psychological well-being of the individual.

Adverse Childhood Experiences (ACEs) have been explicitly identified as “serious public health concerns” that impact mental health (CDC, 2019, p. 26). ACEs are potentially traumatic events that occur between the ages of 0-17, including but not limited to occurrences of violence,

abuse, and neglect (CDC, 2019). In addition to experiences traditionally characterized as traumatic, the CDC also recognizes *any* experience that may undermine a child's sense of stability and bonding as ACEs (CDC, 2019).

Along with stressors like frequent moving, and segregated neighborhoods, the CDC (2019) identifies food insecurity as an ACE-related condition that can cause toxic stress. Toxic stress is defined as prolonged exposure to an activation of the stress response system (CDC, 2019; Shonkoff & Phillips, 2000). Researchers have also referred to toxic stress as the relationship between severe economic hardship and child development (Knowles, Robinwich, Ettinger De Cuba, Cutts, and Chilton, 2016). This defined overwhelming stress associated with economic deprivation and adversity is associated with conditions such as abuse, neglect, exposure to violence, and household instability and may yield long-lasting physical and emotional damage (Knowles et al., 2016). Knowles et al. (2016) present data that supports the notion that household food insecurity is a form of toxic stress for parents. To determine how food insecurity affects parents' mental health and children's well-being, Knowles et al. (2016) conducted 51 semi-structured interviews with parents of children under age four whose households met the criteria for classification as "marginal", "low", or "very low" food insecurity. The researchers found that parents who reported household food insecurity and depression had a greater likelihood of experiencing emotional distress, worry, shame, explicit stress, and fear (Knowles et al., 2016). These are all emotional reactions that have been associated with toxic stress.

In another study, researchers investigated the social determinants of health and identified food insecurity as an exemplar of child poverty and a condition that contributes to toxic stress (Francis, Depretis, Wilson, & Gross, 2018). Francis et al. (2018) went on to report that children who are reared in food-insecure households are more likely to suffer from a number of public

health-related conditions, including iron deficiency anemias (Eicher-Miller, Mason, Weaver, McCabe, & Boushey, 2009 as cited in Francis et al., 2018, poor social, emotional, and cognitive skills needed (Johnson & Markowitz, 2017 as cited in Francis et al., 2018), and developmental difficulties in toddlers and infants (Rose-Jacobs, Black, Casey, Cook, Cutts, 2008, as cited in Francis et al., 2018). All of these studies illustrate that food insecurity is a factor impacting multiple domains of public health, including both mental and physical health.

Case studies such as those conducted by Chilton & Rabinowich (2012) have also drawn an association between food insecurity and toxic stress. In their qualitative investigation, Chilton & Rabinowich (2012) relate food insecurity in children to ACEs in parents, suggesting that lifelong exposure to various forms of toxic stress can serve as a precursor to conditions of food insecurity later in life. Their “toxic stress study” profiled three women who experienced toxic stress because of ACEs. Although Chilton & Rabinowich (2012) only profiled three women in their study, qualitative data was collected from twenty-nine women in total. The researchers selected three case studies wherein participants described their ACEs, including violence, poverty, childhood sexual abuse, homelessness, depressed parents, substance-abusing parents, and childhood hunger. Each of the study participants shared the impact of the subsequent toxic stress on their mental health, parenting attitudes, and overall ability to provide for and adequately nourish their children (Chilton & Rabinowich, 2012). An important detail to highlight here is the fact that the three women profiled in the study have stories that are very similar to twenty-five of the twenty-nine participants interviewed (Chilton & Rabinowich 2012). Chilton & Rabinowich (2012) findings suggest that ACEs, especially food insecurity, have an impact on the individual, the family unit, and the future family for years after the first exposure.

Current American trends suggest that future public health prevention and treatment efforts will center on behavioral health, as well-being continues to decrease and toxic stress increases (Dimeff & Koerner, 2019; Shern et al., 2016). In a global analysis of mental health status and food insecurity, individuals in 149 countries were examined, and results suggested an association between food insecurity and poorer mental health regardless of socioeconomic status (Jones, 2017). The aforementioned studies support the notion that food insecurity is a major concern for mental health care providers because it serves as a global trigger for psychological distress.

Food Insecurity and Family Functioning

Food insecurity has been defined in various ways based on the researchers and/or organizations defining the phenomenon. Amèzquita and George (2020) define food insecurity as the reduced food intake of household members and disrupted eating patterns of household members. Though food insecurity can lead to malnutrition and hunger, researchers note that malnutrition and hunger are not prerequisites to being classified as food insecure. In other words, although malnutrition and/or hunger may not be present, a family may be well classified as food insecure (Blumberg, Bialostosky, Hamilton, & Briefel, 1999).

Food insecurity is a construct that has been described by medical, behavioral, and agricultural researchers. One study defined food insecurity as difficulty accessing sufficient food for a healthy and active lifestyle (Hadley, Tegegn, Tessema, Cowan, Asefa, & Galea, 2008). Other researchers have placed specific emphasis on there being a lack of physical or economic access to nutritious food (United Nations World Food Programme, 2015, as cited in Pryor, Lioret, Waerden, Fombonne, Falissard, Melchoir, 2016). This definition suggests that food insecurity manifests as a problem related to socioeconomic status and physical access to healthy foods.

Thus, the presence of economic access in the absence of physical access to grocery stores yields food insecurity.

The United States Department of Agriculture (USDA) is the federal agency that tracks trends in food security through annual assessments. The U.S. Department of Agriculture (2016) defines food insecurity as a household-level (excluding an individual level) social and economic state of uncertainty concerning access to adequate food. The present study assumes the USDA's definition of food insecurity.

The public health impact of food insecurity and its potential association with parents' psychological well-being may hold relevance for practicing family therapists regarding the prevention of family dysfunction and therapeutic intervention with dysfunctional family interactional patterns. Support for this perspective is found in Hanson et al. (2019), wherein the researchers suggested that the family should be considered at the individual and societal level as the basic unit for health production, a context for public health practice, and an essential part of public health policy, research, and teaching. Hanson et al. (2019) further highlighted that a critical component of promoting overall family health is ensuring that prevention efforts are taken through services offered within communities, policies, and programming. Felitti, Anda, Nordenberg, Williamson, Spitz, & Edwards (1998), as cited in Hanson et al. (2019), found that adults who did not experience primary public health prevention efforts involving the family during childhood were more likely to experience adverse health outcomes as adults, giving longitudinal support for considering food insecurity and psychological well-being through a family lens.

Counseling professionals who offer services within communities must attempt to understand all factors that may influence family functioning including those related to

socioeconomic status like food insecurity (Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007). The problem of food insecurity is a well-known public health problem but it has been rarely related to dimensions of mental health like psychological well-being, and researchers have yet to relate it to family functioning specifically.

Food insecurity exists on a Department of Agriculture continuum ranging from high food security to very low food security. Households experiencing high food security are those that deny food access problems or limitations (U.S. Department of Agriculture, 2016). Households experiencing marginal food security are those that report one person in the household has experienced anxiety over food sufficiency or a food shortage, yet there was minimal to no change in diets within the household (U.S. Department of Agriculture, 2016). Low and very low food security are both terms used to describe food insecurity. Low food security is used to describe the diminished quality and desirability of food in the absence of hunger (U.S. Department of Agriculture, 2016). The term, very low food security suggests that the household is experiencing problems with access to food which has yielded a disruption in the eating patterns of household members (U.S. Department of Agriculture, 2016).

According to the U.S. Department of Agriculture (2016), a distinction has been made between hunger and food insecurity at the request of the Committee on National Statistics (CNSTAT). Hunger is a physiological result of a lack of food, whereas food insecurity is the condition of a lack of food itself (Hake, Engelhard, & Dewey, 2022; U.S. Department of Agriculture, 2016). This definition suggests that food insecurity can exist with or without hunger. It is important to note here that most individuals have felt the physiological concept of hunger. However, most people have not experienced food insecurity. Coleman-Jensen, Rabbit, Gregory, & Singh (2016) reported that 5 percent (6.3 million) of U.S. households experience “very low”

food security (food insecurity with hunger). These staggering statistics suggest that a more investigative approach should be taken within the counseling community to understand how to best serve children, adults, and families within this population.

To understand the relevance of linking food insecurity to a family's ability to function healthily, it is necessary to examine theories that are the foundational frameworks for the present study. Bronfenbrenner (1979), as cited in Botha, F., Booysen, F., & Wouters, E. (2017) postulated that the socioeconomic status of families is largely social microcosms of broader societal macrosystems. Bronfenbrenner's ecological theory systems theory, also known as family ecology, asserted that individual and family development happens in the context of five systems (Bronfenbrenner, 1979). The microsystem includes the individuals' most intimate relationships (e.g., family, peers, church). The mesosystem is inclusive of the relationships between the child and peers and family and teachers (Meyers, Varkey, & Aguirre, 2002). Both the mesosystem and the microsystem are a part of the exosystem, "which have an indirect effect on the family's interactions" (Meyers, Varkey, & Aguirre, 2002, p.258). The larger macrosystem is a societal concept that encompasses the cultural, political, educational, and economic systems that impact the functioning of all five of the systems. Some researchers have found one primary premise of ecological theory, which asserts that macro-systemic economic difficulty has a negative impact on family functioning, to be valid (Botha, Booysen, & Wouters, 2017; Meyers, Varkey, & Aguirre, 2002; Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007).

The idea in ecological theory that emphasizes social circumstances as predictors of family functioning is known as the social causation hypothesis (Botha, Booysen, & Wouters, 2017). Social causation has been empirically supported by many researchers as a means of describing the level of family functioning that results from economic hardship (Clark Barrett

Kolvin, 2000; Williams, Cheadle, Goosby, 2015; Rutter, 2003; Tiffin et al., 2007). Conger and Conger (2010) present the Family Investment Model, which like the social causation theory, asserts that family interactions are a product of socioeconomic status. The core assumption of the Family Investment Model is that socioeconomic status and family functioning are positively associated (Botha, Booyesen, & Wouters, 2017). Based on the Family Investment Model, Researchers can expect to observe better family functioning in families with higher socioeconomic status and worse family functioning in families with lower socioeconomic status (Botha, Booyesen, & Wouters, 2017). The Family investment model postulates that individuals from families with higher socioeconomic status are more likely to “invest more in the development of their children” and families (Botha, Booyesen, & Wouters, 2017, p. 2).

Similar to the Family Investment Model, Brotha, Booyesen, & Wouters (2017) describes the Family Stress Model (FSM). The Family Stress Model asserts that conditions of economic hardship (e.g. food insecurity, low SES, or housing insecurity) increase the amount of pressure the family experiences causing discord within the family (Botha, Booyesen, & Wouters, 2017). Ultimately authors identify SES and conditions related to SES as a major predictor of family functioning (, Brotha, Booyesen, & Wouters, 2017; Clark Barrett Kolvin, 2000; Conger & Conger, 2010; Williams, Cheadle, Goosby, 2015; Rutter, 2003; Tiffin et al., 2007).

When considering family functioning, the basic assumption of the present study can be found in Maslow's theory of human motivation. Maslow (1943) suggests human behavior is motivated by needs that exist on a hierarchy. The five needs proposed by Maslow’s theory are as follows: physiological needs (e.g., food, water, warmth, rest), safety needs (e.g., security), belongingness and love need (e.g., family relationships, friends, intimacy), esteem (e.g., prestige and feeling of accomplishment), and self-actualization (e.g., achieving one’s full potential,

including creative activities). The premiere need, to be described by Maslow, is the physiological need for food, warmth, and rest. Maslow (1943) asserts that if these physiological needs are unmet, individual behaviors are “dominated by the physiological need”. Maslow’s theory has implications for food-insecure populations, as all other needs become secondary and tertiary when the basic need for food is not met (Maslow, 1943). This suggests that the need for a tertiary need of love and belonging (under which parenting, family functioning, and spousal relationships fall) will be unfulfilled and less of a priority until the family’s basic physiological needs are met.

The underlying idea that can be drawn from Maslow’s theory is that, in order for family therapists and mental healthcare professionals to effect positive change within the individuals and families they serve, there must first be an understanding of the client's social context and work in tandem with families to improve their economic condition. Only after this has been accomplished can a client or family begin to work toward behavioral and relationally.

Family functioning is a concept that has been loosely defined, and its conceptualization is relative to the researcher (McCreary & Dancy, 2004). There is no agreement among family theorists concerning which dimensions of family functioning are most important (Carlson, 2001, as cited in McCreary & Dancy, 2004). In the present study, family functioning is defined as a family's interactions and daily activities that are either deemed beneficial or non-beneficial in aiding the family unit in achieving family goals and providing material and emotional support for its member's individual multidimensional well-being (McCreary & Dancy, 2004). One criticism of the family functioning research literature is that the existing literature is currently based on White-American households with median to high income (Fine 2001 as cited in McCreary & Dancy, 2004). It has become necessary for researchers to assess the family functioning of

individuals from more diverse cultures and socioeconomic backgrounds for the purpose of gaining an understanding of the impact of socioeconomic conditions on family functioning.

Food insecurity has become a problem globally, having an impact on children and adults (Hadley, Tegegn, Tessema, Cowan, Asefa, & Galea, 2008). Coleman-Jensen, A. Rabbitt, M. Gregory, C., & Singh, A. (2016) reported that children live in 7.8 percent (3.0 million) of U.S food-insecure households. Though this is a statistically significant decline from the 9.4 percent reported in 2014, the staggering number suggests a need for attention to the impact of food security on children. There has been research suggesting that economic stability and hardship not only have implications for family functioning, but there are also implications for childhood mental health (Hake, Engelgard, Dewey, 2022; Rutter, 2003).

The problem of food insecurity is a well-known public health problem, but it has rarely been related to mental health, and researchers have yet to relate it to family functioning specifically. It is important that helping professionals, including counselors, attempt to understand all factors that may influence family functioning, including those related to a socioeconomic status like food insecurity (Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007).

Chilton & Rabinowich (2012) examined food insecurity from a phenomenological perspective and found that food insecurity was generationally repeated for study participants, bringing into question the implications of food insecurity on future family functionality.

Francis et al. (2018) provides a rationale for improving family functionality by illustrating that families that are healthy and supportive can provide a significant buffer for toxic stress. Programming that encourages family stability and healthy family functioning has been supported as a mandate for practitioners providing both short-term and long-term treatment (Hansen et al., 2019). Food insecurity may also impact a family's ability to establish appropriate structure and

routine. One study by Schuler et al. (2020) found that food insecurity was associated with less mealtime structure. Additionally, researchers in the study suggest that both poverty and food insecurity may be associated with suboptimal parenting practices and poor parent mental health (Schuler et al., 2020).

Gee & Asim (2019) found that in a sample of over seven thousand parents (N=7,820), food-insecure parents experienced heightened aggravation in comparison to food-secure parents. In a hierarchical multiple regression analysis conducted with a sample of 35,718 parents of children ages 6-17, Suh & Luthar (2020) found that parent aggravation had a greater effect on childhood maladjustment than adverse childhood experiences (ACEs). Chilton and Rabinowich (2012) also brought special attention to the fact that child food insecurity in the United States may be underreported due to parental shame and fear of child protective agencies being notified and children potentially being removed from their custody. Food insecurity may also impact a family's ability to establish appropriate structure and routine. One study by Schuler et al. (2020) found that food insecurity was associated with less mealtime structure. Additionally, researchers in the study suggest that both poverty and food insecurity may be associated with suboptimal parenting practices and poor parent mental health (Schuler et al., 2020).

Family Functioning Models

Family functioning has been researched since the 1970s (Dai & Wang 2015). Historical reviews of family functioning have supported the notion that family functioning is an essential component of character development, personality development, and quality of life within communities and the wider society (Schawb, Gray-Ice, Prentice, 2002 & Miller et al., 2000). Traditionally, the definition of the term family functioning has varied relative to constructs

defined by various researchers. The family functioning models that exist in the present day were born out of the constructs conceptualized by family researchers. Current family functioning research tends to identify specific dimensions of family functioning within which families fall (Oshri, Lucier-Greer, O'neal, Arnold, Mancini, Ford, 2015).

Schwab et al. (2002) bring attention to the fact that confusion regarding the term family functioning has been related to the author's failure to define family functionality. Schwab et. al (2002) and Prentice, Gray-Ice, & Schwab (2000) delineate between the terms family functions and family functioning, identifying that family functions include two specific tasks: meeting adult sexual and emotional needs and child-rearing. Family functioning, on the other hand, has been described as the degree to which families are successful at accomplishing their functions (Schwab et al., 2002). Similarly, Dai & Wang (2015) note that family functioning researchers fall into two categories: those who form result-oriented theories that focus on specific family features and those who form task-oriented theories that focus on the tasks that families need to complete.

Thompson & Raezer (1998) note that Family functioning is one of the most commonly researched correlates of both child and parent chronic illness. Assessment of family functioning has generally fallen into two categories, client or participant self-report and observer report (Prentice, Gray-Ice, Schwab, 2000). Dai & Wang 2002 further highlight that family functioning is limited by the characteristics of the family. Epstein et al. (1983) highlight that family functioning is complex and can be assessed in multiple ways. More recently, researchers have considered multi-rater assessments of family functioning as a potential solution to response bias that may occur as a result of client self-reports of family functioning (Liu, Zhang, & Yeh, 2011). Gaining an understanding of family functioning requires that various models of family

functioning be examined. Masarik & Conger (2017) submit the Family Stress Model (FSM) as a theoretical framework for understanding family economic stress and the impact of this economic stress on an array of childhood outcomes and family functioning. According to the FSM, economic hardships and pressures worsen child and adolescent maladjustment (Masarik & Conger, 2017).

Unhealthy Family Functioning vs. Healthy Family Functioning

In the pre-existing research literature, investigators have found that Childhood Family Adversities (CFA) are linked to psychopathology and poor family functioning (Cassels, Harmelen, Neufeld, Goodyer, Jones, Wilkinson, 2018; Dunn, Abbott, Croudace, Wilkinson, Jones, Herbert, & Goodyer, 2011; St Clair, Croudace, Dunn, Jones, Herbert, & Goodyer, 2015). A review of current research literature revealed that there has been little quantitative analysis of methods of improving family relationships during and after CFA. Hughes (2004), as cited in Cassels et al. (2018), posits that when trauma occurs in the context of family dysfunction and is not responded to adequately by parents, family functioning is likely to become impaired. Cassels et al. (2018) demonstrated that poor family functioning served as a mediator between CFA before age five and nonsuicidal self-injury at age 14. Cassels et al., (2018) findings expose poor family functioning as an underlying mechanism impacting the association between CFA and nonsuicidal self-injury in 14-year-olds. Cassels et al, (2018) give strong support for improving family functioning as the results of the study suggested that improving family functioning after CFA may prevent later nonsuicidal self-injurious behavior in adolescents. Additionally, the study gave further support for taking a family-focused approach to the prevention of nonsuicidal self-injurious behavior.

The relationship between family functioning and mental illness has been studied for decades. In an exploration of the relationship between family functioning and Major Depressive Disorder, researchers found that 50% of families with a depressed member considered their family functioning to be unhealthy (Keitner, Ryan, Miller & Kohn, 1995). In the same study, 70% of clinicians reported unhealthy functioning among families with a depressed member (Keitner et al., 1995). Keitner et al. (1995) found an association overall between recovery from major depression and healthy family functioning.

Psychological Well-being

The CDC (2019) notes that ACEs, including food insecurity, can have a negative effect on general well-being, behavior, life potential, and health. The consensus among healthcare professionals internationally is that mental health contributes to overall well-being (WHO & Calouste Gulbenkian Foundation, 2014). The forthcoming subsections will focus specifically on identifying research literature that draws a link between food security status and variations in psychological well-being.

As highlighted throughout both chapter one and two of this study, the link between food security and physical health have been identified in a considerable amount of previous research (Martinez, Garner, Nazmi, Canedo & Ritchie, 2019; To, Frongillo, Gallegos, & More, 2014; CDC, 2020). Associations between mental health and food insecurity have not been investigated at the same rates (Chilton & Rabinowich 2012). Upon entry of search criteria “psychological well-being and food insecurity” into the EBSCO host search engine, with selected databases being APA Psych Articles, APA Psych Info, and Psychology and Behavioral Science Collection, only four articles were yielded. None of the articles found were studies that examined the variables “psychological well-being” and “food insecurity”. It is important to note

here that the search criteria “mental health” and “food insecurity” yielded a total of 514 articles within the four databases. For this reason, many of the studies in the present literature review will be studies that examine “mental health” as a variable rather than “psychological wellbeing”. The World Health Organization qualifies mental health as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO & Calouste Gulbenkian Foundation, 2014 p.12).

The World Health Organization specifies that mental health is not limited to the absence of a mental disorder or disordered behavior (WHO & Calouste Gulbenkian Foundation, 2014). Therefore, when considering mental health, researchers are not obligated to limit the investigation of the variables “mental health” or “psychological well-being” to the absence or presence of a mental disorder. The lack of articles investigating the variables of food insecurity and psychological well-being provides further support for this researcher's perspective that further research is needed on food insecurity and psychological well-being.

Food Insecurity as a Social Determinant of Mental Health

Compton (2014) provides support for all of the studies mentioned in this section in that the findings suggest that food insecurity is a social determinant of mental health. Social determinants of health (SDOH) are societal conditions shaped by policy decisions and opportunity distributions into which people either are born, live, or age (Shim & Compton 2020). Social determinants of health are broken down by the CDC into five domains: Economic stability, education access and quality, healthcare access and quality, neighborhood and building environment, and social and community context (US Department of Health and Human Services Office of Disease Prevention and Health Promotion, n.d.). According to the Centers for Disease

Control and Prevention SDOH, are the conditions within the environments where people live, work, learn, work, and play affect a wide range of health risks and outcomes (CDC, 2021). Social Determinants of Mental Health specifically have recently been identified by American Psychiatric publishing as the fundamental “causes of disease” as well as “the causes of the causes of disease” (Shim & Compton, 2020). Researchers have been able to identify 10 specific social determinants of mental health which are as follows: food insecurity, adverse life experiences, low educational attainment, poor educational quality, educational inequality, income inequality, poverty; neighborhood deprivation; unemployment, and underemployment; poor housing quality and housing instability; climate change; adverse features of the built environment; and poor access to healthcare (Compton & Shim, 2015).

Shim & Compton (2020) bring specific attention to the fact that food security is needed to attain good mental health. This assertion implies that mental health care professionals must screen for food security as they would other social factors that may impact a patient's mental well-being (Shim & Compton, 2020). Compton (2014) emphasizes that the connection between food insecurity and mental health is complex. Compton (2014) suggests a model for understanding potential links between poor mental health and food insecurity. Food insecurity leads to psychological stress, which triggers certain psychological responses that may place individuals at higher risk for experiencing mental illnesses, especially depression, and anxiety (Compton, 2014).

Psychological Wellbeing of Men, Women, Adolescents, and Children

Food insecurity has implications for the psychological well-being of women. In a scoping review of research data on food insecurity and mental health, Maynard et al. (2018) found support for the link between food insecurity and mental health among females in high-income countries, including Australia, North America, Canada, and the United States of America). In their review, the researchers utilized systematic search criteria and techniques to identify 13,645 initial studies (Maynard et al., 2018). The researchers then identified peer-reviewed search criteria relevant to the study and were able to extract 39 articles for text review (Maynard et al., 2018). A data extraction form was used by the researchers to identify characteristics to be investigated, including study design, main study objectives, measures used to assess food security and mental health, analytic approach, mental health states considered, population, and study setting (Maynard et al., 2018). The researchers found significant associations between food insecurity and depression in 36 of the 39 articles reviewed (Maynard et al., 2018). Additionally, stress and anxiety were associated with food insecurity in multiple participating studies supporting the researcher's premise that there is a link between food insecurity and “compromised mental health” in countries that are considered high-income (Maynard et al.).

In a global analysis of food insecurity and mental health in 149 countries, Jones (2017) investigated both adult males and females. Jones (2017) found that food insecurity was associated with poorer mental health status regardless of gender. The study, however, did not include an investigation of socioeconomic characteristics, so the findings were independent of the consideration of SES as a variable leaving the research reader to wonder if extraneous variables were responsible for the study outcomes.

The state of Georgia ranks fourth in the United States for childhood food insecurity, with 20.9 percent of Georgia children living in food-insecure households (Feeding America, Map the Meal Gap Study (2018)). Hake, Engelhard, & Dewey (2022) highlight that national food insecurity would likely have been higher in 2020 if not for the overwhelming national response efforts to COVID-19 food insecurity in the United States. Food insecurity at the “child level” is low in the United States compared to “household-level” food insecurity (Chilton & Rabinowich, 2012). Chilton and Rabinowich (2012) highlight that the low reports of child food insecurity may be attributed to parental fear of potentially losing custody of their children due to food insecurity. A growing concern for children related to food insecurity is toxic stress. Toxic stress is the stated “relationship between severe economic hardship and child development” (Knowles, Robinwich, Ettinger De Cuba, Cutts, and Chilton, 2016).

Overwhelming stress associated with economic deprivation and adversity, such as abuse, neglect, exposure to violence, and household instability, can cause long-lasting physical and emotional damage (Knowles et al., 2016). Another question related to food insecurity is what the research literature says about the psychological well-being of food-insecure children/adolescents. Brinkman et al. (2020) investigated the mental well-being of middle schoolers along with intra- and interpersonal factors that serve as buffers between food insecurity and mental well-being. The researchers analyzed data from a statewide survey conducted by the Vermont Department of Health and administered to all public middle schoolers. The Youth Risk Surveillance Survey was administered to (n=13, 648) middle schoolers. The Youth Risk Surveillance survey included items assessing food insecurity and interpersonal variables like social support and relationship with teachers (Brinkman et al., 2020). The survey also included participants’ interpersonal experiences of suicidal ideation and hopelessness (Brinkman et al., 2020). All data collected

included information on teacher caring, community caring, breakfast, physical activity, and demographics.

Brinkman et al. (2020) indicated a significant association between food insecurity and decreased mental well-being, with food-insecure participants being four times more likely than food-secure participants to experience suicidal ideation. While this study did find an association between food insecurity and decreased mental well-being, the researchers note that interpersonal factors like participants feeling connected to their community, eating breakfast regularly, and having a positive relationship with their teachers, serve as buffers (Brinkman et al., 2020). Students who reported these positive interpersonal factors experienced significantly lower instances of suicidal ideation and hopelessness (Brinkman et al., 2020).

Burke et al. (2016) collected data from the 2011-2014 National Health Interview Survey to examine associations between food security status and mental health in a nationally representative sample of children and adolescents in the United States. Associations were found between food security status and mental disorders with impairment among adolescents adding empirical support to the premise that food insecurity has a negative impact on the mental wellness of children and adolescents (Burk et al., 2016). In a cross-sectional analysis of data collected from the World Health Organization on over 34 000 participants, Smith (2021) found that adults aged 50-62 who reported severe food insecurity had nearly two times higher odds of suffering from depression than those who reported moderate food insecurity. Smith (2021) suggested that it may be beneficial to use interventions to address food insecurity in tandem with psychological interventions when treating this population. Amerizquita & George (2020) note that food insecurity affects household members differently therefore, it must be evaluated carefully.

Psychological Well-being and Family Functioning

Feeding all people throughout the world in a sustainable manner has been identified globally as a major societal difficulty (FAO, IFAD, & WFP, 2015). The fact that there are more than 800 million people in 70 developing countries that are identified as food insecure suggests that food insecurity is multidimensional in nature, and in order to understand the causes and effects of food insecurity, all dimensions need to be explored (Hook, 2015). Clinical treatment that includes a needs assessment for families has been shown to be a critical component of multiple models of family treatment (Gehart & Tuttle, 2003). More specifically, identifying families that are food insecure has become relevant in both the medical and mental healthcare industries (Amèzquita & George, 2020; Tuthill, 2019). Hook (2015) emphasizes the importance of collecting mental health data by describing the impact of food insecurity on mental health.

Food Insecure families as Hard-to-Reach Families

Ecology is the branch of biology that deals with the relationship between organisms and their environment, including other organisms (Rubin, Leslie, Merrick, & Joav, 2017). The ecological perspective places the family at the center of larger societal domains like community programs, public policy, services, and organizations (Hanson et al., 2019). The subject of food insecurity brings to another concept used to describe marginalized populations, “hard to reach”. The term hard to reach is usually used to describe marginalized individuals (Chilton & Rabinowich). Bonevski, Randell, Paul, Chapman, Twyman, Bryant, & Brozek (2014) highlight that an ongoing problem in research communities is the difficulty that researchers have with collecting data from populations that are socioeconomically and/or socially disadvantaged, which yields researchers labeling those populations as “hard to reach” or “hidden”.

Sydor (2013), as cited in Bonevski et al. (2014), describes “hard to reach” as populations that are difficult for researchers to access. This may account for the lack of data collected on the family functionality of food-insecure families. “Hard-to-reach” families and individuals may also include those that exhibit reluctance to speak to individuals who are not a part of their group or community Bonevski (2014). Food-insecure families may be considered “hard to reach” because of the tradeoffs that food-insecure parents sometimes must make to ensure that there is enough food to nourish their families. An example of this type of trade-off may be a parent opting not to pay a low-priority bill because paying a phone bill (Chilton & Rabinowich, 2012), an internet bill, or obtaining family counseling may not be a high priority compared to purchasing food. Unpredictable access to various forms of social communication makes the food-insecure population hard to reach.

CHAPTER 3

METHODOLOGY

Awareness of the relationship between food security status and a family's ability to function healthily and adapt to change has implications for family therapy outcomes. Understanding the relationship between food security status, psychological well-being, and family functioning can assist family therapists in treatment planning and resource gathering. Furthermore, clinician understanding of the relationship among these variables could improve the likelihood that food-insecure families will exhibit changed behavior and better relationships because of attending family therapy.

This chapter outlines the methodological procedures necessary to complete the present research study. The chapter diverges into nine main sections, one of which has three subsections. The nine sections of this chapter are organized as follows: the purpose of the study, research questions, hypothesis, research design, procedures, sample description, data collection, and instrumentation (with the subsections Demographic Survey, Family Functioning: General Functioning Scale of the McMaster Family Assessment Device(GF-12), Food Security: Household Food Security Survey Module Short Form (HFSSF), psychological well-being: Patient Health Questionnaire Screener (PHQ-4)), data analysis, and summary.

Purpose of the Study

The purpose of the present study was to investigate the relationship between food security status, psychological well-being, and family functioning utilizing the McMaster Model of Family Functioning. More specifically, the aim of this study was to investigate whether or not food security status and psychological well-being predict general family functioning based on the McMaster model's GF-12 scale. Secondly, the study explored the existence of a relationship between participants' psychological well-being and family functioning.

This investigation specifically evaluates food security status, a contextual factor that has been under-researched in the marriage and family therapy profession. The overarching purpose of the present study was to contribute to the clinical knowledge base of family therapy treatment providers and promote individual, family, and societal functionality by bringing empirical attention to food insecurity, psychological well-being, and family functioning.

Simultaneous multiple regression analysis was used to determine if food security status and psychological well-being are predictors of family functioning. Identifying psychological well-being and food security status as preliminary predictors of family functioning may prove essential to the initial clinical assessment process, as clinicians will have an ecological basis for projecting treatment outcomes for families. This research examines food security status at the household level with the aim to shed empirical light on the relationship between food security status, psychological well-being, and family functioning.

Research Questions

This section outlines the research questions investigated in this study. As previously stated, there is presently no existing study known to the researcher that examines the relationship between food security status and family functioning. Further, no research considers psychological well-being as a factor simultaneously associated with food security status and family functioning. For this reason, this study investigated the following research questions:

1. Do food security status and psychological well-being predict family functioning?
 - A) Which of the two dependent variables (food security status and psychological well-being) is more weighted in the final regression model?
 - B) Do differences in family functioning exist between households reporting food security (high/marginal food security) and food insecurity (low and very low food security)?

Hypothesis

The central issue investigated in this quantitative research study was whether food security status and psychological well-being predict family functioning. Secondly, this study intended to identify which of the two predictor variables (food security status and parent psychological well-being) will be weighted more heavily in the final regression model with respect to the dependent variable, family functioning.

As a tertiary priority, this study investigated the potential existence of differences in family functioning among households reporting high, marginal, low, or very low food security. Due to the lack of existing research surveying the relationships among food security, psychological well-being, and family functioning, there is no quantitative basis upon which the current predictive research hypothesis is built. The McMaster model of family functioning was

considered simultaneously with the current food security research and psychological well-being, in forming the following research hypotheses.

Null Hypothesis 1: Food security status and psychological well-being do not predict family functioning.

Alternative Hypotheses 1: Food security status and psychological well-being are predictors of family functioning.

Null Hypothesis 1B: Differences do not exist between or among families reporting high, marginal, low, and very low food security.

Alternative Hypothesis 1B: Differences in family functioning exist between or among families reporting high, marginal, low, and very low food security. Families reporting high food security will report healthy functioning. Families reporting low to very low food security will report more problematic and/or unhealthy functioning.

Research Design

A non-experimental quantitative research design was used in the present study to assess relationships between variables in this dissertation. This cross-sectional study was a correlational design, utilizing a standard simultaneous multiple regression analysis to investigate the relationship between the *criterion variable* (family functioning) and the *predictor variables* (food security status and psychological well-being). George & Mallory (2014) assert that multiple regression analyses are used when a researcher ventures to indicate the influence of two or more variables on a single dependent variable. In behavioral science research, multiple regression is used to predict variable outcomes and highlight the overall contribution of each independent variable to the dependent variable variance yielded during analysis (Field, 2009). Multiple regression analyses used in the present study aided the researcher in determining if

there is significance in the relationship between the predictor variables and the dependent variables. Parallel to determining significance, the multiple regression analyses used in this study also assisted the researcher in identifying the model that best predicts family functionality and family dysfunction when food security status and psychological well-being are considered.

Sample Description

The Current Population Survey of the U.S. Census Bureau (2019) reports that there are an estimated 2,457,810 family households in the state of Georgia. An estimated 20.9% of those are homes with children that are living in food insecurity (Feeding America, 2019). To obtain a representative sample of the population, the sample of participants for this study included both food-insecure and food-secure individuals over age 18. The selected sample size was based on statistical “rules of thumb” for selecting the minimum reasonable sample size that yields enough power to increase the probability of detecting associations where true associations exist (Van Vorhis C. & Morgan B., 2007).

According to Green (1991), the equation $N \geq 50 + 8(k)$, where k is the number of independent variables, represents the lowest sample size that a researcher should consider when conducting a multiple regression analysis. Based on the $N \geq 50 + 8(k)$ equation for determining sample size, the minimum reasonable sample size for this study is $N=66$. An a priori G-power analysis was run to determine the minimum sample size to reach statistical significance when running the multiple regression analyses for RQ1. The effect size was set at 0.15, and alpha level was set at 0.05. The power was set at 0.80. According to the G Power analyses, the minimum reasonable sample size for this study was 68. To reduce the likelihood of Type I or Type II error while increasing power, the researcher has elected to recruit at least 70 participants. Increasing

the suggested minimum sample size accounted for data that cannot be utilized due to survey non-completion or errors and participant exclusion based on identified inclusion criteria.

An additional apriori G-power analysis will be run to determine the minimum sample size for the ANOVA used for RQ1B. The effect size was set at 0.25, and the alpha level was set at 0.05. The power was set at 0.80. According to the G-power analyses, the minimum reasonable sample size for a fixed-effects one-way ANOVA is 176.

The U.S. Census Bureau (2017), a “family” is defined as two or more related by birth, marriage, or adoption and residing together. Study participation is not limited to heads of household. The rationale for including adult non-heads of households is that there may be a difference in perceptions and reporting of family functioning by heads of households and non-heads of households. Although the U.S. population Survey conducted by the Economic Research Service excludes all veterans of the U.S. Armed Forces from participation in food insecurity research, this study did not exclude this population (U.S. Department of Agriculture, 2016).

Instrumentation

Instrumentation for this study included measures to assess all variables, including food security status, family functioning, and psychological well-being. This section will outline the four instruments utilized in the present study. The four instruments used were administered to all study participants. All instruments were compiled in one Survey Monkey-generated format. Instruments will be administered to participants in the following order: General Functioning Scale of the McMaster Family Assessment Device (GF-12) (Appendix G), Patient Health Questionnaire 4 (Appendix E), Household Food Security Survey Short Form (Appendix F), and the final instrument was the Demographic Survey (Appendix H).

Demographic Survey

A demographic survey created by the researcher was included as an instrument in this study. The demographic survey items were intended to provide descriptive statistics regarding the population sample, as well as assist with identifying data from participants that cannot be used based on sample exclusion criteria. The demographic survey consists of five self-report questions. Items for the demographic survey were selected based on past research studies that suggested an association between food insecurity demographic factors like socioeconomic status/income and ethnicity as well as the U.S. Census Bureau's guidelines for what constitutes a "family (Feeding America, 2019; Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007; U.S. Census Bureau, 2019). A copy of the demographic survey utilized in this study can be found in Appendix H.

Family Functioning: General Functioning Scale McMaster Family Assessment Device

The instrument used to evaluate family functioning in the present study is the General Functioning Subscale of the (GF-12) McMaster Family Assessment Device (FAD) originally developed in 1983 by Epstein, Baldwin, & Bishop (1983). The FAD is presently one of the most widely used measures of global family functioning in clinical settings and research (Leibach & Everhart, 2017; Pritchett, Kemp, Wilson, Minnis, Bryce, Gillberg, 2011).

Developed based on the McMaster Model of Family Functioning (MMFF), the FAD consists of a sixty-item, four-point Likert scale, with the following response options: "strongly agree", "agree", "disagree", and "strongly disagree"(Epstein et al., 1983). The GF-12 of the FAD is a 12-item measure of overall family functioning. The FAD was created for use with individuals functioning on an eighth-grade reading level or higher and/or individuals who are 12 years of age or older. The primary purpose of the FAD is to assess individual family members'

perceptions of family functioning and identify areas of strength and weakness in families (Ryan, Epstein, Keitner, Miller, Bishop, 2005). The FAD identifies six dimensions of family functioning which exist on seven subscales (Ryan et al., 2005). In 2005, *Evaluating and Treating Families: The McMaster Approach* was written to assist clinicians and researchers in gaining a refined understanding of both the McMaster approach to family treatment and supplemental instruments developed for family appraisal, including the FAD.

In *Evaluating and Treating Families: The McMaster Approach*, Ryan, Epstein, Keitner, Miller, & Bishop (2005) report that there are 6-12 questions per dimension of family functioning, and questions are not listed in consecutive order by dimension. Participants are expected to self-report perceptions on each dimension of family functioning by indicating how well each of the statements on the measure describes their family. The subscales of the FAD (and thereby the McMaster dimensions of family functioning) are as follows: (a) problem-solving, (b) communication, (c) roles, (d) affective responsiveness, (e) affective involvement, (f) behavior control and (g) general functioning (Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007). The seventh subscale of the FAD is a “general functioning” subscale.

The Problem-Solving subscale in the McMaster Model of Family Functioning (MMFF) assesses “the family’s ability to resolve problems” or “any issues” that may be a threat to the capacity of the family to function (Epstein, Baldwin, Bishop, 1983, p.172). The *communication* subscale is intended to assess how information is exchanged within a family (Epstein et al. 1983, p.172). More specifically, the *Communication* subscale assesses whether or not “information is clearly and directly exchanged” within the family unit (Epstein, Baldwin, Bishop, 1983, p.172).

The *Roles* subscale is intended to appraise the family’s ability to “establish patterns of behavior” that include responsibilities in the areas of supporting the development of members,

maintaining and managing the systems within the family, nurturing, and providing adult sexual gratification (Epstein et al., 1983, p.172). The *Affective Responsiveness* subscale assesses the extent to which individual family members exhibit appropriate affect in response to various situations (Epstein et al., 1983). The *affektive Involvement* subscale evaluates the extent to which family members are interested in and place value on each other's activities (Epstein et al., 1983). The *Behavioral Control* subscale “assesses the way in which the family expresses and maintains behavioral standards” (Epstein, Baldwin, & Bishop, 1983, p.173). Finally, the *General Functioning* scale assesses the overall health and pathology of the family (Epstein, Baldwin, & Bishop, 1983). Completion of the FAD takes about 15-20 min (Tiffin, Pearce, Kaplan, Fundudis, & Parker, 2007).

Items of the FAD relate to both healthy and unhealthy functioning in each of six McMaster dimensions of family functioning. Examples of items that relate to healthy family functioning are: “we talk directly rather than through go-betweens” and “we try to think of different ways to solve problems” (Ryan et al., 2005). Items related to unhealthy family functioning include items such as “you can easily get away with breaking the rules” and “we sometimes run out of the things we need” (Ryan et al., 2005). As previously noted by the researcher, each statement regarding family functioning on the FAD is followed by four response options ranging from “strongly agree” to “strongly disagree”.

The FAD has been found to be both reliable and valid as Cronbach's *alpha* for each subscale of the FAD ranges from ($\alpha=.72$) to ($\alpha=.92$), indicating that the instrument exhibits acceptable to high reliability (Epstein, Baldwin, & Bishop, 1983, p.173). Zulkifli, Ishak, and Saad (2017) yielded overall reliability for the FAD of ($\alpha=.971$), indicating the measure is highly reliable with adult and adolescent populations. Zulkifli, Ishak, & Saad (2017) further noted that

reliability for each dimension subscale of the FAD ranged from “good” to “high” as indicated by the following Cronbach’s alpha values: Problem-solving ($\alpha = .834$), *communication* ($\alpha = .889$), the dimensions of the role ($\alpha = .908$), *affective responsiveness* ($\alpha = .886$), *affective involvement* dimension ($\alpha = .916$), and *behavior control* ($\alpha = .847$) and *general functionality* ($\alpha = .805$).

According to Ryan et al., 2005 all six family dimensions exhibit statistical validity and individual items that comprise each dimension exhibit face validity. Essentially, the validity of the FAD is well established.

The FAD can be scored manually, or an electronic scoring package can be purchased. Responses are coded using numerals 1-4 for positively worded items. For negatively worded items, responses are reverse scored, meaning the scale scoring runs in the opposite direction. A strength of the FAD is that participants do not have to complete all the items for each scale for the data to be used. According to Ryan et al. (2005), up to 40% of responses for each scale can be missing, and the reported data can still be used. If a scale is missing more than 40% of responses, the score for that scale is not calculated, and the dimension corresponding to that scale is considered missing (Ryan et al., 2005). An example of this use of a scale with missing data can be observed with the nine-item scale for the communication dimension. If a minimum of five items on the *communication* dimension subscale are completed, then the communication dimension score can be calculated (Ryan et al., 2005).

The general functioning subscale of the FAD (GF12) has also been validated as a single measure for characterizing overall family functioning (de Haan et al., 2015). The items on the general functioning subscale of the FAD have been found to be highly correlated with all six of the other dimensions, making it a reliable measure for assessing family functioning based on the McMaster Model of Family Functioning (Shek, 2001; Mansfield et al., 2015; Wo et al., 2018).

In completing the scoring process, the user must total the responses for each subscale and divide by the total number of responses given for that subscale to get the final subscale dimension score. Higher scores on individual dimensions indicate poorer functioning (Ryan et al., 2005). During administration, participants will complete an electronic version of the FAD generated by the researcher's university.

Food Security Status: Household Food Security Survey Short Form

Participant Food Security Status was assessed using the USDA Economic Research Service's Household Food Security Survey Module: 6-Item Short Form (Blumberg, Bialostosky, Hamilton, Briefel; 1999; Patton-López, López-Cevallos, Cancel-Tirado, & Vazquez, 2014). The original Household Food Security Survey Module (an 18-item measure) was developed by the Economic Research Service of the U.S. Department of Agriculture in 1995 in response to a report made by President Regan's Task Force on Food Assistance, which highlighted that there was a lack of data on hunger in the United States and in order to improve food assistance programs food security data was needed (Jones, Ngure, Pelto, & Young, 2013). The six-item short form of the HFSSM was developed by researchers at the National Center for Health Statistics in 1999 as an abbreviated version of the longer 18-Item Household Food Security (Blumberg, Bialotosky, Hamilton, Briefel, 1999). In the original research, the HFSSM correctly identified food insecurity in 97% of survey participants (Blumberg, et al., 1999) Patton-López, López-Cevallos, Cancel-Tirado, & Vazquez (2014) report that the internal consistency of the scale is .83, indicating that the scale has very good reliability. Although the USDA defines food security on a continuum as follows: High food security, marginal food security, low food security, and very low food security (U.S. Department of Agriculture, 2016), the short form of the Household Food Security Survey Module breaks the level of food accessibility into only two

categories, “food secure” and “food insecure” (Patton-López, López-Cevallos, Cancel-Tirado, & Vazquez, 2014). The researcher in the present study has opted to use the shorter 6-item measure of food security status to decrease the respondent burden anticipated by the use of the FAD. Though the scale is a brief version of the original 18-item measure, the scale maintains the ability to detect indicators of food insecurity with items that assess household food depletion and self-perceived nutritional adequacy of food (Blumberg et al., 1999).

Scale scores for the Household Food Security Survey Module: Six-item Short Form are based on a Rasch measurement model, which changes ordinal scales into interval scales for use in parametric statistical analyses (Granger, 2008). Each Rasch model interval scale score corresponds to a raw score. In the present study, the Rasch interval scale scores are not used when reporting data; rather, the corresponding raw scores are used. The corresponding raw scores are based on participant self-report of food security status. Raw scores range from 0-6. Food security status for each raw is defined as follows: a raw score of 0-1 indicates high or marginal (a food security raw score of 1) may be considered marginal food security, a raw score of 2-4 indicates low food security, a raw score 5-6 indicates very low food security. In the present study, the researcher has opted to deem a raw score of 1 as marginal food security.

Psychological Well-Being: Patient Health Questionnaire

The Patient Health Questionnaire-4 (PHQ-4) developed by Kroenke, Spitzer, Williams, & Lowe (2009) was used to assess psychological well-being. The PHQ-4 is an “ultra-brief” four-item self-report inventory created to detect depression and anxiety (Kroenke, Spitzer, Williams, & Lowe, 2009). Depression and anxiety are the most prevalent psychiatric disorders and are often comorbid. For this reason, the PHQ-4 was created (Kroenke, Spitzer, Williams, & Lowe, 2009). The purpose of the PHQ-4 is to allow busy medical and mental health clinicians the

ability to briefly and accurately assess depression and anxiety symptomatology (Kroenke, Spitzer, Williams, Lowe, (2009).

Items on the PHQ-4 were taken from two assessments previously created by Kroenke, Spitzer, Williams (2003) and Spitzer, Kroenke, Williams, & Lowe (2006). The PHQ-4 consists of two subscales: a depression subscale and an anxiety subscale. The two anxiety subscale questions on the PHQ-4 were taken from the Generalized Anxiety Disorder-7 (GAD-7), a seven-item measure of anxiety used by healthcare providers to briefly assess anxiety (Spitzer, Kroenke, Williams, & Lowe, 2006). The two depression subscale questions on the PHQ-4 were taken from the PHQ-2, a two-item depression assessment used by healthcare providers to briefly assess depression (Kroenke, Spitzer, Williams, 2003). A factor analysis indicated that the four items on the PHQ-4 account for 84% of the total variance in a validation study (Kroenke, Spitzer, Williams, & Lowe, 2009).

The PHQ-4 begins with one stem question related to respondents' frequency of experiencing symptoms, "in the past two weeks", and consists of four items describing depression and anxiety symptoms. The stem question read, "How many times in the past two weeks have you been bothered by the following problems". Sample items from the PHQ-4 include "Feeling nervous, anxious, or on edge" and "Little interest or pleasure in doing things". Responses on the PHQ-4 are rated on a four-point Likert-type scale. The Likert-type scale ranges from 0, "not at all", to 4, "nearly every day". The scoring for the scale ranges from 0-12, with categories of psychological distress as follows: "none," corresponding with a raw score of 0-2, "mild," corresponding with a raw score of 3-5, "moderate," corresponding with a raw score between 6-8, and "severe" corresponding with raw scores from 9-12. Scores ≥ 3 on the

depression subscale indicate that depression is present. Scores ≥ 3 on the anxiety subscale suggest that anxiety is present in the patient.

Validation of the PHQ-4 revealed that increasing PHQ-4 scores were related to decreasing functionality in participants (Kroenke, Spitzer, Williams, & Lowe, 2009). Construct validity was reflected during validation when rising PHQ-4 scores were consistently “associated with multiple domains of functional impairment” (Kroenke, Spitzer, Williams, & Lowe, 2009, p. 618). Internal reliability (Cronbach’s α) for the PHQ-4 is very good ($\alpha=.85$). A copy of the Patient Health Questionnaire-4 can be found in (Appendix E).

Data Collection

The following procedures were followed to complete the present research study. Before initiating the study, the researcher applied for approval to conduct the research from the Institutional Review Board of the researcher's university. Institutional Review Board approval letters are included in Appendix A. The researcher used non-probability sampling methods, exponential non-discriminative snowball sampling, and convenience sampling to recruit participants for this study (Etikan, Alkassim, Abubakar, 2016; Salkind, 2012). Participants were recruited using a research recruitment letter, which can be found in Appendix B. The research recruitment letter was sent out electronically with the survey to various social networking sites, list serves, food pantry directors, and outreach coordinators. The list serves included but was not limited to, the Counselor Education and Supervision Network (CESNET), Facebook, and Instagram. The researcher also recruited participants from food pantries in the Gwinnett County metropolitan areas, including, The Southeast Gwinnett Cooperative Ministry; the rationale for focusing on the Gwinnett County area for participant recruitment was the fact that the area has a

rising food insecure population, data collection in this area could be beneficial for families seeking mental health treatment in the area (Dalbey, 2019).

A link to the Survey Monkey-supported electronic version of the study survey followed the research recruitment letter. Next, participants were asked to indicate their voluntary consent to participate in the study by clicking a button identified in the informed consent portion of the survey. A copy of the Informed consent can be found in Appendix C.

Participants will be informed via the recruitment letter that confidentiality will be maintained with all data collected. Participants were requested to voluntarily indicate their consent to participate in the study by clicking a button at the beginning of the survey. Data collection occurred over the course of fourteen days. No incentives were offered for study participation. Recruiting participants online and from local food pantries ensures that the sample of participants will consist of both food-insecure and food-secure individuals allowing for comparison of the data collected for each group. Collecting data online also allows for geographical diversity among research participants.

Data Analysis

Relationships between variables in research data are rarely univariate for this reason, the researchers examined the relationship between two predictor variables (food security status and parent psychological well-being) and one criterion variable (Steinberg, 2011). The present study examined the relationship between food security status/level, psychological well-being, and family functioning.

Descriptive Data Analysis

All data in this study were analyzed using the Statistical Package for Social Sciences (SPSS) version 27. Data collected from the demographic survey will be analyzed using descriptive statistics. Means, medians, and modes will be collected and reported. Descriptive data are represented in frequency tables and graphs.

Graphs and tables are used to illustrate the results of descriptive analyses. Descriptive statistics were also analyzed for each variable. Frequencies, including percentages and means where applicable, were analyzed and reported.

Inferential Data Analysis

A simultaneous multiple regression was used during analysis to determine if food security status and parent psychological well-being are predictors of general family functioning, addressing research question one. The simultaneous multiple regression will be used to determine which variables (food security status or psychological well-being) accounted for most of the observed variance in the analysis. Food insecurity and food security were broken into three groups to address research question 1B (high/marginal, low, and very low food security. Beta weights will be standardized and interpreted. Standardized beta weights will be used because the measurement scales of the predictor variables are different; therefore, standardization may assist with accurately determining the effect size of variables. Beta weight interpretation will address research question 1A (which predictor variable is weighted more heavily in the final regression model). The linear model yielded by the multiple regression analysis addresses research questions. The level of significance, P-value, during the analysis will be set at .05. The researcher will report observed correlation coefficient values, R , R^2 , and the adjusted R^2 to indicate the strength of the relationship between the predictors (food insecurity and

psychological well-being) and the criterion (family functioning). SPSS regression coefficient output tables and a model summary output table are also presented.

One-way between groups Analysis of Variance tests will be used to address research question two. Research question two asks whether there are existing differences in family functioning between or among respondents reporting food security and food insecurity. If statistical significance is found in the F statistic for the research question, two a post hoc test will be applied. Tukey HSD post hoc test will be used to determine the level of food security responsible for the statistically significant F. SPSS ANOVA output tables will be provided.

Summary

Chapter three of this research study serves as a detailed overview of the methodology used to complete this study. The chapter includes thorough descriptions of the study's purpose, research questions, hypotheses, research design, sample description, instrumentation, data collection methods, and data analysis. The primary purpose of the present study is to answer the research questions in response to the deficit in existing research addressing food security status and psychological well-being and the relationship to family functioning.

CHAPTER 4

RESULTS OF DATA ANALYSIS

This study investigated the relationship between food security status, psychological well-being, and family functioning. Food insecurity is a pervasive public health matter that affects millions of families and individuals in the U.S. In past research, food insecurity has been linked to overall stress levels, lower academic achievement, and poor health outcomes. This chapter will provide an in-depth overview of the data analysis conducted and an interpretation of the analyses. The results of the data analysis will be presented in the following subsections: descriptive statistics, inferential statistics, hypotheses 1, hypothesis 1A, hypotheses 1B, assumptions of multiple regression, and summary.

The results of this study are presented via quantitative analyses of the data collected to answer the primary research question, do food security status and psychological well-being predict family functioning, and the two consecutive sub-questions, which of the two variables is more weighted in the final regression model and do differences exist between, or among households reporting food security and food insecurity. All analyses were performed using IBM SPSS Statistics (version 27) predictive analytic software.

Descriptive Statistics

Descriptive analyses were conducted on the sample, including mean, median, mode, and standard deviation. This section presents descriptive statistics for the initial five demographic items assessed: age, ethnicity, household size, marital status, and food assistance use.

Secondarily, descriptive analyses were also conducted on this study's two discrete independent variables, psychological well-being and food security status, and the continuous dependent variable, family functioning. The total number of initial survey participants was one-hundred

forty-three. Twenty-three (16.0%) cases were eliminated from the initial participant pool due to non-completion or missing responses. One (0.69%) case was eliminated due to a response error. After exclusions, the sample size was 119, 83.2% of the original participant sample. Participants were recruited using non-probability sampling methods, exponential non-discriminative snowball sampling, and convenience sampling. All participants included in the final population sample completed all survey items.

Age and Ethnicity

Participants in this study ranged in age from 18-74 years old. However, most participants, 51 (42.9%), were between the ages of 35-44. The dispersion of age groups among the population sample was as follows: 16 participants (13.4%) were between ages 18-24, 18 participants (15.1%) were between ages 25-34, 15 (12.6%) participants were between ages 45-54, 14 participants (11.8%) were between ages 55-64, and five participants (4.2%) were between ages 65-74.

The study sample comprised individuals from various ethnic backgrounds, including black or African American, White or Caucasian, Hispanic or Latino, and Asian or Pacific Islander. Black or African Americans were the predominant ethnic group in the sample, with a total of 86 or (72.3%) identifying as Black or African American. White or Caucasian participants comprise the second largest ethnic group, with 19 (16.0%) participants identifying as White. Ten participants (8.4%) in the sample identified as Hispanic or Latino. Four participants (3.4%) identified as Pacific Islanders. An overview of the age and ethnicity dispersion among study participants can be found in *Table 1* and *Table 2*.

Table 1*Participant Age*

	N	%
18-24 years old	16	13.4%
25-34 years old	18	15.1%
35-44 years old	51	42.9%
45-54 years old	15	12.6%
55-64 years old	14	11.8%
65-74 years old	5	4.2%

Table 2*Ethnicity*

	N	%
White	19	16.0%
Hispanic or Latino	10	8.4%
Black or African American	86	72.3%
Asian / Pacific Islander	4	3.4%

Household Size and Marital Status

The population sample for this study consisted of households with a range of sizes, from 1-2 individuals to 7-8 individuals. Results indicated that the most common household size was 1-2 individuals, with 44 (37.0%) households falling into this category. Thirty-six households reported having 2-3 individuals, accounting for 30.3% of households in the sample. Larger households were less common among this sample of participants, with 26 (21.8%) of households

having 4-5 individuals, nine (7.6%) households having 5-6 individuals, and four (3.4%) households having 7-8 individuals. This data suggests that smaller households are more prevalent than larger households in this population. *Table 3* compares the summary statistics for household size.

Turning now to marital status reported, most study participants, 52 (43.7%), reported being married or in a domestic partnership. Forty-seven (39.5%) participants reported being single/never married. The divorce and separation rate among participants was notably high, with 17 participants (14.3%) reporting divorce and two (1.7%) participants reporting separation. *Table 4* presents an overview of marital status among study participants.

Table 3

Household Size

	N	%
1-2	44	37.0%
2-3	36	30.3%
4-5	26	21.8%
5-6	9	7.6%
7-8	4	3.4%

Table 4

Marital Status

	N	%
Single, never married	47	39.5%
Married or domestic partnership	52	43.7%
Widowed	1	0.8%
Divorced	17	14.3%
Separated	2	1.7%

Food Security Status, Psychological Well-being, and Family Functioning

Descriptive data were analyzed for each variable. Food security scores ranged from 0 to 6, with 0-1 indicating high to marginal food security (food security) and 2-6 indicating low to very low food security (food insecurity). The mean score for food insecurity was 2.04, indicating that, on average, individuals in the sample population were mildly food insecure.

Psychological well-being scores were reported using the PHQ-4, a measure of perceived psychological distress. Psychological distress scores could range from 0-12, with 0-2 indicating no psychological distress, 3-5 indicating mild distress, 6-8 indicating moderate distress, and 9-12 indicating severe distress, respectively. The mean psychological distress score for the sample was 3.9, suggesting that, on average, the individuals in the population were experiencing mild psychological distress. It is relevant to note here that the standard deviation for psychological distress scores was 3.44. Therefore, the scores were widely spread, indicating high variability in perceived psychological distress among the sample. Psychological Distress scores are indicated in *Table 5*.

Table 5

Psychological Distress Descriptive Statistics

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mild	28	23.5	23.5	23.5
	Moderate	28	23.5	23.5	47.1
	None	52	43.7	43.7	90.8
	Severe	11	9.2	9.2	100.0
	Total	119	100.0	100.0	

Family functioning scores ranged from 0-4, with scores of two and above indicating problematic functioning and scores below two indicating healthy functioning. A score of 4 indicated unhealthy functioning. The mean family functioning score for this population was 1.94. Though within a healthy range, the family functioning mean score suggests that on-average individuals in the sample perceived their family functioning as nearly problematic. *Table 6* presents a summary of the descriptive statistics for food security status, psychological well-being, and family functioning.

Table 6

Independent and Dependent Variable Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FamilyFunctioningScore	119	1.17	3.25	1.9447	.48449
FoodSecuritySum	119	.00	6.00	2.0420	2.15656
PsychWellbeingTotals	119	.00	12.00	3.9580	3.44545
Valid N (listwise)	119				

Inferential Statistics

Inferential analyses were conducted for both discrete independent variables, psychological well-being and food security status, and the continuous dependent variable, family functioning. Multiple linear regression analyses were run to determine the relationship between family functioning, psychological well-being, and food security status. Categorical variables in a multiple regression must be recoded before the multiple regression can yield interpretable results Sundström, S. (2010). Before the initial regression analyses, the statistical procedure in this

investigation applied the equation $k-1$, where k is the number of levels of the dependent variable food security status, to determine the number of dummy variables needed for analyses. Yielding, $2(\text{marginal, low, very low food security}) - 1 = 1$ dummy variable. The categorical dependent variable food security status was recoded into the corresponding dummy variable FOODINSec_DUM. Here in the food, the value for food-insecure individuals was equal to 1, and the value for food-secure individuals was equal to 0.

Research Question I and Hypotheses I

The present study aimed to answer the following research question: Do food security status and psychological well-being predict family functioning? The corresponding alternative hypothesis proposed in this study stated that food security status and psychological well-being are predictors of family functioning. The null hypothesis for research question 1 asserts that food security status and family functioning do not predict family functioning. A two-step multiple regression model was applied to determine how much of the variance in the dependent variable family functioning could be accounted for by food security status and psychological well-being. The significance level was set at $p < .05$. *Table 7* provides a model summary.

Food security status was applied as a potential predictor of family functioning in Model one. An R-squared value of (.128) was yielded in this model, indicating that 12.8% of the variance in family functioning can be accounted for by food security status. The F-change statistic is 17.136, and a significance level of $<.001$. The R-squared change in model one is (.128), indicating that adding the predictor, food security status, significantly improved the model.

Model two is also presented in *Table 7*. Model two includes both predictor variables, food security status, and psychological well-being. A larger portion of the variance (16.9%) is

accounted for in model two, indicating psychological well-being and food security status together account for more of the variance than food security status alone. The R-square change statistic in model two is (0.41), indicating that from model one to model two, the change when adding an additional predictor, psychological well-being, is less significant than when adding the first predictor, food security status. Based on the results of the multiple linear regression analyses, the null hypothesis has been rejected.

Table 7

Model Summary

				Change Statistics				
R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
.357 ^a	.128	.120	.45442	.128	17.136	1	117	<.001
.411 ^b	.169	.155	.44547	.041	5.747	1	116	.018

a. Predictors: (Constant), FoodINSec_DUM

b. Predictors: (Constant), FoodINSec_DUM, PsychWellbeingTotals

c. Dependent Variable: FamilyFunctioningScore

The overall regression model was significant, $F(2,116) = 11.78, p < .001, R^2 = .169$.

Psychological well-being and food security status predict family functioning significantly when taken together. It is important to note that the residual total in the ANOVA is 23.019, indicating that there are unaccounted-for variables impacting the family functioning variance. *Table 8* presents an overview of the overall model. The Q-Q plot in *Figure 1* for family functioning shows that the data are normally distributed.

Figure 1

Normal Q Plot

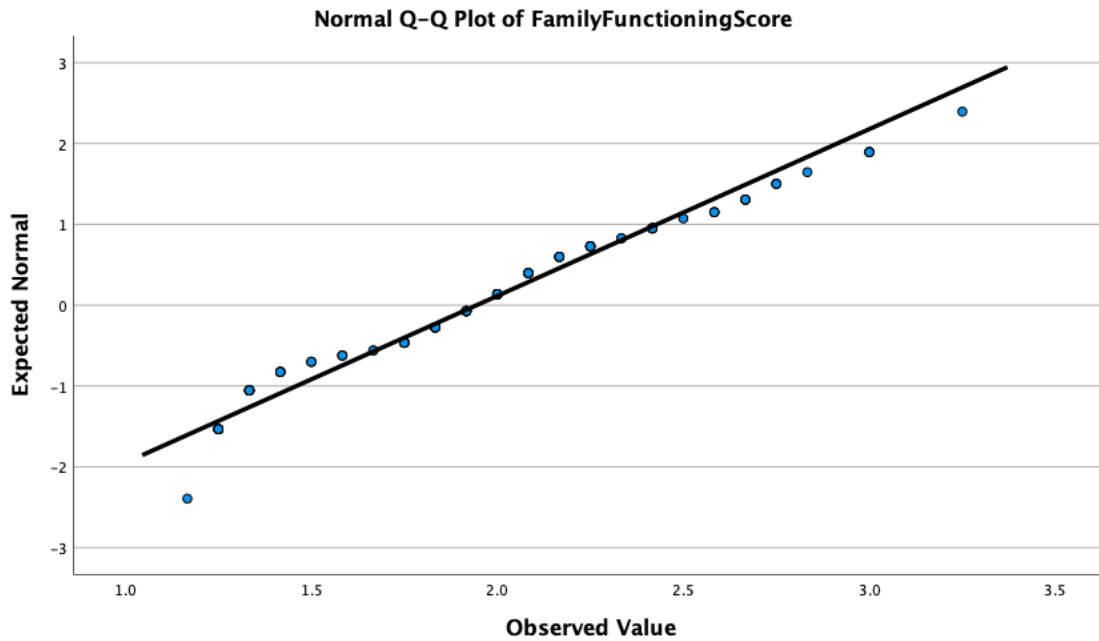


Table 8

Research Question 1 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.538	1	3.538	17.136	<.001 ^b
	Residual	24.160	117	.206		
	Total	27.698	118			
2	Regression	4.679	2	2.339	11.789	<.001 ^c
	Residual	23.019	116	.198		
	Total	27.698	118			

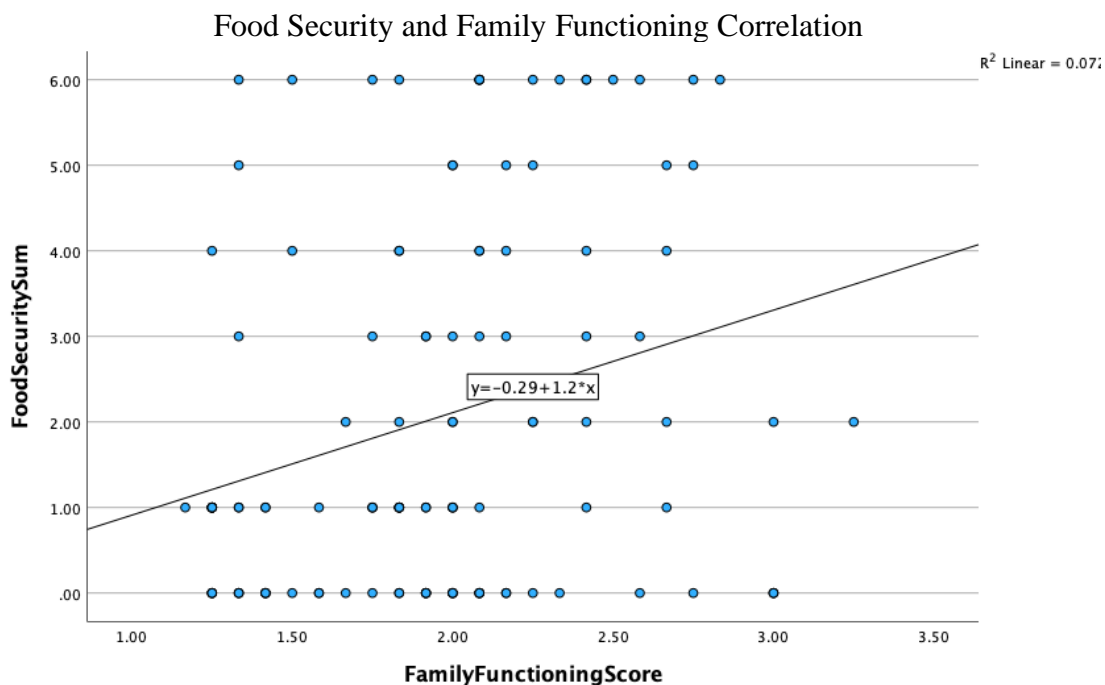
a. Dependent Variable: FamilyFunctioningScore

Relationship Among Variables

Correlations were conducted to determine the existence of a linear relationship between the criterion variable, family functioning and each predictor variable, food security status, and psychological wellbeing. *Figure 2* demonstrated the relationship between food security status and family functioning. The linear equation $y = -0.29 + 1.2 * x$ is observed in *Figure 2* indicating that when food security status is the only variable considered, there is a significant relationship positive relationship with family functioning. More specifically the r value for food security status is statistically significant at the $p < 0.01$, ($r = 0.269$, $p < 0.01$). As food security scores increase, (indicating lower food security) family functioning scores also increase indicating poorer family functioning.

Figure 2

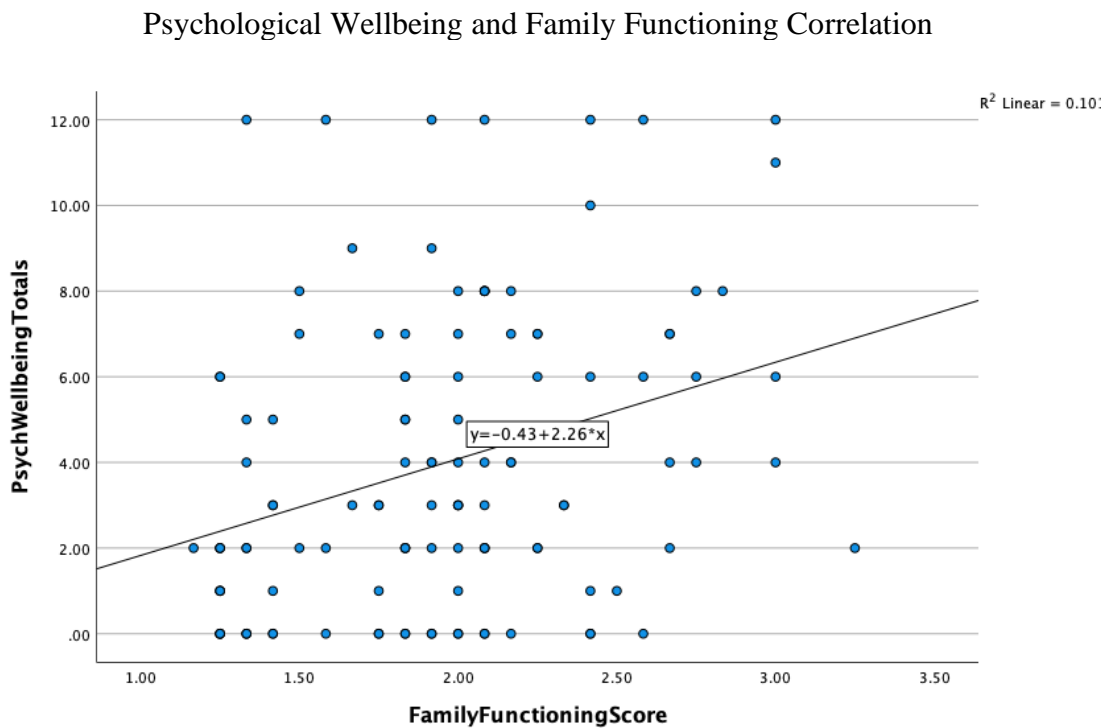
Food Security and Family Functioning



The relationship between psychological well-being and food insecurity is observed in *figure 3*. Psychological well-being score and family functioning score bivariate Pearson correlation yielded a statistically significant correlational value of $r = .317$ at $p < 0.01$ ($r = 0.317, p < 0.01$), indicating a positive correlational relationship. As psychological well-being scores increase (indicating greater psychological distress), family functioning scores also increase (indicating poorer family functioning).

Figure 3

Psychological Wellbeing and Family Functioning Correlation



Correlations were also conducted between the two independent variables, psychological wellbeing, and food security. A significant positive correlation was observed between food

security status and family psychological well-being. The strongest correlation observed in the investigation, $r = .380$, $p < 0.01$, was between food security status and psychological wellbeing. The r value here indicates that as food security scores increase psychological wellbeing scores also increase. This data indicates that for this sample as food insecurity increases, we can expect to observe an increase in psychological distress. Table 8 gives an overview of all correlations observed.

Table 9

Correlations

		Food Security Sum	Family Functioning	Psych Wellbeing Totals
Food Security Sum	Pearson	1	.269**	.380**
	Correlation			
	Sig. (2-tailed)		.003	<.001
	N	119	119	119
Family Functioning	Pearson	.269**	1	.317**
	Correlation			
	Sig. (2-tailed)	.003		<.001
	N	119	119	119
Psych Wellbeing Totals	Pearson	.380**	.317**	1
	Correlation			
	Sig. (2-tailed)	<.001	<.001	
	N	119	119	119

** . Correlation is significant at the 0.01 level (2-tailed).

Research Question 1A and Hypothesis 1A

Follow-up research inquiry 1A explored which independent variable, psychological well-being, or food security status, was weighted more heavily in the final regression model.

Answering this question required beta weights to be examined. The null hypothesis for RQ1A was stated as follows; differences do not exist between or among families reporting high,

marginal, low, and very low food security. *Table 10* provides an illustration of the beta weights observed relative to the significance of each dependent variable.

Both food security status and psychological well-being are significant in the final model. Food insecurity had a significance of .003, while psychological well-being has a significance of (.018). The standardized beta weight of food security status, .357, indicates a positive relationship between food security status and family functioning. This is statistically significant at the $p < .001$ level. For every increase in one unit in food insecurity, family dysfunction increases by 357. The standardized coefficient for psychological well-being is .217, indicating statistical significance at the $p < .05$ level.

Table 10

Research Question 1A Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part
(Constant)	1.795	.055		32.58	<.001	1.686	1.904			
FoodINSec_DUM	.348	.084	.357	4.140	<.001	.182	.515	.357	.357	.357
(Constant)	1.707	.065		26.08	<.001	1.577	1.836			
FoodINSec_DUM	.273	.088	.280	3.088	.003	.098	.448	.357	.276	.261
PsychWell-beingTotals	.031	.013	.217	2.397	.018	.005	.056	.317	.217	.203

a. Dependent Variable: Family Functioning

A decrease is observed from model one to model two in the standardized coefficient for food insecurity to .276. Food security status is weighted more heavily or has a stronger impact on family functioning. It is important to note that these data do indicate that both variables, psychological well-being, and food security have an effect on family functioning, although the effect is greater for food security status. The results indicate that the researcher must reject the null hypothesis.

Research Question 1 B

The final research question in this investigation examined whether differences in family functioning exist between or among households reporting high food security, marginal food security, low food security, and very low food security. It is important to note here that high and marginal food security are considered categorized as food secure. Low to Very low food security is categorized as food insecure. A One-Way Analysis of Variance test was performed to answer the research question here. *Table 11* illustrates the descriptive statistics for this question.

Table 11

Food Security Status

	N	%
High/Mar	68	57.1%
Low	28	23.5%
Very Low	23	19.3%

Considering each level of the food security status, the participants reporting "High/Marginal" food security have the lowest mean score (1.8889), indicating the healthiest level of family functioning among the sample. Households reporting "Low" food security have the highest mean score (2.3333), indicating more problematic functioning. Family functioning

scores range from 1-4, with scores of two or above indicating problematic functioning unhealthy/problematic functioning is represented by the highest score of 4. The "Very Low" level of food security has a mean score of 2.1667, and the "High/Marginal" level has a mean score of 1.6695.

The One-Way ANOVA results suggest significant differences in Family Functioning Scores across groups, with the Low and Very Low groups having higher mean scores (poorer functioning) than the High/Marginal groups. *Table 12* and *Table 13* illustrate the data yielded from the one-way ANOVA. These data show that differences exist between households reporting low, very low, marginal, and high food security. *Figure 4* shows the difference in the estimated marginal means for each group. Comparatively, although there are group differences in family functioning observed, the greatest difference was observed between the overall food secure group (high-marginal food security) and the food insecure (low to very low). The family functioning of the two subgroups within the food insecure group was relatively similar.

Table 12

Tests of Homogeneity of Variances

		Levene			
		Statistic	df1	df2	Sig.
Family Functioning	Based on Mean	.432	6	112	.856
	Based on Median	.387	6	112	.886
	Based on Median and with adjusted df	.387	6	104.591	.886
	Based on trimmed mean	.431	6	112	.857

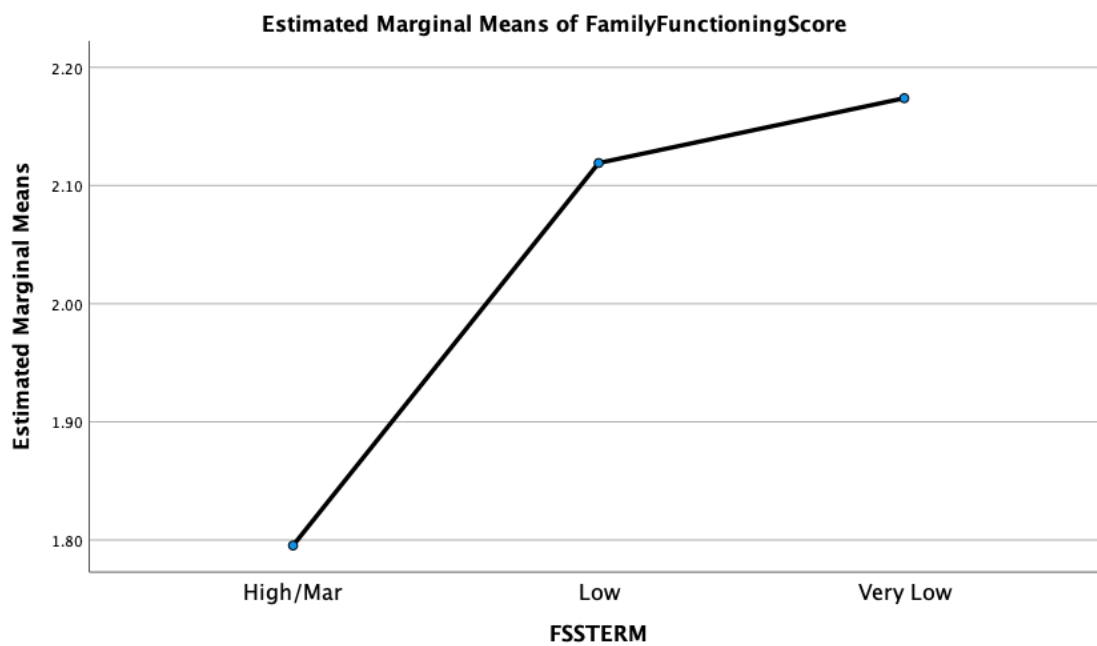
Table 13

Family Functioning ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.098	6	.850	4.210	<.001
Within Groups	22.601	112	.202		
Total	27.698	118			

Figure 4

Estimated Marginal Means



Summary

This chapter's focus was to present the results of the statistical analyses performed in this investigation. Statistical procedures were defined throughout the chapter. The methods of statistical analyses used, including (multiple regression, analyzing descriptive, one-way analyses of variance) yielded statistical significance on all research questions. A discussion of this data is provided in the following chapter.

CHAPTER 5

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The primary objective of this study was to examine the relationship between food security status and psychological well-being in family functioning. More specifically, this study sought to examine food security status and psychological well-being as potential predictors of family functioning. The study included a sample population of both food-secure and food-insecure individuals. An online survey was created by combining four instruments.

The instruments used to collect data included a five-item demographic survey created by the principal investigator. A measure of psychological distress, Patient Health Questionnaire 4, was used to assess psychological well-being. Family functioning, the outcome variable in this research study, was assessed using the General Functioning Scale of the McMaster Family Assessment Device. Food security status was evaluated using the U.S. Department of Agriculture Household Food Security Survey Module: Six Item Short form. Three research questions were addressed, one primary research question, and two sub-questions were addressed in the investigation. This chapter will provide a discussion of the findings of this research study, the implications for clinical practice and theory building, and recommendations for future research.

The Map the Meal Gap study conducted by the U.S. Department of Agriculture provides data on food insecurity in every American congressional district (Hake, Engelhard, & Dewey, 2022). The 2022 Map the Meal Gap report highlighted that food insecurity increased in 2022 especially among populations of color increased in 2020 (Hake, Engelhard, & Dewey, 2022). This data on food insecurity has significant implications for clinical practice in marriage and

family therapy and individual mental health treatment. The present study contributes to scholarship in treating socioeconomically diverse families.

Review of Findings

Descriptive statistics were employed to provide an overview of the population sample. The study began with 143 participants and concluded with 119 participants after 121 participants were dropped from the research study due to survey non-completion.

The age range of the sample population was 18-74 years old. The majority of participants, 51 (42.9%), were between the ages of 35-44. Sixteen participants (13.4%) were between ages 18-24, 18 participants (15.1%) were between ages 25-34, 15 (12.6%) participants were between ages 45-54, 14 participants (11.8%) were between ages 55-64, and five participants (4.2%) were between ages 65-74.

The sample consisted of African Americans, White or Caucasians, Hispanic or Latinos, and Asians or Pacific Islanders. African Americans were the largest race in the sample, with a total of 86 (72.3%) identifying as Black or African American. Nineteen participants (16.0%) identified as White or Caucasian. Ten participants (8.4%) in the sample identified as Hispanic or Latino. Four participants (3.4%) identified as Pacific Islanders.

The population sample for this study consisted of households with 1-8 individuals. Rehe Most households in the study consist of 1-2 individuals, with 44 (37.0%). Thirty-six households reported having 2-3 individuals, accounting for 30.3% of households in the sample. Larger households were less common among this sample of participants, with 26 (21.8%) of households having 4-5 individuals, nine (7.6%) households having 5-6 individuals, and four (3.4%) households having 7-8 individuals.

The majority of study participants, 52 (43.7%), reported being married or in a domestic partnership. Forty-seven (39.5%) participants reported being single/never married. The divorce and separation rate among participants was notably high, with 17 participants (14.3%) reporting divorce and two (1.7%) participants reporting separation. This demographic data suggests that there may be undetected variables contributing to the dysfunction in spousal relationships among the sample population. This data suggests that there may be underlying factors contributing to the dysfunction in spousal relationships. Simultaneously, the high marriage rate in the sample suggests a need for marital and potentially family support services in the population.

The occurrence of food insecurity versus food security among the sample population varied, with 42.9 % (51 participants) of the sample population reporting food insecurity and 57.1 % (68 participants) of the sample population reporting food security. The mean food security status score of the sample was 2.0, indicating that, on average, individuals in the sample population fall within the “low” food security range.

Family functioning among the population was about equally split, with 50.4% (60 individuals) of participants reporting healthy functioning and 49.6% (59 individuals) reporting problematic functioning. The mean family functioning score for the population was 1.94. Recalling that family functioning scores of two and above indicate problematic functioning; it is significant to highlight that family functioning for the sample falls on the borderline between healthy and unhealthy functioning.

Most of the sample population reported no psychological distress. The mean psychological distress score for the population was $M=3.9$, indicating that, on average, individuals in the population at least experienced mild psychological distress. The mean food

security status score of the sample was 2.0, indicating that, on average, individuals in the sample population fall within the “low” food security range.

Hypothesis 1

The null hypothesis for research question one stated that there is no relationship between food security, psychological well-being, and family functioning. Significant positive relationships were observed between each predictor variable (food security status and psychological well-being) and the criterion variable, family functioning. The correlational data presented in chapter 4 of this investigation is compelling in highlighting the systemic impact of food insecurity on family functionality. Food security alone accounted for roughly about 13% (.128) of the total variance in family functioning. The R squared value = .169 in the regression model applied, indicating that roughly 17% of the total variance in family functioning can be accounted by food security status and psychological well-being. The r squared change value only increases by 4% (.041) in the regression model when going from running the model with food security as to only variable to running the model with the added psychological wellbeing variable. The null hypothesis was rejected. A One Way ANOVA was employed to answer results suggesting significant differences in Family Functioning Scores across groups, with the Low and Very Low groups having higher mean scores (poorer functioning) than the High/Marginal groups.

Hypothesis 1A

A more surprising finding was observed when each dependent variable was weighed to determine which had the greater impact on perceived family functioning. The analyses result indicate that for this population sample, the occurrence of food insecurity has a greater impact on family functioning than psychological well-being. This finding indicates that there is a relationship between food security, family functioning, and psychological well-being, with

higher levels of food security being associated with both better family functioning and higher levels of psychological well-being. This brings into question the prioritization of symptoms and interventions during the treatment process. Moreover, these findings show that psychological distress alone is a weaker stressor than food insecurity alone. Essentially, when families have enough food to eat, they tend to function better, and the individuals within them tend to experience better psychological well-being. Overall, when simultaneously considering food security status and family functioning, the greater or stronger predictor of family functioning is food security status.

Discussion

The rationale for this research study was based on Urie Bronfenbrenner's Ecological systems theory which emphasizes the influence of social systems on individuals and families. Ecological systems theory purports that extrafamilial conditions influence intrafamilial processes (Bronfenbrenner, 1986). This study introduced food security status and psychological well-being as potential ecological correlates impacting family functioning. A thorough review of the literature indicated that there are presently no empirical investigations examining food security status as a factor impacting family functioning. Additionally, during the literature review, the researcher found no investigations that considered psychological well-being and food security status to see which had the stronger impact on family functioning.

The correlational data presented in chapter 4 of this investigation is compelling in highlighting the systemic impact of food insecurity on family functionality. The significant positive relationship between food security status and family functioning allows for clinical projections to be made regarding functionality based merely on these variables. As the family's food security status declines, it can be inferred that the family's perceived functionality will

decline. For more clarity, the data in this examination suggest that as individuals experience more psychological distress, the more problematic the family functioning. Food security status is heavier.

Although the correlation between food security and psychological well-being was not addressed by any research question, it is significant to note that the correlations observed in this study also provide further empirical support for existing data on food insecurity and mental health. The decline in an individual's food security status points to an increase in psychological distress. Jackson, Chilton, Johnson, & Vaugh, 2019 cite food insecurity as an adverse childhood experience the data in the present investigation makes implicated food insecurity as an adverse adulthood experience related to psychological distress.

The relatively high rate of divorce and separation in the sample suggests a need for support services for families. This may include marriage and family therapy, individual psychotherapy, financial literacy support, and better and more accessible food support options.

Limitations

A weakness of the research design was that the population exclusion criteria limited the scope of the study. Excluding institutionalized individuals, minors, and single-person households diminished the representativeness of the population sample. The USDA has indicated that the Household Food Security Survey Short Form is less precise and less reliable than the more comprehensive 18-Item Household Food security survey (Bickel, Nord, Price, Hamilton, Cook, 2000; Coleman-Jensen, Rabbit, Hales, & Gregory, 2022).

More than half of the survey participants (57%) were between the age of 35-44. The data collected may have presented higher or lower functioning levels if the sample population age group was higher or lower. The geographical location of sample participants may also be a

variable impacting the study outcomes. A portion of the sample was collected in person at a food pantry in Gwinnett County Georgia. This may have had an impact on household size, marital status, and socioeconomic status of the study participants.

This study provided only minimal diversification among the study sample. Most of the participants were African American and or Caucasian. Varying the ethnic backgrounds of study participants may have also varied the results of the three variables, especially food insecurity family sociological wellbeing and family functioning. Data was not collected on participant gender which may be a residual variable accounting for perceived family functioning and reports of psychological distress.

Each of the measures used in the study is a limitation to the overall process of evaluating the variables investigated. A barrier to obtaining comprehensive data is that short forms of instruments were used to assess variables. For example, the Household Food Security Survey short form fails to assess the most severe forms of food insecurity. Hunger is not assessed by the short form, which excludes the portion of the population that is critically food insecure. The full McMaster Family Assessment device assesses family functioning across several

Theoretical and Practical Implications

The results of this study provide further empirical support for the premise presented by Urie Bronfenbrenner that individuals and family systems are impacted by extra-familial circumstances, which may have adverse on intrafamilial processes. The results of this study also provide further empirical support for Abraham Maslow's hierarchy of needs. The correlations observed between psychological well-being and family functioning and food security status and family functioning highlight the challenges that individuals may face if physiological needs are not supremely met.

Taking this into account, clinical practitioners can infer that it is necessary to provide a thorough assessment of food security status at the outset of clinical treatment for both individuals and families. Providing a thorough food security assessment at the outset of treatment may strengthen clinical outcomes. For example, a clinician treating an individual assessed for food insecurity and found to have very low food security may begin treatment by providing referrals for family and marriage counseling alongside the individual psychotherapeutic treatment. The data in this study support the need for this type of clinical treatment and referral to become standard operating processes in clinical practice.

This study also implicates food insecurity as a potential barrier to decreasing psychological distress. The term food security and food insecurity has only been used by the USDA's Economic Research Service since 1995, This makes the concept of food insecurity a fairly new concept in contemporary western society. Although hunger has been a focus of previous mental health research, there has been little focus on food insecurity, a less pervasive but more widespread problem impacting contemporary western society. With this as a consideration, the findings of the present research study suggest a need for new mental health counseling theories, specifically for use with populations That are deprived of basic needs like food security or housing security. Developing new theories that give specific attention to specific socioeconomic like food insecurity can assist with counseling efficacy.

Future research

Further studies that explore the variables analyzed in this study will need to be conducted in the future. There are no other studies known to this researcher that consider food security status, psychological well-being, and family functioning simultaneously. More studies are needed to determine the generalizability of the results of this study. Determining the

generalizability of the study results holds relevance for clinical practice and future theory development.

The impact of the COVID-19 pandemic on food insecurity will also need to be researched in future investigations. The 2020 international pandemic has undoubtedly adjusted the focus on food insecurity in both the public and private sectors. However, no studies are known to the clinician that take into account the impact of the pandemic on family functioning and parents psychological well-being. Further, there is much to be considered when comparing pre-pandemic and post-pandemic.

Additional mental health outcomes impacted by food security status are another under researched area related to the variables examined in the present. This study evaluates the depression and anxiety levels associated with food security status. Conditions, including substance abuse, eating disorders, and traumatic stress, need to be assessed for potential association with food security status. Future research could investigate the demographic characteristics of households of different sizes, as well as the cultural and economic factors that influence household size.

Additionally, the role of social and financial support in mitigating food insecurity is needed to understand how different forms of social support and financial support influence food insecurity and mental health outcomes. The effectiveness of food assistance programs in reducing food insecurity will need to be explored in future examinations. While there is some research on the effectiveness of food assistance programs, such as SNAP (Supplemental Nutrition Assistance Program), more research is needed to understand how these programs can be optimized to better meet the needs of food-insecure individuals and families. More specifically, researchers may need to consider pairing participation in food assistance programs

with reports of psychological well-being to determine the best way to modify programming to benefit families. Overall, there remains much to be learned about food insecurity and its impact on family functioning, and continued research is needed to better understand this complex issue and develop effective solutions.

Summary

This research examination was conducted to share empirical light on food security status and psychological well-being as potential predictors of family functioning. The statistically significant results of this study indicate that both psychological well-being and food insecurity are predictors of Family functioning. Further, the data in the present study suggest that food security is a more heavily weighted predictor of family functioning than psychological well-being. Overall the results of this study provide an empirically supported ecological basis for family therapy treatment planning and outcome projections.

REFERENCES

- Alderfer, M., Fiese, B., Gold, I., Cutuli, J., Holmbeck, G., & Goldbeck, L. (2008). Evidence-based assessment in pediatric psychology: family measures. *Journal of Pediatric Psychology*, 33, 9, 1046-61.
- Anderson J. (2014). The impact of family structure on the health of children: Effects of divorce. *The Linacre quarterly*, 81(4), 378–387. <https://doi.org/10.1179/0024363914Z.000000000087>
- Anema, A., Vogenthaler, N., Frongillo, E. A., Kadiyala, S., & Weiser, S. D. (2009). Food insecurity and HIV/AIDS: current knowledge, gaps, and research priorities. *Current HIV/AIDS reports*, 6(4), 224–231. doi:10.1007/s11904-009-0030-z
- Amèzquita, L., & George, P. (2020). Food insecurity: How to recognize & address it: Certain factors put different patient populations at risk. A 2-question survey can help identify families that are food insecure. *Journal of Family Practice*, 69(2), 74.
- Ashiabi G, & O’Neal K. (2008). A framework for understanding the association between food insecurity and children’s developmental outcomes. *Child Develop Perspectives* (2),71-77.
- Baker, K.(2018). Food insecurity: A public health challenge. *Gastroenterology Nursing* (41) 2, 91-92. doi: 10.1097/SGA.0000000000000380
- Beavers, R. and Hampson, R. (2000) The Beavers Systems Model of Family Functioning. *The Association for Family Therapy*, No. 22, 128-143.

- Berger, B. (1998). The civilization-building role of the nuclear family in historical perspective. *International Journal on World Peace*, 15(2), 21-30. Retrieved February 15, 2021, from <http://www.jstor.org/stable/20753153>
- Bickel, G., Nord, M., Price C., Hamilton, W., & Cook, J.(2000). Guide to measuring household Service, security, Revised 2000. U.S. Department of Agriculture, Food and Nutrition Alexandria VA.
- Blumberg, S.J, Bialostosky, Hamilton,W.L., Briefel R. (1999). The effectiveness of a short form of the household food security scale, *American Journal of Public Health*, 89(8): 1231–1234.
- Boston, P. (2000). Advances in psychiatric treatment: Systemic family therapy and the influence of postmodernism. *Journal of Continuing and Professional Development*. DOI: 10.1192/apt.6.6.450
- Bowlby, J. (1988). A secure base: Clinical applications of Attachment Theory. London: Routledge.
- Brinkman, J., Garnette, B., Kolodinsky, J., Weiwei, W., Pope, L. (2020). Intra-and interpersonal factors buffer the relationship between food insecurity and mental wellbeing among middle schoolers.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*. Retrieved from file:///media/fuse/drivefs-3f207a34b944ca048f933833bb959288/root/Dissertation/Articles/Ch.%201%20Articles/Bronfenbrenner%20(1977).pdf
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22, 723-742.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, Mass: Harvard University Press.

Bronfenbrenner, U., McClelland, P., Wethington, P., Ceci, S. (1996). *The state of Americans: Disturbing facts and figures on changing values, crime, the economy, poverty, family, education, the aging population, and what they mean for our future*. New York, NY: The Free press.

Bonevski, B., Randell, M., Paul, C., Chapman, K., Twyman, L., Bryant, J., Brozek, I., & Hughes, C. (2014). Reaching the hard-to-reach: a systematic review of strategies for improving health and medical research with socially disadvantaged groups. *BMC Medical Research Methodology*, 14, 42. <https://doi.org/10.1186/1471-2288-14-42>.

Burke, M., Martini, L., Çayır, E., Hartline-Grafton, H., Meade, R. (2016). Severity of household food insecurity is positively associated with mental disorders among children and adolescents in the United States. *The Journal of Nutrition*, Volume 146(10), 2019–2026. <https://doi.org/10.3945/jn.116.232298>

Carter, K. N., Kruse, K., Blakely, T., & Collings, S. (2011). The association of food security with psychological distress in New Zealand and any gender differences. *Social Science & Medicine*, 72(9), 1463–1471. <https://doi.org/10.1016/j.socscimed.2011.03.009>

Casey, P., Goolsby, S., Berkowitz, C., Frank, D., Cook, J., Cutts, D., ... Meyers, A. (2004).

Maternal Depression, Changing Public Assistance, Food Security, and Child Health Status.

Pediatrics, 113(2), 298–304. Retrieved from

<http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=pbh&AN=11960917&site=ehost-live>

Cassels, M., Harmelen, A., Neufeld, S., Goodyer, I., Jones, P., Wilkinson, P. (2018). Poor family

functioning mediates the link between childhood adversity and adolescent non suicidal self-injury. *Journal of Child Psychology and Psychiatry*, 59:8, 881-887. doi:

10.1111/jcpp.12866

Centers for Disease Control and Prevention (2014). Introduction to Public Health. In: Public

Health 101 Series. Atlanta, GA: U.S. Department of Health and Human Services, CDC;

Retrieved from <https://www.cdc.gov/publichealth101/public-health.html>

Centers for Disease Control and Prevention (2018). Learn about mental health. Retrieved from

<https://www.cdc.gov/mentalhealth/learn/index.htm#>

Centers for Disease Control and Prevention (2019). Preventing Adverse Childhood Experiences:

Leveraging the Best Available Evidence. Atlanta, GA: National Center for Injury

Prevention and Control, Centers for Disease Control and Prevention.

Centers for Disease Control and Prevention (2021) Social Determinants of Health: Know What

Affects Health <https://www.cdc.gov/socialdeterminants/index.htm>

- Coleman-Jensen, A. Rabbitt, M. Gregory, C., & Singh, A. (2016). *Household Food Security in the United States in 2015*, ERR-215, U.S. Department of Agriculture, Economic Research Service, September 2016. Retrieved from <https://www.ers.usda.gov/webdocs/publications/102076/err-298.pdf?v=5865.1>
- Coleman-Jensen, A. Rabbitt, M., Gregory, C., & Singh, A. (2018). *Household Food Security in the United States in 2017*, ERR-256, U.S. Department of Agriculture, Economic Research Service. Retrieved from <https://www.ers.usda.gov/webdocs/publications/90023/err-256.pdf>
- Coleman-Jensen, A., Rabbitt, M., Gregory, C., and Singh, A., (2021). *Household Food Security in the United States in 2020*, ERR-298, U.S. Department of Agriculture, Economic Research Service.
- Chilton, M., & Rabinowich, J. (2012). Toxic stress and child hunger over the life course: Three Case Studies. *Journal of Applied Research on Children* 3(1).
- Compton, M. T., American Psychiatric Publishing, & Shim, R. S. (2015). *The Social Determinants of Mental Health: Vol. First edition*. American Psychiatric Association Publishing.
- Compton, M.(2014). Food insecurity as a social determinant of mental health. *Psychiatric Annals*, 44(1), 46-51. doi:<http://dx.doi.org/10.3928/00485713-20140108-08>
- Craddock, A. E. (2001). Family system and family functioning: Circumplex model and FACES IV. *Journal of Family Studies*, 7, 1, 29-39.
- Dai, L. and Wang, L. (2015) Review of Family Functioning. *Open Journal of Social Sciences*, 3, 134-141. doi: 10.4236/jss.2015.312014.

Dalbey, B. (2019). Thousands in Gwinnett county don't have enough to eat. Retrieved from <https://patch.com/georgia/loganville/thousands-gwinnett-county-don-t-have-enough-eat>

Davey, R. M. A., Flamm, L. J., Kassa, H. T., & Latkin, C. A. (2014). Food Insecurity and Depressive Symptoms: Comparison of Drug Using and Nondrug-Using Women at Risk for HIV. *Journal of Community Psychology*, 42(4), 469–478.

<https://doi.org/10.1002/jcop.21622>

Davison, K., Marshall-Fabien, G., & Tecson, A. (2015). Association of moderate and severe food insecurity with suicidal ideation in adults: national survey data from three Canadian provinces. *Social Psychiatry & Psychiatric Epidemiology*, 50(6), 963–972. <https://doi-org.proxy-s.mercer.edu/10.1007/s00127-015-1018-1>

De Haan, K. L. B., Hafekost, J., Lawrence, D., Sawyer, M. G., & Zubrick, S. R. (2015). Reliability and validity of a short version of the General Functioning Subscale of the McMaster Family Assessment Device. *Family Process*, 54(1), 116–123.

<https://doi.org/10.1111/famp.12113>

Duerden, M. D., & Witt, P. A. (2010). An Ecological Systems Theory Perspective on Youth Programming. *Journal of Park & Recreation Administration*, 28(2), 108–120. Retrieved

from [http://search.ebscohost.com.proxy-](http://search.ebscohost.com.proxy-s.mercer.edu/login.aspx?direct=true&db=hjh&AN=51445220&site=ehost-live)

[s.mercer.edu/login.aspx?direct=true&db=hjh&AN=51445220&site=ehost-live](http://search.ebscohost.com.proxy-s.mercer.edu/login.aspx?direct=true&db=hjh&AN=51445220&site=ehost-live)

- Dimeff, L. A., & Koerner, K. (2019). Fulfilling the promise of behavioral health technologies to improve public health impact and reduce public health disparities: A commentary. *Clinical Psychology: Science and Practice*, 26(1), 1–4.
<https://doi.org/10.1111/cpsp.12276>
- Dunn, V., Abbott, R., Croudace, T., Wilkinson, P., Jones, Herbert, J., & Goodyer, I., (2011). Profiles of family-focused adverse experiences through childhood and early adolescence: The ROOTS project a community investigation of adolescent mental health. *BMC Psychiatry*, 11, 109.
- Egelston B, Miller, S., Meropol, N. (2011). The impact of misclassification due to survey response fatigue on estimation of and identifiability of treatment effects. *Stat Med* 30(30): 3560–3572.
- Eicher-Miller, H. A., Mason, A. C., Weaver, C. M., McCabe, G. P., & Boushey, C. J. (2009). Food insecurity is associated with iron deficiency anemia in US. *American Journal of Clinical Nutrition*, 90(June), 1358-1371. doi:10.3945/ajcn.2009.27886.1358
- Ellaway, R. H., Bates, J., & Teunissen, P. W. (2017). Ecological theories of systems and contextual change in medical education. *Medical Education*, 51(12), 1250–1259.
<https://doi.org/10.1111/medu.13406>
- Epstein, N. B., Baldwin, L. M., & Bishop, D. S. (1983). The McMaster Family Assessment Device. *Journal of Marital and Family Therapy*, 9, 171–180.
- Ettekal, A. & Mahoney, J. (2017). Ecological systems theory. *Sage Encyclopedia of Out-of-School-learning*. Sage Publications Inc. Thousand Oaks, CA., 239-241.

Etikan I., Alkassim R., Abubakar S., (2016). Comparison of Snowball Sampling and Sequential Sampling Technique. *Biometrics and Biostatistics International Journal* 3(1): 00055.

DOI: 10.15406/bbij.2016.03.00055

Fagan P., (2007). *Belonging: The formation of Human Capital as expressed in five basic institution of society*. In A.S. Loveless

& T. Holman, *New millennium: Strengthening the family*. (2007). *United Kingdom: Praeger Publishers*.

Food and Agriculture Organization of the United Nations, International Fund for Agricultural Development, & World Food Program (2015). *The state of food Insecurity in the world 2015*. Retrieved from <http://www.fao.org/publications/sofi/2015/en/>

Food and Agriculture Organization of the United Nations (2018). *The state of food security and nutrition in the world 2018: Building climate resilience for food security and nutrition*. Retrieved from <http://www.fao.org/3/i9553en/i9553en.pdf>

Feeding America (2019). *Map the meal gap: A report on county and congressional district food insecurity and county food costs in the United States in 2017*. Retrieved from <https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-full.pdf>

Feeding America (2014). *Hunger in America 2014: Report for Atlanta community food bank*. Retrieved from http://www.acfb.org/sites/default/files/hunger-in-america-ACFB-2014-summary.pdf?_ga=2.264676233.704006286.1565371297-233340425.1565371297

- Federal Register (2019). Federal poverty guidelines. (84) 22 Retrieved from <https://dch.georgia.gov/sites/dch.georgia.gov/files/2019%20Federal%20Poverty%20Guidelines.pdf>
- Felitti V., Anda R, Nordenberg D., Williamson D., Spitz A., Edwards V. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventative Medicine*. 14:245–58. 10.1016/S0749-3797(98)00017-8
- Field, A. (2009). *Discovering statistics using SPSS and sex drugs and rock ‘n’ roll* third edition. Thousand Oaks: CA Sage Publications Inc.
- Fiese, B. H., Rhodes, H. G., & Beardslee, W. R. (2013). Rapid changes in American family life: consequences for child health and pediatric practice. *Pediatrics*, 132(3), 552–559. <https://doi.org/10.1542/peds.2013-0349>
- Food Insecurity: A Public Health Issue. (2016). *Public Health Reports*, 131(5), 655–657. Retrieved from <https://doi.org/10.1177/0033354916664154>
- Francis, L., DePriest, K., Wilson, M., & Gross, D. (2018). Child Poverty, Toxic Stress, and Social Determinants of Health: Screening and Care Coordination. *Online Journal of Issues in Nursing*, 23(3), 2. <https://doi.org/10.3912/OJIN.Vol23No03Man02>
- Gee, K. A., & Asim, M. (2019). Parenting While Food Insecure: Links Between Adult Food Insecurity, Parenting Aggravation, and Children’s Behaviors. *Journal of Family Issues*, 40(11), 1462–1485. <https://doi-org.proxygsu-psin.galileo.usg.edu/10.1177/0192513X19842902>

- Gehart, D. & Tuttle, A. (2003). *Theory-Based Treatment Planning for Marriage and Family Therapists*. Pacific Grove, CA: Brooks/Cole-Thompson Learning.
- Gehart, D. & Lucas, B. (2007). Client advocacy in marriage and family therapy: A qualitative case study. *Journal of Family Psychotherapy* 18(1), p. 39-56.
- George D. & Mallory P. (2014). *SPSS statistics 21 step by step*. Pearson Education Inc. Upper Saddle River, NJ.
- Garner, R. (2016). *Food Insecurity : Patterns, Prevalence and Risk Factors*. New York: Nova Science Publishers, Inc. Retrieved from <http://search.ebscohost.com.proxygsu-psin.galileo.usg.edu/login.aspx?direct=true&db=nlebk&AN=1419127&site=eds-live&scope=site>
- Granger, C.(2008). Rasch analysis is important to understand and use for measurement. *Rasch Measurement Transactions* 21(3), p.1122-1123. Retrieved from <https://www.rasch.org/rmt/rmt213d.htm>
- Grzywacz, J. & Marks, N. (2000). Reconceptualizing the Work-Family Interface: An Ecological Perspective on the Correlates of Positive and Negative Spillover Between Work and Family. *Journal of occupational health psychology*. 5. 111-26. 10.1037/1076-8998.5.1.111.
- Gundersen, C. & Ziliak, J. (2018). Food insecurity research in the United States, where we have been and where we need to go. *Applied Economics Perspectives and Policy*, 40 (1), 119-135.

Haering, S. & Syed, S. (2009). Community food security in United States Cities: A survey of relevant scientific literature. Baltimore, MD: Johns Hopkins Center for a Livable Future

Hake, M., Engelhard, E., & Dewey, A. (2022). Map the Meal Gap 2022: An Analysis of County and Congressional District Food Insecurity and County Food Cost in the United States in 2020. Feeding America.

Hanson, C., Crandall, A., Barnes, M., Magnusson, B., Novilla, M., & King, J. (2019). Family-Focused Public Health: Supporting Homes and Families in Policy and Practice. *Frontiers in public health*, 7, 59. doi:10.3389/fpubh.2019.00059

Hook, K. (2015). Peace of mind, health of body: Why the correlation of food security, physical health, and mental wellbeing holds important implications for humanitarian actors. *The Journal of Humanitarian Assistance*. Retrieved from <https://sites.tufts.edu/jha/archives/2115>

Hughes, D. (2004). An attachment-based treatment of maltreated children and young people. *Attachment and Human Development*, 6, 263–278.

Jackson D, Chilton M, Johnson K, Vaughn M. (2019). Adverse childhood experiences and household food insecurity: Findings From the 2016 National Survey of Children's Health. *Am J Prev Med*. 2019 Nov;57(5):667-674. doi: 10.1016/j.amepre.2019.06.004. Epub 2019 Sep 13. PMID: 31522923.

- Johnson, A. D., & Markowitz, A. J. (2017). Associations between household food insecurity in early childhood and children's kindergarten skills. *Child Development*, 89(2).
doi:10.1111/cdev.12764
- Jones, A. (2017). Food insecurity and mental health status: A global analysis of 149 countries. *American Journal of Preventive Medicine*, 53(2):264–273. & 2017. Retrieved from <https://doi.org/10.1016/j.amepre.2017.04.008>
- Jones, A. D., Ngure, F. M., Pelto, G., & Young, S. L. (2013). What are we assessing when we measure food security? A compendium and review of current metrics. *Advances in nutrition (Bethesda, Md.)*, 4(5), 481–505. doi:10.3945/an.113.004119
- Jones, A. (2017). Food insecurity and mental health status: A global analysis of 149 countries. *American Journal of Preventive Medicine* 53(2).
<https://doi.org/10.1016/j.amepre.2017.04.008>
- Keitner, G., Ryan, C., Miller, I., Kohn, R., & al, e. (1995). Role of the family in recovery and major depression. *The American Journal of Psychiatry*, 152(7), 1002-8. Retrieved from
<https://search.proquest.com/docview/220454734?accountid=12381>
- Kogen L. (2015). Not up for debate: U.S. news coverage of hunger in Africa. *International Communication Gazette*. 77(1):3-23. doi:10.1177/1748048514556973
- Knowles, M., Rabinowich, J., Ettinger de Cuba, S., Cutts, D., & Chilton, M. (2016). “Do You Wanna Breathe or Eat?”: Parent Perspectives on Child Health Consequences of Food Insecurity, Trade-Offs, and Toxic Stress. *Maternal & Child Health Journal*, 20(1), 25.
<https://doi.org/10.1007/s10995-015-1797-8>

- Kroenke, K., Spitzer, R. L., Williams, J. B. W., Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: the PHQ-4 Psychosomatics, 50(6): 613-621.
- Kroenke K., Spitzer, R., Williams, J. (2003). The Patient Health Questionnaire–2: validity of a two-item depression screener. *Med Care*, 41:1284–1292.
- Landau, S. and Everitt, B. S.(2004). A Handbook of Statistical analyses using SPSS. Retrieved From http://www.academia.dk/BiologiskAntropologi/Epidemiologi/PDF/SPSS_Statistical_Analyses_using_SPSS.pdf
- Leibach, G. G., & Everhart, R. S. (2017). Family Assessment Device: Real-World Validity in Urban Families of Children With Asthma. *Journal Of Family Psychology*, doi:10.1037/fam0000313
- Life Sciences Research Office, Federation of American Societies for Experimental Biology (1990). Core indicators of nutritional state for difficult-to-sample populations. *The Journal of Nutrition*, 120 (11), 1559–1600.
- Leung, C., Epel, E., Willett, W., Rimm, E., Laraia, B. (2015). Household Food Insecurity Is Positively Associated with Depression among Low-Income Supplemental Nutrition Assistance Program Participants and Income-Eligible Nonparticipants, *The Journal of Nutrition*, 145 (3), 622–627, Retrieved from <https://doi.org/10.3945/jn.114.199414>
- Logan, J. (2014). *Diversity and Disparities : America Enters a New Century*. Russell Sage Foundation.
- McIntosh, J., Lyon, A., Carlson, G., Everette, C., Loera, S. (2008). Measuring the Mesosystem: A survey and critique of approaches to cross setting measurement for ecological research and models of collaborative care. *Families, Systems, & Health: The Journal of Collaborative Family Healthcare*. (26) 1, p.86-104.

- Mandak, K., O'Neill, T., Light, J., & Fosco, G. M. (2017). Bridging the gap from values to actions: a family systems framework for family-centered AAC services. *AAC: Augmentative & Alternative Communication*, 33(1), 32–41.
<https://doi-org.proxy-s.mercer.edu/10.1080/07434618.2016.1271453>
- Mandara, J., & Murray, C. B. (2006). Father's absence and African American adolescent drug use. *Journal of Divorce & Remarriage*, 46, 1-12.
- Mansfield, A. K., Keitner, G. I., & Dealy, J. (2015). The Family Assessment Device: An Update. *Family Process*, 54(1), 82–93. <https://doi.org/10.1111/famp.12080>
- Martin M., Maddocks E., Chen Y., Gillman S., Colman, I. (2016). Food insecurity and mental illness: Disproportionate impacts in the contents of perceived stress and social isolation. *Public Health*. 132:86-91. doi: 10.1016/j.puhe.2015.11.014
- Martin, K., Colantonio, A., Picho, K., & Boyle, K. (2016). Self-efficacy is associated with increased food security in novel food pantry program. *SSM - population health*, 2, 62–67.
<https://doi.org/10.1016/j.ssmph.2016.01.005>
- Martinez, S. M., Grandner, M. A., Nazmi, A., Canedo, E. R., & Ritchie, L. D. (2019). Pathways from Food Insecurity to Health Outcomes among California University Students. *Nutrients*, 11(6), 1419. <https://doi.org/10.3390/nu11061419>
- Martinez, S. M., Webb, K., Frongillo, E. A., & Ritchie, L. D. (2018). Food insecurity in California's public university system: What are the risk factors? *Journal of Hunger & Environmental Nutrition*, 13(1), 1–18. Retrieved from <https://doi-org.proxygsu-psin.galileo.usg.edu/10.1080/19320248.2017.1374901>

- Maynard, M., Andrade, L., Packull-McCormick, S., Perlman, C. M., Leos-Toro, C., & Kirkpatrick, S. I. (2018). Food Insecurity and Mental Health among Females in High-Income Countries. *International journal of environmental research and public health*, 15(7), 1424. <https://doi.org/10.3390/ijerph15071424>
- Meurs, J. A., Breaux, D. M., & Perrewé, P. L. (2008). The family and HRM in North America: how demographic and social changes are shifting the way work-family issues are managed by organizations and employees. *International Journal of Human Resource Management*, 19(8), 1455–1471. <https://doi.org/10.1080/09585190802200215>
- Miller, I., Ryan, C., Keitner, G., Bishop, S., Epstein, N. (2000). The McMaster Approach to families: Theory, assessment, treatment, and research. *Journal of Family Therapy* 22:168-189.
- Miller, D. P., Nepomnyaschy, L., Ibarra, G. L., & Garasky, S. (2014). Family Structure and Child Food Insecurity. *American Journal of Public Health*, 104(7), 70–76. <https://doi.org/10.2105/AJPH.2014.302000>
- Meyers, S. A., Varkey, S., & Aguirre, A. M. (2002). Ecological Correlates of Family Functioning. *American Journal of Family Therapy*, 30(3), 257–273. <https://doi.org/10.1080/019261802753577575>
- Muldon, K., Duff, P., Fielden, S., & Anema, A. (2013). Food insufficiency is associated with psychiatric morbidity in a nationally representative study of mental illness among Canadians. *Social Psychiatry and Psychiatric Epidemiology*, (48)5, 795-803.

- Neukrug, E. (2018). *Counseling theory and practice* 2nd ed. San Diego, CA: Cognella Publishing
- Oberholser, C. A., & Tuttle, C. R. (2004). Assessment of Household Food Security Among Food Stamp Recipient Families in Maryland. *American Journal of Public Health*, 94(5), 790–796. <https://doi.org/10.2105/AJPH.94.5.790>
- Olson, D. H. & Gorall, D. M. (2006). FACES IV and the circumplex model of family functioning.
- Olson, D. (2000). Circumplex model of marital and family systems. *Journal of Family Therapy* 22: 144-167.
- Oshri, A., Lucier-Greer, M., O'neal, C. W., Arnold, A. L., Mancini, J. A., & Ford, J. L. (2015). Adverse childhood experiences, family functioning, and resilience in military families: A pattern-based approach. *Family Relations*, 64(1), 44-63.
doi:<http://dx.doi.org/10.1111/fare.12108>
- Patton-López, M., López-Cevallos, D., Cancel-Tirado, D., & Prentice, F. R., Gray-Ice, H., Schwab, J. J. (2000). *Family Functioning: The General Living Systems Research Model*. Netherlands: Springer US.
- Poole-Di Salvo, E., Silver E., & Stein, R. (2016). “Household Food Insecurity and Mental Health Problems Among Adolescents: What Do Parents Report?” *Academic Pediatrics* 16 (1): 90–96.
- Pritchett, R. , Kemp, J., Wilson P., Minnis, H., Bryce, G., Gillberg, C. (2011). Quick, simple measures of family relationships for use in clinical practice and research: A systematic review. *Family Practice*, Vol. 28(2), Pages 172–187.

Pryor, L., Lioret, S., Waerden, J., Fombonne, É., Falissard, B., & Melchior, M. (2016). Food insecurity and mental health problems among a community sample of young adults. *Social Psychiatry & Psychiatric Epidemiology*, 51(8), 1073–1081.

and toddler development. *Pediatrics*, 121(1), 65-72. doi:10.1542/peds.2006-3717

Ratts, M. J., Singh, A. A., Nassar-McMillan, S., Butler, S. K., & McCullough, J. R. (2016).

Multicultural and Social Justice Counseling Competencies: Guidelines for the counseling profession. *Journal of Multicultural Counseling and Development*, 44(1), 28–48.

Rico, B., Kreider, R., Anderson, L. (2018). Growth in interracial and interethnic married couple households. Retrieved from [https://www.census.gov/library/stories/2018/07/](https://www.census.gov/library/stories/2018/07/Interracial-marriages.html)

[Interracial-marriages.html](https://www.census.gov/library/stories/2018/07/Interracial-marriages.html)

Rose-Jacobs, R., Black, M. M., Casey, P. H., Cook, J. T., Cutts, D. B., Chilton, M., Frank, D. A. (2008). Household food insecurity: Associations with at-risk infant

Rubin, L., & Merrick, J. (2017). *Public Health : An Ecological Framework for Child*

Environmental Health Interventions. Hauppauge, New York: Nova Science Publishers,

Inc. Retrieved from <http://search.ebscohost.com.proxygsu->

[psin.galileo.usg.edu/login.aspx?direct=true&db=nlebk&AN=1464664&site=eds-](http://search.ebscohost.com.proxygsu-)

[live&scope=site](http://search.ebscohost.com.proxygsu-)

Ryan, C., Epstein, N., Keitner, G., Miller, I., Bishop, D. (2005) *Evaluating and treating families: The McMaster Approach*. Routledge. East Sussex: Hove, Great Britain.

- Saad, F. (2007). Building healthy communities: The family is the basic group unit of society-The Malaysian experience. In A.S. Loveless & T. Holman, *New millennium: Strengthening the family*. (2007). United Kingdom: Praeger Publishers.
- Schwab, J., Gray-Ice, H, Prentice, F. (2002). Family Function: An Historical and Research Review. In: Family Functioning. Critical Issues in Psychiatry. Springer, Boston, MA
- Schuler, B. R., Bauer, K. W., Lumeng, J. C., Rosenblum, K., Clark, M., & Miller, A. L. (2020). Poverty and Food Insecurity Predict Mealtime Structure: Mediating Pathways of Parent Disciplinary Practices and Depressive Symptoms. *Journal of Child & Family Studies*, 29(11), 3169–3183. <https://doi.org/10.1007/s10826-020-01806-1>
- Salkind, N. J. (Ed.). (2010). *Encyclopedia of research design*. Retrieved from <https://ebookcentral.proquest.com>
- Salkind, N. (2012). *Exploring research* (8th ed). Upper Saddle River, NJ: Pearson Education.
- Seligman, H.K., Laraia, B.A. and Kushel, M.B. (2007), “Food insecurity is associated with diabetes mellitus: results from the National Health and Nutrition Examination Survey (NHANES) 1999-2002”, *Journal of General Internal Medicine*, (22) 7, 1018-1023
- Shek D. The General Functioning Scale of the Family Assessment Device: Does it work with Chinese adolescents. *Journal Clinical Psychology*. 2001; 57(12): 1503-16.
- Shern, D. L., Blanch, A. K., & Steverman, S. M. (2016). Toxic stress, behavioral health, and the next major era in public health. *American Journal of Orthopsychiatry*, 86(2), 109–123. <https://doi-org.proxygsu-psin.galileo.usg.edu/10.1037/ort0000120>

- Shim, R. & Compton, M. (2020). The social determinants of mental health: Psychiatrists' role in addressing discrimination and food insecurity. *FOCUS Journal of Lifelong Learning in Psychiatry*. Retrieved from <https://doi.org/10.1176/appi.focus.20190035>
- Shonkoff, J., & Phillips, D.(2000). From neurons to neighborhoods: The science of early childhood development. National Research Council and Institute of Medicine. Washington DC: National Academy Press.
- Skinner, H. and Steinhauer, P. (2000) Family Assessment Measure and Process Model of Family Functioning. *Journal of Family Therapy*, 22, 190-210. <http://dx.doi.org/10.1111/1467-6427.00146>
- Slopen N., Fitzmaurice G., Williams D., & Gilman. S. (2010) Poverty, food insecurity, and the behavior for childhood internalizing and externalizing disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2010;49(5):444–452.
- Spitzer R.L., Kroenke K., Williams, J.B., Lowe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD–7. *Arch Intern Med*. 166:1092–1097.
- Smith, M. D., & Meade, B. (2019). Who Are the World's Food Insecure? Identifying the Risk Factors of Food Insecurity Around the World. *Amber Waves: The Economics of Food, Farming, Natural Resources, & Rural America*, 1–8. Retrieved from <http://search.ebscohost.com.proxygsu-psin.galileo.usg.edu/login.aspx?direct=true&db=bth&AN=138950996&site=eds-live&scope=site>

- Smith, L. (2021). Association between food insecurity and depression among older adults from low- and middle-income countries. *Depression and Anxiety*, 38(4), 439–446.
<https://doi.org/10.1002/da.23147>
- Smith, R. & Southern, S. (2005). Integrative confusion: An examination of integrative models in couple and family therapy. *The Family Journal* 13 (4):392-399
- St Clair, M., Croudace, T., Dunn, V, Jones, P., Herbert, J., & Goodyer, I., (2015). Childhood adversity subtypes and depressive symptoms in early and late adolescence. *Development and Psychopathology*, 27, 885–899.
- Suh, B., & Luthar, S. S. (2020). Parental aggravation may tell more about a child’s mental/behavioral health than Adverse Childhood Experiences: Using the 2016 National Survey of Children’s Health. *Child Abuse & Neglect*, 101. <https://doi-org.proxygsu-psin.galileo.usg.edu/10.1016/j.chiabu.2019.104330>
- Sydor, A. (2013). Conducting research into hidden or hard-to-reach populations. *Nurse Res.* 2013 Jan; 20(3):33-7.
- Tan M., Madsen K., Au L., Frongillo E., & Ritchie L. (2019). Child food insecurity is associated with energy intake among fourth- and fifth-grade girls. *Journal of the Academy of Nutrition and Dietetics*. 119(10):1722-1731. doi: 10.1016/j.jand.2018.07.011.
- Tevie, J., & Shaya, F. (2018). Does food security predict poor mental health? *Journal of Public Mental Health*, 17(1), 3–10. Retrieved from <https://doi.org/10.1108/JPMH-12-2016-0058>
- Thompson R., & Raezer L. (1998). *Application in Diverse Populations*

in A.S. Belleck, M., Hersen, *Comprehensive Clinical Psychology*. Retrieved from
<https://www.sciencedirect.com/topics/social-sciences/family-functioning>

Tiffin, P. A., Pearce, M., Kaplan, C., Fundudis, T., & Parker, L. (2007). The impact of socioeconomic status and mobility on perceived family functioning. *Journal Of Family And Economic Issues*, 28(4), 653-667. doi:10.1007/s10834-007-9077-

To, Q., Frongillo, A., Gallegos, D., More, J. (2014). Household food insecurity is associated with less physical activity among children and adults in the U.S. Population. *Journal of Nutrition*, 144(11), 1797-1802. <https://doi.org/10.3945/jn.114.198184>

Tolan, P. H., & Larsen, R. (2014). Trajectories of Life Satisfaction During Middle School: Relations to Developmental-Ecological Microsystems and Student Functioning. *Journal of Research on Adolescence (Wiley-Blackwell)*, 24(3), 497–511.
<https://doi.org/10.1111/jora.12156>

Trzcinski, E. (1995). An ecological perspective on family policy: A conceptual and philosophical framework. *Journal of Family and Economic Issues* (16) 1, 7-33.

Tuthill, E. L., Sheira, L. A., Palar, K., Frongillo, E. A., Wilson, T. E., Adedimeji, A., Merenstein, D., Cohen, M. H., Wentz, E. L., Adimora, A. A., Ofotokun, I., Metsch, L., Kushel, M., Turan, J. M., Konkle-Parker, D., Tien, P. C., & Weiser, S. D. (2019). Persistent Food Insecurity Is Associated with Adverse Mental Health among Women Living with or at Risk of HIV in the United States. *Journal of Nutrition*, 149(2), 240.

<https://doi.org/10.1093/jn/nxy203>

U.S. Census Bureau (2017). Current Population Survey. Retrieved from

<https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html#family>

U.S. Census Bureau (2019). Current population demographics and statistics by gender, age, and

race. Retrieved from <https://suburbanstats.org/population/how-many-people-live-in-georgia>

U.S. Census Bureau (2019). Current population survey (CPS): Subject definitions. Retrieved

from <https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html#family>

U.S. Department of Health and Human Services, Office of Disease Prevention and Health

Promotion (n.d.). Healthy People 2030: Social determinants of health. Retrieved 7/3/21, from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>

United Nations (1948). Universal Declaration of Human Rights. Retrieved from

<https://www.un.org/en/universal-declaration-human-rights/index.html>

U.N. Food and Agriculture Organization (FAO), International Fund for Agricultural

Development (IFAD), United Nations Children's Fund (UNICEF), World Food Program

(WFP) and World Health Organization (WHO), (2018). The State of Food Security and

Nutrition in the World 2018. Building Climate Resilience for Food Security and Nutrition.

Retrieved from <http://www.fao.org/3/I9553EN/i9553en.pdf>

Van Vorhis, C. & Morgan B. (2007). Understanding power and rules of thumb for determining

sample sizes. *Tutorials in Quantitative Methods for Psychology*, 3 (2), p. 43-50

Vazquez, L. (2014). Prevalence and correlates of food insecurity among students attending a midsize rural university in Oregon. *Journal Of Nutrition Education And Behavior*, 46(3), 209-214.

Voisin, D. R., Kim, D., Takahashi, L., Morotta, P., & Bocanegra, K. (2017). Involvement in the Juvenile Justice System for African American Adolescents: Examining Associations with Behavioral Health Problems. *Journal of social service research*, 43(1), 129–140. <https://doi.org/10.1080/01488376.2016.1239596>

Weaver, L. J., & Hadley, C. (2009). Moving beyond hunger and nutrition: A systematic review of the evidence linking food insecurity and mental health in developing countries. *Ecology of Food and Nutrition*, 48, 263 – 284. doi: 10.1080/03670240903001167 ; 10.1080/03670240903001167

Winslow CEA. The untilled field of public health. *Mod Med* 1920; 2:183–91.

World Health Organization & Calouste Gulbenkian Foundation (2014). Social determinants of mental health. Geneva, World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/112828/9789241506809_eng.pdf;jsessionid=B95A124259245C68CA8A658F45227AB6?sequence=1

Wo, S., Lai, P., Ong, L., Low, W., Wu, D., Nathan, A., Wong, C. (2018). Factorial validation of the Chinese version of the general functioning subscale of the family assessment device in Malaysia.

Woo, E. (2005). Urie Bronfenbrenner; theories altered approach to child development at age 88.

Los Angeles Times. Retrieved from

http://archive.boston.com/news/globe/obituaries/articles/2005/09/29/urie_bronfenbrenner_theories_altered_approach_to_child_development_at_88/

Xi, L., J., Zhang, & Chen-Yu Linus, Y. (2011). Investigating the Validity of a

Multi-Rater Assessment of Family Functioning in China. *Social Behavior & Personality: An International Journal*, 39(6), 773.

<https://doi.org/10.2224/sbp.2011.39.6.773>

Zulkifli, W., Ishak, N., Saad, Z. (2017). The reliability of McMaster Family Assessment

Device (Fad) instruments among delinquent teenagers. *IOSR Journal Of*

Humanities And Social Science. Vol (22) 7: 40-43. doi:10.9790/0837-2207054043

APPENDICES

APPENDIX A
IRB APPROVAL



Institutional Review Board
For Research Involving Human Subjects

Monday, November 14, 2022

Ms. Jacqueline N. Robinson
3001 Mercer University Drive, Suite 214
Counseling & Human Sciences
Atlanta, GA 30341

**RE: An Examination of the Relationship Between Food Security Status, Psychological Wellbeing, and Family Functioning:
An Ecological Perspective with Implications for Clinical Practice (H2211280)**

Dear Ms. Robinson:

On behalf of Mercer University's Institutional Review Board for Human Subjects Research, your application submitted on 11-Nov-2022 for the above referenced protocol was reviewed in accordance with the 2018 Federal Regulations [21 CFR 56.110\(b\)](#) and [45 CFR 46.110\(b\)](#) (for expedited review) and was approved under category(ies) _6, _7 per 63 FR 60364.

Your application was approved for one year of study on 14-Nov-2022. The protocol expires on 13-Nov-2023. If the study continues beyond one year, it must be re-evaluated by the IRB Committee.

Item(s) Approved:

Student application for counseling research using surveys to determine if food insecurity and psychological wellbeing impact family functioning.

NOTE: You **MUST** report to the committee when the protocol is initiated. Report to the Committee immediately any changes in the protocol or consent form and **ALL** accidents, injuries, and serious or unexpected adverse events that occur to your subjects as a result of this study.

We at the IRB and the Office of Research Compliance are dedicated to providing the best service to our research community. As one of our investigators, we value your feedback and ask that you please take a moment to complete our [Satisfaction Survey](#) and help us to improve the quality of our service.

It has been a pleasure working with you and we wish you much success with your project! If you need any further assistance, please feel free to contact our office.

Respectfully,

Ava Chambliss-Richardson, Ph.D.
Director of Research Compliance
Member
Institutional Review Board

"Mercer University has adopted and agrees to conduct its clinical research studies in accordance with the International Conference on Harmonization's (ICH) Guidelines for Good Clinical Practice."

Mercer University IRB & Office of Research Compliance
Phone: 478-301-4101 | Email: ORC_Mercer@Mercer.Edu | Fax: 478-301-2329
1501 Mercer University Drive, Macon, Georgia 31207-0001

APPENDIX B

RECRUITMENT LETTER

Dear Reader,

My name is Jacqueline Robinson, and I am a doctoral candidate at Mercer University in the Counselor Education and Supervision program. I am writing to you to request your participation in my dissertation research in partial fulfillment of the degree of Doctor of Philosophy. I am conducting research intended to examine the relationship between food security status, psychological well-being, and family functioning.

Eligibility for the survey is limited to individuals 18 years or older.

The survey is brief and will only take about 15-20 minutes to complete. Please click the link below to go to the survey website:

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. No personally identifiable information will be associated with your responses to any reports of these data. There are no anticipated risks to your participation and you may decline to answer any or all questions, your data will not be used if you choose to do so. Lastly, you may terminate your involvement at any time if you choose.

If you have any questions or concerns, you may contact

Jacqueline N. Robinson, LPC

Jacqueline.robinson@live.mercer.edu

(404) 590-6868

Karen Rowland

Rowland_kd@mercer.edu

678-547-6049

APPENDIX C
INFORMED CONSENT

Informed Consent

You are being asked to participate in a research study. Before you give your consent to volunteer, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Investigators

Jacqueline N. Robinson, MAMFT, LPC Mercer University/College of Professional Advancement
3001 Mercer University Drive Atlanta, GA 30341 (404) 590-6868

Karen D. Rowland. Ph. D Mercer University College of Professional Advancement,
Department of Counseling

Purpose of the Research

Food insecurity exists in every American congressional district; this reality implicates a need for mental health treatment providers to gain an understanding of the impact food insecurity on individual and family functionality. This study's purpose is to investigate whether food security status and psychological well-being predict general family functioning. The research findings should make an important contribution to the initial clinical assessment process of socioeconomically diverse families. The aim is to provide an empirically supported ecological basis for family therapy treatment planning and outcome projections. A major objective of the study is to contribute to the clinical competence and knowledge base of family therapy treatment providers.

Procedures

If you volunteer to participate in the study, you will be asked to complete three brief surveys and six questions regarding your household access to food or food security, mental health, and family. Your participation will take 15-20 minutes to complete

Risk Management

There is no perceived risk associated with this study. If you experience distress as a result of your participation in this study, we encourage you to seek help at the National Alliance on Mental Illness (NAMI) Helpline at 1-800-950- NAMI (6264) or info@nami.org Monday through Friday, 10 am–6 pm, ET.

Confidentiality

We will keep your records private to the extent allowed by law. You will not be asked to supply any identifying information in the study, unless you opt to participate in the incentive drawing. The researcher will not be able to match any identifying information to your survey responses. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally. All surveys and transcriptions will be stored safely in a secure encrypted data storage device accessible only by this researcher. The surveys and transcriptions will be used to identify themes via data analysis.

Participation and Withdrawal

Your participation in this research study is voluntary. As a voluntary participant, you may refuse to participate at any time. To withdraw from the study please contact Jacqueline N. Robinson at Jacqueline.robinson@live.mercer.edu.

Questions about the Research

If you have any questions about the research, please speak with Jacqueline Robinson at Jacqueline.robinson@live.mercer.edu. and Dr. Dr. Karen D. Rowland at rowland_kd@mercerc.edu.

In Case of Injury

It is unlikely that participation in this project will result in harm to subjects. All expenses associated with care will be the responsibility of the participant and his/her insurance.

Reasons for Exclusion from this Study

Individuals who are under 18 years of age.

This project has been reviewed and approved by Mercer University's IRB. If you believe there is any infringement upon your rights as a research subject, you may contact the IRB Chair, at (478) 301-4101. You have been given the opportunity to ask questions and these have been answered to your satisfaction.

Your signature following indicates your voluntary agreement to participate in this research study.

APPENDIX D

MCMASTER PERMISSION LETTER



Hello,

My name is Jacqueline Robinson and I am a doctoral candidate in the College of Professional Advancement at Mercer University. In partial fulfillment of the requirements for the degree of Doctor of Philosophy, I am conducting research examining the relationship between Food Security Status, Parent Psychological Wellbeing, and General Family Functioning. The theoretical framework of this research includes the McMaster Model of Family Functioning.

I requested to use the McMaster GF-12 for my doctoral dissertation research in 2019, I was told that permission is generally granted. I am now nearing the data collection phase and am sending this communication to formally request permission to use the instrument for this study and learn of any associated fees for use in doctoral research.

For the purpose of the My University, Mercer University will put the instrument along with two other instruments the PHQ4 and the Household Food Security Survey Module-short form in an electronic survey monkey format for the research study. Study participants will then consent to study participation and subsequently be administered all three instruments. A copy of the full dissertation and findings will be provided upon request and completion. Finally, the instrument will not be used for clinical purposes during this study. I look forward to hearing from you.

The research Supervisor for this study is Dr. Karen Rowland, PhD, NCC, LPC, ACS:
Professor & Chair: Department of Counseling
Coordinator: School Counseling Program
College of Professional Advancement, Mercer University
678-547-6049

Thank You,
Jacqueline Robinson, MAMFT, LPC
Mercer University
Doctoral Candidate and Principal Researcher
404.590.6868

APPENDIX E
PATIENT HEALTH QUESTIONNAIRE

PHQ4

Over the last 2 weeks, how often have you been bothered by the following problems?

Not at all Several Days More than half the days Nearly everyday

(Use “✓” to indicate your answer)

	0	1	2	3
1. Feeling nervous, anxious, or on edge				
2. Not being able to control or stop worrying				
3. Little interest or pleasure in doing things				
4. Feeling down depressed or hopeless				

APPENDIX F

U.S. HOUSEHOLD FOOD SECURITY SURVEY MODULE: SIX-ITEM SHORT FORM

Select the appropriate fill from parenthetical choices depending on the number of persons and number of adults in the household.

HH3. For these statements, please tell me whether the statement was often true, sometimes true, or never true for (you/your household) in the last 12 months—that is, since last (name of current month). The first statement is, “The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

Often true

Sometimes true

Never true

DK or Refused

HH4. “(I/we) couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

Often true

Sometimes true

Never true

DK or Refused

AD1. In the last 12 months, since last (name of current month), did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

Yes

No (Skip AD1a)

DK (Skip AD1a)

AD1a. [IF YES ABOVE] How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

Almost every month

Some months but not every month

Only 1 or 2 months

DK

AD2. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?

Yes

No

DK

AD3. In the last 12 months, were you every hungry but didn't eat because there wasn't enough money for food?

Yes

No

DK

[End of Six-Item Food Security Module

APPENDIX G

MCMASTER FAMILY ASSESSMENT DEVICE

GENERAL FUNCTIONING SUBSCALE

1. Planning family activities is difficult because we misunderstand each other.

__SA __A __D __SD __

2. In times of crisis we can turn to each other for support.

__SA __A __D __SD __

3. We cannot talk to each other about the sadness we feel.

__SA __A __D __SD __

4. Individuals are accepted for what they are.

__SA __A __D __SD __

5. We avoid discussing our fears and concerns.

__SA __A __D __SD __

6. We can express feelings to each other.

__SA __A __D __SD __

7. There are lots of bad feelings in the family.

__SA __A __D __SD __

8. We feel accepted for what we are.

__SA __A __D __SD __

9. Making decisions is a problem for our family.

__SA __A __D __SD __

10. We are able to make decisions about how to solve problems.

__SA __A __D __SD __

11. We don't get along well together.

__SA __A __D __SD __

12. We confide in each other.

__SA __A __D __SD __

Evaluating and Treating Families

APPENDIX H
DEMOGRAPHIC SURVEY

1) What is your age?

- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65-74 years old
- 75 years or older

2) Please specify your ethnicity.

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian / Pacific Islander
- Other

3) How many people (other than yourself) are there living in your home whom you are related to by birth, marriage, or adoption.

- 1-2
- 2-3
- 4-5
- 5-6
- 7-8
- 9-10

- 10+

4) What is your marital status?

- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

5) In the past 12 months has your household received assistance from any of the following:

- Local Food Pantry/Food Bank
- Supplemental Nutrition Assistance Program (SNAP) (EBT/Food Stamps)
- Women Infants and Children Nutrition Program (WIC)
- None of the above

