UNDERGRADUATE RESEARCH IN NATURAL AND CLINICAL SCIENCE AND TECHNOLOGY (URNCST) JOURNAL
Read more URNCST Journal articles and submit your own today at: https://www.urncst.com

REVIEW OPEN ACCESS

The Relationship of Food Insecurity and Mental Health in Single-Parent Households: A Literature Review

Jorja R. Strickland, BSc Student [1]*

[1] Department of Anthropology and Archaeology, University of Calgary, Calgary, Alberta, Canada T2N 3H2

*Corresponding Authors: jorja.strickland@ucalgary.ca

Abstract

Introduction: Food insecurity is recognized as an extensive physical health concern globally, it also has impacts on mental well-being, contributing to elevated rates of depression and stress, among other symptoms of psychological distress. This relationship between food insecurity and poor mental health is heavily supported; however, previous research on this topic has focused on nuclear families as opposed to single-parent family structures. This review comprehensively examined food insecurity and mental health in single-parent households to better understand the role that family structure may have in this relationship.

Methods: A literature search was conducted using three terms stipulated for study inclusion: "mental health", "food insecurity", and "single parent". Primary studies were identified with no restrictions on study type and type of data (qualitative or quantitative) for a more comprehensive review.

Results: All of the studies included in this review supported a relation between food insecurity and mental health in single-parent households, with individuals in this demographic experiencing higher rates of both compared to the general population. This relation was observed in people from a variety of developed countries, suggesting that such findings could potentially be noteworthy throughout regions of similar elements as those represented.

Discussion: It is suggested through these results that being in a single-parent household increases the risk of food insecurity, contributing to poor mental health within this population. There are many gaps in the literature on single-parent households to explore further, including the experience of single fathers and how this relation appears in developing countries as well as a need to explore a wider range of mental health conditions resulting from food insecurity.

Conclusion: Food insecurity is a significant concern in single-parent households. This increases the risk of poor mental health in these households, seen in higher rates of depression, among other conditions. Public health institutions should consequently consider this demographic when working towards new programs or initiatives aimed at addressing food insecurity and mental health problems.

Keywords: food insecurity; mental health; single-parent households; food insufficiency; depression; single mothers; family structure

Introduction

Food insecurity, for the purpose of this review, is recognized when a person cannot consistently access safe and nutritious food [1]. It is perceived as a worldwide concern, being that in 2021, around 2.3 billion people globally were moderately to severely food insecure, with this number increasing each year [2].This review observes food insecurity at a household level in order to better gather acute data around families, specifically in regard to the socioeconomic factors that make some households more vulnerable to food insecurity than others. Although exploring it at the individual level potentially has certain benefits, exploring food insecurity at the household level can allow observation of single parent families as a whole unit, instead of diluting the research with specific individuals in that household. Food insecurity has patent physical health consequences, but it also impacts mental well-being. Mental health conditions can often get overlooked in favour of physical ones, due to being harder to diagnose and less observable in many cases. However, its important to acknowledge that an individual's health is impacted by their emotional and mental state. Considering this, a "whole person approach" is stressed [3]. This is relevant to many circumstances, but for the purpose of this review, can be concisely examined in regard to food insecurity, specifically its physical indications, and its mental health outcomes. The implications of food insecurity on mental health can be seen in findings from a review in which 372 143 individuals from 10 different countries were pooled for consideration in a meta-analysis.

Such results established a positive relationship between food insecurity and risk of depression and stress. [4]. This is seen across all global regions, suggesting that the relation between food insecurity and poor mental health is accurate across cultural contexts [5]. However, most information on food insecurity and mental health is based on a nuclear family structure, one of a father, mother, and biological children. These intact families generally report lower levels of depression compared to non-intact families [6]. As well, findings in South Korea indicate that single parents have significantly poorer mental health than partnered parents [7]. Given the higher odds of food insecurity in single-parent households [8], it is crucial to consider the effect of food insecurity on the mental health of these families. Having established the differences concerning the experience of these two types of households, nuclear and single parent, it is recognizable that single parent households face poorer outcomes in the individual factors of food insecurity and mental health. Although this research indicates single parent households to being a vulnerable household group, there is a noticeable gap in the literature surrounding the research of single parent households, specifically those that experience food insecurity and their mental health outcomes. In response to uncertainty about the specific correlation between food insecurity and mental health in single-parent households, this review examined the interaction of all three components to gather as an informed foundation, specifically how food insecurity and mental health is exacerbated in single parent households. The established relationship of these factors is intended to be used for public policy concerns and global health initiatives, while also posing as a key basis with which further research proposals can utilize as a purpose to explore the topic more.

Methods

Literature Search and Eligibility Criteria

A search was conducted through the University of Calgary's Libraries and Cultural Resources database throughout September 24 to October 13, 2023. In this database, the search was narrowed to only include articles. The search comprised three specific keywords: "mental health", "food insecurity", and "single parent". For studies to be considered for inclusion, all three terms had to be present in the abstract. Following article screening using this method, study eligibility was assessed at the full-text level. Studies were included in the review with no restrictions on study type, with both quantitative and qualitative findings included to be as comprehensive as possible. Only studies in English were examined, while no studies were included before the year 2000, to allow for prevalence in the findings through the use of recent information. Further, in order to be eligible, the studies must contain participants with a defined mental health condition, such as a depressive or anxiety disorder. Studies are still considered eligible if other health conditions are present in the demographic, provided that mental health was studied independently from the other ailments. While acknowledging the global variability of definitions pertaining to minors, for this review's purposes, the age group considered for the children in the single parent households was they must be a dependent under the age of 18 (0-17 years old).

Data Collection

Relevant data from the studies that met the inclusion criteria were extracted using a spreadsheet containing the following headings: reference (lead author, year, reference #), sample, country, purpose, food insecurity measure, mental health measure, mental health conditions, and main findings.

Data Synthesis

The main characteristics of the included studies were summarized to provide an overview of the existing literature on this topic. To better understand the different factors that may impact the relation between food insecurity and mental health in our population of interest, this paper attempted to conduct subgroup analyses based on gender (male vs. female single parents), country (developed vs. developing countries), and mental health domain.

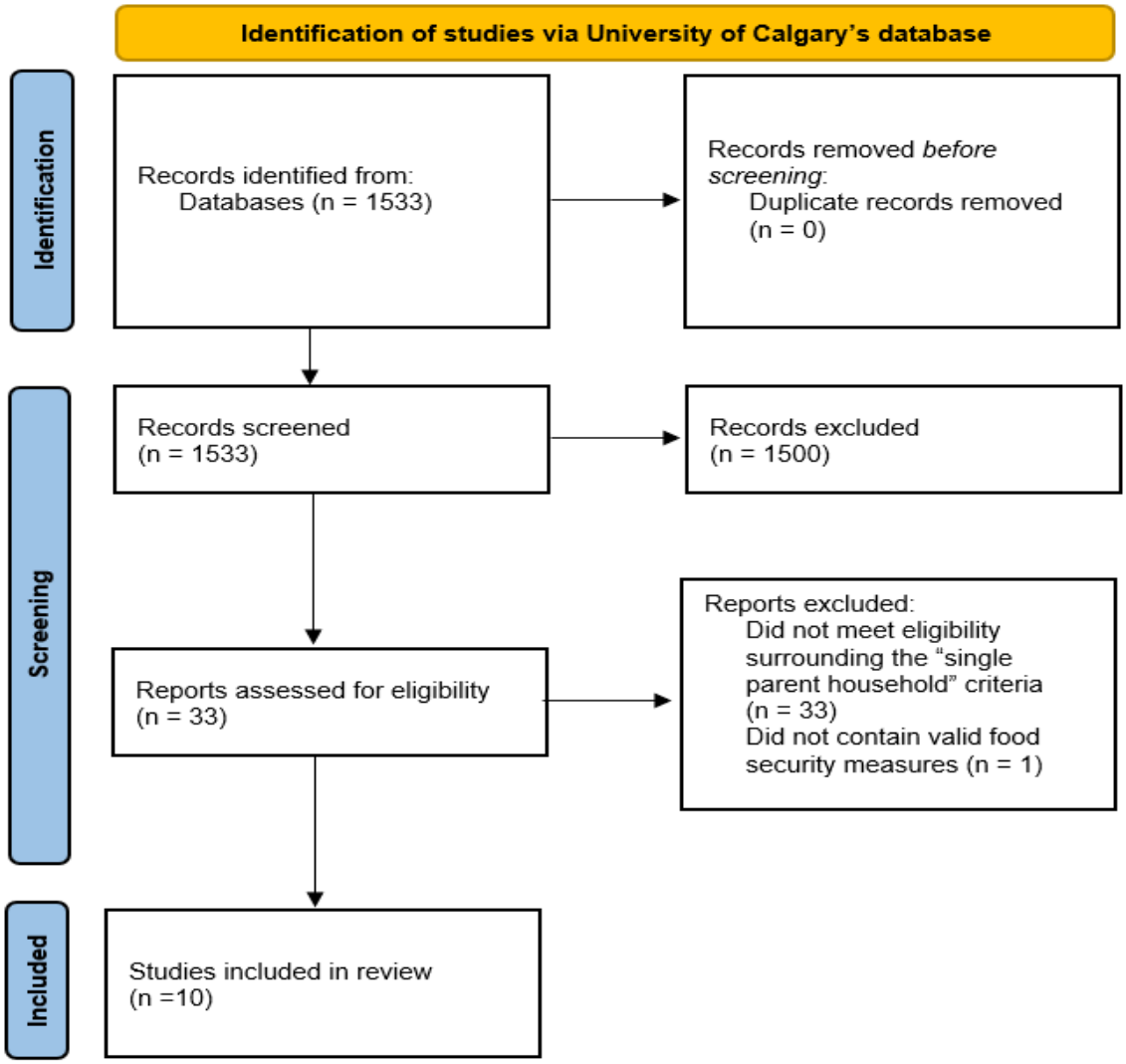

Figure 1. PRISMA diagram of the selection of studies to be included in review (created with Microsoft Word) [9].

Results

Upon an initial search of literature applicable to the topic, 1,533 articles were found. Through screening of the title and abstract, only 33 pertained to the topic. Using full text screening, seen in Figure 1 [9], 10 of the 32 studies were found to meet the determined criteria. Having used the CASP Qualitative Studies Checklist [10], all 10 studies were found to be of quality. Through the use of the Risk-of-bias VISualisation (robvis) tool [11], it was found that studies are at an overall low score of bias, with one exception being Lent et al. [18], which is some concern, results shown in Table. 2. Studies were excluded because specific defined criteria were not met in terms of including single parent households. The included studies did not differentiate single parent households from nuclear households or did not refer to single parent households specifically in their results, both of which prevent convincing conclusions to be made. Among the included articles, five different countries were represented from the United States (N =6), Canada (N =2), Denmark (N =1), and South Korea (N =1). Of the studies, different populations were considered, six of which solely included women. All of the respondents considered in the studies were 18 years or older. Nine out of the ten studies measured depression and/or anxiety, with one study reporting on "psychological distress". The prominent source of information was survey responses; however, there was one study that conducted semi-structured interviews as part of their research. A brief summary of the characteristics and main findings of each study can be found in Table 1.

Table 1. Summary of findings from included studies (n = 11)

Reference (lead author, year)	Study Type	Sample	Country	Mental Health Condition	Mental Health Measures	Food Insecurity Measures	Comparators	Significant Findings
Zekeri, 2019, [14]	Cross-sectional	200 single mothers	United States	Depression	CES-D scale	USDA Core Food Security Model	Food insecurity and no food insecurity Depression and no depression	Of the 60.7% of participants that reported symptoms of depression. 52.6% were classified as food insecure. The association between the two was positive and statistically significant. Using the bivariate regression model, food insecurity was the strongest predictor of depression (Beta = .346)
Casey et al., 2004, [15]	Cross-sectional	5306 mothers	United States	Depression	PDS	USDA 18-item Food Security Scale	Food security and food insecurity Positive maternal depression screen and negative maternal depression screen	Of the single-mother participants, 37% scored positive for depression, compared to the 32% score for married women. Mothers who did score positive were considerably more likely to report household food insecurity. Used bivariate associations between maternal depression and other categorial variables using $\chi 2$ tests
Huddleston-Casas, 2008, [16]	Cross-sectional	413 mothers	United States	Depression	CES-D scale	Core Food Security Module (CFSM)	Food insecurity and no food insecurity Depression and no depression	Of the single mothers, 69% reported clinically depressive symptoms. Pearson correlations were used, the model asserts a bidirectional relationship between food insecurity and depression.
Lund et al., 2017, [20]	Cross-sectional	4165 households	Denmark	Psychological distress	Measure of overall life-satisfaction (11-point response scale) Kessler's 6-item scale of psychological distress	USDA 6-item Food Security Scale	Food security, low food security and very low food security High life satisfaction and high psychological distress	Single parents in the lowest income quintile had a 29% response rate of food insecurity. Among those experiencing low/very low food security, the prevalence of psychological distress is higher. Logistical regression was used to determine that low food security was found in single-parent households.

Reference (lead author, year)	Study Type	Sample	Country	Mental Health Condition	Mental Health Measures	Food Insecurity Measures	Comparators	Significant Findings
Siefart et al., 2004, [10]	Cross-sectional	735 mothers	United States	Depression and anxiety	World Health Organization's Composite Diagnostic Interview (CIDI)	Single-item measure using the question "Which of the following describes the amount of food your household has to eat- enough to eat, sometimes not enough to eat, or often not enough to eat?" (Food insufficiency was coded if someone answered "sometimes" or "often"	Food insufficient and food sufficient Depression and high mastery	Low-middle income single female-headed families with children were 5.5 times more likely than other family types to be food insufficient. Risk factors for poor mental health were highly prevalent. Used three nested logistic regression models.
Muldoon et al., 2021, [18]	Cross-sectional	5588 respondents	Canada	Depression disorder and anxiety disorder	Self-reported that they had been diagnosed by a health professional with a mood disorder such as depression and manic depression, bipolar disorder, mania or dysthymia, or an anxiety disorder. Terminology consists of conditions outlined in the DSM-IV manual.	18 questions, a scale based on the US-based household food security scale module.	With hunger and without hunger Mental health diagnosis and no mental health diagnosis	Those in single-parent households have 1.54 higher odds of having a mental health diagnosis than those living alone, with others, or with a partner and children. Single-parent households have higher odds of hunger-associated mental illness. Bivariate and multivariable logistic regression models were used.
Heflin et al., 2005, [12]	Cross-sectional	753 mothers	United States	Depression	CIDI	Single-item measure using the question "Which of the following describes the amount of food your household has to eat- enough to eat,	Food insufficiency and no food insufficiency Depression and mastery	A change in food "insufficiency status "s highly positively associated with a change in major depression status. A change in marital or cohabitation status is negatively associated with a change in depression. Food

Reference (lead author, year)	Study Type	Sample	Country	Mental Health Condition	Mental Health Measures	Food Insecurity Measures	Comparators	Significant Findings
						sometimes not enough to eat, or often not enough to eat?" (Food insufficiency was coded if someone answered "sometimes" or "often"		insufficiency is strongly associated with depression and may be a causal or contributing factor. Used fixed effect models.
Vozoris et al., 2003, [13]	Cross-sectional	210 377 households	Canada	Depression	Self-rated reported health: a self-rated health scale, a functional health index, restricted activity status, number of chronic conditions, a depression index, a distress index and a social support index	Three questions: If over the past year, their household had ever "run out of money to buy food?", then two additional questions if this was the case.1) "Did anyone in your" household receive food from a food bank, soup kitchen, or other charitable agency?" 2) "Which of the following best describes the food situation in your household? a) always enough food to eat; b) sometimes not enough food to eat; or c) often not enough food to eat." The last question is a slight modification from the USDA food sufficiency indicator	Food insufficient and food sufficient Major depression and no major depression Distress and no distress	Single-parent families had greater odds of reporting food insufficiency compared to other household types. Individuals in food-insufficient households had significantly higher odds of rating their health as poor or fair, of having major depression and distress. Multiple logistics regression was used to determine this.
Chung et al., 2016, [21]	Cross-sectional	8095 participants	Korea	Stress, depression, and suicidal ideation	Self-administered health questionnaires	U.S. Household Food Security. Hunger Survey Module (18-item questionnaire)	Food-Secure, Food-Insecure without hunger, and Food-Insecure with	Participants who were single or alone after marriage were prevalent in the "food-insecure household with hunger" group.

Reference (lead author, year)	Study Type	Sample	Country	Mental Health Condition	Mental Health Measures	Food Insecurity Measures	Comparators	Significant Findings
							hunger Perceived stress and no perceived stress Depressive symptoms and no depressive symptoms Suicidal ideation and no suicidal ideation	Those with perceived poor mental health (stress, depressive symptoms, and suicidal ideation) were more represented in the "food-insecure household with hunger" group than the other groups. A chi-square test and one-way analysis of variance (ANOVA) were used to determine statistical difference in categorical and continuous variables.
Lent et al., 2009, [17]	Cohort	30 mothers	United States	Depression	CES-D scale, SF-36 Health Survey	18-item US Household Food Security Survey Module	Food insecure and food secure High depressive symptoms and low depressive symptoms Unhealthy mental health and healthy mental health	Higher than average rates of food insecurity are higher in households headed by a single mother (30.2%) or father (18.0%). Eliza, a single mother, suffered depression, causing stressful employment and leaving any job that she had (leading to food insecurity). Chi-squared tests were used.

Table 2. Risk of bias assessment

Study (lead author, date)	D1	D2	D3	D4	D5	Overall
Zekeri, 2019	Low	Some concern	Low	Some concern	Low	Low
Casey et al., 2004	Low	Some concern	Low	Low	Low	Low
Huddleston-Casas, 2007	Low	Low	Low	Low	Low	Low
Lund et al., 2016	Low	Some concern	Low	Low	Low	Low
Siefart et al., 2004	Low	Low	Low	Low	Low	Low
Muldoon et al., 2021	Low	Low	Low	Low	Low	Low
Heflin et al., 2005	Low	Low	Low	Low	Low	Low
Vozoris et al., 2003	Low	Some concern	Low	Low	Low	Low
Chung et al., 2016	Low	Low	Low	Low	Low	Low
Lent et al., 2009	Low	Low	High	Some concern	Some concern	Some concern

Table 3. Legend of headings used in bias assessment [11]

D1	Bias due to randomisation
D2	Bias due to deviations from intended intervention
D3	Bias due to missing data
D4	Bias due to outcome measurement
D5	Bias due to selection of reported result

Food Security and Mental Health Measures

Among the 10 included studies, various methods were used to determine food insecurity. The most common survey was the USDA 18-item Food Security Scale, which was used in four of the studies from the United States as well as the studies from Denmark, Canada, and South Korea. The studies that did not use this questionnaire instead used a survey, with a single-item measure with one question: "Which of the following describes the amount of food your household has to eat- enough to eat, sometimes not enough to eat, or often not enough to eat?", with food insufficiency being coded as "sometimes" or "often". This measure was used in two of the studies from the United States [11,13]. One Canadian study [14] used a survey that was composed of three questions. The first question asked respondents whether their household had ever "run out of money to buy food?", followed by two additional questions if they answered, 'yes' to the first: 1) "Did anyone in your household receive food from a food bank, soup kitchen, or other charitable agency?" and 2) "Which of the following best describes the food situation in your household? A) always enough food to eat; b) sometimes not enough food to eat; or c) often not enough food to eat." The last question represents a slight modification from the USDA food sufficiency indicator, which was used in most of the other studies. In addition to the variety of food security measures, several different tools were used to assess mental health symptoms. The specific measures were as follows: the Center for Epidemiological Studies Depression Scale (CES-D), the Posttraumatic Stress Diagnostic Scale (PDS), the Short Form (36) Health Survey (SF-36) with a mental health component, Kessler's 6-item scale of psychological distress, the WHO's Composite Diagnostic Interview, and various forms of self-report scales, indexes, and questionnaires.

United States

The United States comprises six out of 11 (55%) of the included studies. One study, by Zekeri, 2019, considered African-American single mothers who were recruited from HIV clinics in Alabama. [15]. It is also a part of a larger, longitudinal, multi-county project called Food Insecurity in Poor, Female-Headed Families in Five of Alabama Black Belt Counties. The participants chosen had to be 18 years of age or older, African American mothers, as well as having at least one child living at home. Although the participants have the additional condition of being diagnosed with HIV/ AIDS, the results are still applicable to the broader topic of food insecurity and mental health. The study found that of the single mothers, 60.7% of them reported symptoms of depression while 52.9% were classified as food insecure. In addition, food insecurity was observed to be the strongest predictor of depression. Another study, Casey et al., 2004, comprised of a convenience sample of 5306 mother participants with young children, aged 0-3 years old, being seen in general clinics or emergency rooms [15], which took place between 2000-2001, with single mothers accounting for almost half of the participants (46.3%). Of the minority of single mothers, 37% were positive for

depression, while married women were less at 32%. Concerning this difference of depression screening, mothers who scored positive on the depression screen were considered more likely to report household food insecurity.

Canada

Two of the included studies (18%) were conducted in Canada. The first study, Muldoon et al., which used the Canadian Community Health Survey (CCHS), cycle 4.1, 2007-2008, with the sampling containing all participants, except those living on Indian Reserves and Crown Land, institutional residents, full time members of the Canadian Forces, and residents in certain remote regions. Children (aged less than 18 years) and seniors (aged over 64 years) were also excluded [19]. This study found that individuals in single-parent households have 1.54 higher odds of having a mental health diagnosis compared to those living alone, with others, or with a partner and children in a nuclear family. Additionally, single-parent households had higher odds of hunger-associated mental illness and were identified as a vulnerable group for both food insecurity and mental illness. The second study, Vozoris et al., [14] used a larger demographic, as it used participants from the National Public Health Survey (NPHS), specifically Cycle 2, 1996-1997. The findings of this study showed that household food insufficiency was significantly associated with poorer health status, including the mental dimension of health.

Denmark

This study, Lund et al., included data from a questionnaire-based survey addressing food budget constraints in Denmark, which took place in 2015. A disproportional stratified sampling design was used to obtain more accurate analysis in the associations between food insecurity and socio-demographic characteristics, eating behavior, and health-related factors. As a result of this design, households in the lowest income quintile were oversampled, as well as single person and single parent households. After the design was implemented, a gross sample of 4165 households was randomly identified by Statistics Denmark [21]. They found that low food security was considerably more prevalent in single-parent households. With this, among the low/very low food-secure individuals (as seen in single-parent households), overall life satisfaction was considerably lower while the prevalence of psychological distress was higher, compared to the food secure.

Korea

This study, conducted by Chung et al., was based on the Korean National Health and Nutritional Examination Survey (KNHANES) (2012-2013) that collected data from 16113 people between the ages of 20 and 64 years [22]. This data includes demographic variables, such as income and marital status, as well as health-related variables (eg. smoking, alcohol consumption, physical activity, etc.) through the use of health interviews, health examinations, and a nutrition survey. The study found a higher prevalence of participants who were single or alone after marriage (including single parents) in the "food-insecure household with hunger" group than those in the "food-secure household" group. The food-insecure group also had more people with perceived poor mental health (stress, depressive symptoms, and suicidal ideation) than the food-secure households' group.

Discussion

Overall, the included studies all supported a relation between food insecurity and poor mental health among single parents, with rates of both being higher in single-parent households compared to the general population. While the relationship between food insecurity and mental health is not novel, there is now an additional consideration that being in a single-parent household increases the risk of food insecurity, and, by association, poor mental health. As well, the congruency of such findings highlights how single parents are often a demographic in a disadvantaged position, which can lead to food insecurity and subsequent mental health problems. There is logical reasoning to support why this may be the case, specifically, why food insecurity is so prevalent in single parent households. In one such explanation, single parent households have lower income on average than dual-parent households [23]. Having lower income could reasonably progress that such families have less means of getting food. Moreover, there is also research that shows that single-parent households are less likely to have received transfers than dual-parent households in the countries they studied (Great Britain, France, Germany, Italy, Spain, U.S.) [23]. Both these findings could suggest that single parent families have less means of obtaining food than dual-parent families. To further support these findings is a study completed by Crosier et al., of which had the term 'financial hardship', which was defined solely by having insufficient money to buy food. Following this measurement of financial hardship, it was found that the prevalence of moderate to serve mental disability was pronounced among single mothers at 28.7%, the primary factor being financial hardship [24]. Through the reasoning discussed surrounding single parents and their income and financial status, the evidence of the studies examined in this review can be reasonably supported, justifying the results that single parents experience high rates of food insecurity that results in poor mental health.

Strengths and Limitations

All studies considered in this review concluded with similar results, those of which, when taken as a whole, indicates that single parents face a high rate of food insecurity. As seen in many of the studies, when viewing large demographics through surveys, the single parents, a

minority group, have a very recognized rate of food insecurity. Moreover, when conducting such studies, there appears to be a positive correlation with food insecurity and poor mental health, and thus have established that single parents also tend to have poor mental health. The findings of these studies together is very persuasive in that their determination, although varied in demographical representation and types of statistical analyses, come to the same conclusion regarding the elements of food insecurity and mental health that single parents experience.

Acknowledging the strong link between single parent households, food insecurity, and mental health shown in this review, there are also apparent limitations that should be examined, which could potentially represent approaches of future research. One such obstacle being that single mothers were participants chosen in majority of the studies in this review, while the rest viewed single parents as a whole. As such, it was not possible to conduct a subgroup analysis according to gender (male vs. female single parents). There is one study that should be recognized that did explore this gender comparison, as Lent et al., [16] found that there were higher than average rates of food insecurity are found in households headed by a single mother at 30.2%, while households headed by a single father have rates at 18.0%. The gender distinction noted by Lent is the exception in this review, whereas the rest do not mention single fathers. This is important because while mothers make up to 80% of all single parents in the United States [25], there is still a gap in the literature with regards to the single fatherhood experience, especially with respect to the connection between food insecurity and mental health. This lack of information is highly relevant given that single mothers have a 35.6% smaller median income than single fathers [25], potentially contributing to a higher rate of food insecurity in female-led single parent households. This notion is supported by a report by the United Nations [26] which stated that 31.9% of women in the general population were moderately/severely food insecure in comparison to 27.6% of men. The assumption that food insecurity is more prevalent in single mothers, formed on the basis of their lower income, can however be contested. , Through research directed at understanding mortality rates among single fathers [27], a study found that single fathers have more than two times greater mortality risk than other parents (including single mothers), which is related to unhealthy lifestyle behaviours given this new insight, its evident that single fathers experience challenges as well, the nature of which should be investigated in order to bring clarity around the prevalence of the food insecurity in this group, while also assessing such mental health qualities that could lead to "unhealthy lifestyle behaviour" [27]. Given the current insufficiency of the research being done surrounding single parenthood, shifting gender norms, and the growing prevalence of divorce, future studies on food insecurity and mental health should consider the impact of both family structure and gender on this relation.

Another important note about the literature included in this review is that, although there were four different countries represented, none of the studies were conducted in countries that are classified as "developing". This is particularly concerning given that these countries are home to many of the world's most vulnerable citizens who are often the first to suffer from food and nutritional insufficiency, often representing a lack of food at the national level. It is estimated that over 50% of child deaths in developing countries are a result of malnourishment [28]. As a result of this gap in the literature, the information shared in this review does not completely reflect the current state of global food insecurity. The lack of data from developing countries could reflect a level of health disparity and social support between low- vs. high-income countries. Also seen in depression rates, where developed countries have higher rates of depression than less developed countries, while the true rates are probably much higher than reported in developing countries. The underrepresentation of developing countries in such healthcare statistics could potentially be due to the higher chance of diagnosis in developed countries, with the effective health care infrastructures in place [29]. Therefore, the underrepresentation of developing countries when concerning conditions such as food insecurity and depression is probably not accurate to realistic circumstances, but moreover is a reflection of the distinction between health care establishment of the two kinds of countries. Additional research is needed to understand how the relation between food insecurity and mental health may differ in developed vs. underdeveloped countries, particularly among single parents.

When considering mental health conditions, the literature reviewed primarily considers symptoms of depression and anxiety. This range of mental health conditions does not accurately reflect the much wider range that has been studied about food insecurity among nuclear families. A systematic review on the association between mental health outcomes and food insecurity [30] addressed not only depression and anxiety but also externalizing behaviours, internalizing behaviours, hyperactivity, and stress, with the majority of the studies finding a significant relation between the presence of these conditions and food insecurity. Another review considered the correlation between disordered eating behaviour and food insecurity in nuclear families [31]. The results suggest that food insecurity is linked to a greater likelihood of binge eating and more severe binge eating symptomatology. Associations between food insecurity and compensatory behaviours (such as behaviours trying to control weight) may also exist. The results found in this review, although very effective when concerning both depression and anxiety in single parent households, lack the breadth of mental health symptoms that have been researched for nuclear families. Therefore, although this review included two of the primary mental health conditions related to food insecurity, there is a much broader depth of mental health

symptoms to consider when studying this relation in single-parent families.

Conclusion

This review found that single-parent households have frequent disclosures of food insecurity, and, as a result, typically have poor mental health (such as observed symptoms of depression). Overall, there is an apparent lack of research on single-parent households that exemplifies future directions that can be taken to remedy this literature gap. As demonstrated by this review's limitations, there is much more to explore about single parent households in developing countries, whether that be delving into the food insecurity they experience, the mental health outcomes, or potentially examining the reasons behind this discrepancy between information on single parent households in developing and developed countries. Moreover, there is further research that can be done surrounding single fathers, which appear to be a potentially underrepresented group in scientific literature. Through the illumination of food insecurity and its resulting mental health effects in single parent households, there is determined to be potentially more scrutinization need of this vulnerable demographic group. Although further consideration would be valuable, the evidence gathered under this review has important implications, both in national level healthcare, and potentially universally as well. Specifically, the results from all studies indicate single parent households as a vulnerable group to food insecurity and, consequently, poor mental health. In recognition of the uniformity of these results, there could be more effective public health policy developed to support single parent households, as well as particular consideration for government fund allocation to adequately address food insecurity and mental health towards this group.

List of Abbreviations Used

HIV: human immunodeficiency virus
NPHS: National Population Health Survey
USDA: United States Department of Agriculture
DSM-IV: Diagnostic and Statistical Manual of Mental Disorders
CES-D: Center for Epidemiological Studies Depression Scale
PDS: Posttraumatic Stress Diagnostic Scale
SF-36: Short Form (36) Health Survey
CIDI: Composite International Diagnostic Interview
CCHS: Canadian Community Health Survey
NPHS: National Public Health Survey
KNHANES: Korean National Health and Nutritional Examination Survey

Conflicts of Interest

The author declares that they have no conflicts of interest.

Ethics Approval and/or Participant Consent

This review did not require any ethics approval or participant consent because no participants were used throughout the research of the article.

Authors' Contributions

JRS: contributed to the study topic, collected and analyzed data, drafted the manuscript, and made revisions throughout the process until final approval for submission.

Acknowledgements

I would like to sincerely thank Emily Smith for her work as a first peer reviewer, with her contributions to the review's design and topic, as well as her guidance throughout the planning of the manuscript, collection of data, and revision processes.

Funding

This study was not funded.

References

[1] Food and Agriculture Organization of the United Nations. Hunger and food insecurity [Internet]. Food and Agriculture Organization of the United Nations. [cited 2023 Nov 25]. Available from: https://www.fao.org/hunger/en/
[2] World Health Organization. UN Report: Global hunger numbers rose to as many as 828 million in 2021 [Internet]. World Health Organization. [cited 2023 Nov 25]. Available from: https://www.who.int/news/item/06-07-2022-un-report—global-hunger-numbers-rose-to-as-many-as-828-million-in-2021
[3] Sminkey P. The "Whole-Person" Approach: Understanding the Connection Between Physical and Mental Health. Professional Case Management, 2015 June; 20(3): 154–155. https://doi.org/10.1097/NCM.0000000000000094
[4] Pourmotabbed A, Moradi S, Babaei A, Ghavami A, Mohammadi H, Jalili C, et al. Food insecurity and mental health: a systematic review and meta-analysis. Public Health Nutrition. 2020 Mar 16; 23(10): 1778-1790. https://doi.org/10.1017/S1368980020001512
[5] Jones AD. Food insecurity and mental health status: a global analysis of 149 countries. American Journal of Preventative Medicine. 2017 Aug; 53(2):264–273. https://doi.org/10.1016/j.amepre.2017.04.008
[6] Yang Y, Jiang J. Influence of family structure on adolescent deviant behavior and depression: the mediation roles of parental monitoring and school connectedness. Public Health. 2023 Feb 20; 217:1-7. https://doi.org/10.1016/j.puhe.2023.01.013
[7] Kong KA, Choi HY, Kim SI. Mental health among single and partnered parents in South Korea. PloS ONE. 2017 Aug 14; 12(8). https://doi.org/10.1371/journal.pone.0182943

[8] Coleman-Jensen AJ. U.S. food insecurity status: Toward a refined definition. Social Indicators Research. 2009 Feb 20; 95(2): 215-230. https://doi.org/10.1007/s11205-009-9455-4
[9] Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ (Clinical research ed.). 2021 Mar 29; 372(71). https://doi.org/10.1136/bmj.n71
[10] Critical Appraisal Skills Programme. CASP (Qualitative) Checklist. [Internet]. [cited 2023 Dec 22]. Available from: casp-qualitative-studies-checklist-fillable.pdf (casp-uk.net)
[11] McGuinness, LA, Higgins, JPT. Risk-of-bias VISualization (robvis): An R package and Shiny web app for visualizing risk-of-bias assessments. Res Syn Meth. 2020; 1-7. https://doi.org/10.1002/jrsm.1411
[12] Siefert K, Heflin CM, Corcoran ME, Williams DR. Food Insufficiency and Physical and Mental Health in a Longitudinal Survey of Welfare Recipients. Journal of Health and Social Behaviour. 2004 Jun; 45(2):171-186. https://doi.org/10.1177/002214650404500204
[13] Heflin CM, Seifert K, Williams DR. Food insufficiency and women's mental health. Findings from a 3-year panel of welfare recipients. Social Sciences & Medicine. 2005 Nov; 61(9), 1971-1982. https://doi.org/10.1016/j.socscimed.2005.04.014
[14] Vozoris NT, Tarasuk VS. Household food insufficiency is associated with poorer health. The Journal of Nutrition. 2003 Jan; 133(1): 120-126. https://doi.org/10.1093/jn/133.1.120
[15] Zekeri AA. Food Insecurity and Maternal Mental Health among African American Single Mothers Living with HIV/AIDS in the Alabama Black Belt. Journal of Health Care for the Poor and Underserved. 2019 Nov; 30(4):151-159. https://doi.org/10.1353/hpu.2019.0124
[16] Casey P, Goolsby S, Berkowitz C, Frank D, Cook J, Cutts D, et al. Maternal depression, changing public assistance, food security, and child health status. Pediatrics (Evanston). 2004 Feb 1; 113(2): 298-304. https://doi.org/10.1542/peds.113.2.298
[17] Huddleston-Casas C, Charnigo R, Simmons LA. Food insecurity and maternal depression in rural, low-income families: a longitudinal investigation. Public Health Nutrition. 2008 Sept 15; 12(8): 1133-1140. https://doi.org/10.1017/S1368980008003650
[18] Lent MD, Petrovic LE, Swanson JA, Olson CM. Maternal Mental Health and the Persistence of Food Insecurity in Poor Rural Families. Journal of Health Care for the Poor and Underserved. 2009 Aug; 20(3): 645-661. https://doi.org/10.1353/hpu.0.0182
[19] Muldoon KA, Duff PK, Fielden S, Anema A. Food insufficiency is associated with psychiatric morbidity in a nationally representative study of mental illness among food insecure Canadians. Social Psychiatry and Psychiatric Epidemiology. 2012 Oct 11; 48(5):795-803. https://doi.org/10.1007/s00127-012-0597-3
[20] Wang JL. The difference between single and married mothers in the 12-month prevalence of major depressive syndrome, associated factors and mental health service utilization. Social Psychiatry and Psychiatric Epidemiology. 2004; 39(1):26-32. https://doi.org/10.1007/s00127-004-0699-7
[21] Lund TB, Holm L, Tetens I, Smed S, Nielson AL. Food insecurity in Denmark—socio-demographic determinants and associations with eating- and health-related variables. European Journal of Public Health. 2017 Sept 3; 28(2): 283-288. https://doi.org/10.1093/eurpub/ckx121
[22] Chung HK, Kim OY, Kwak SY, Cho Y, Lee KW, Shin MJ. Household Food Insecurity Is Associated with Adverse Mental Health Indicators and Lower Quality of Life among Koreans: Results from the Korea National Health and Nutrition Examination Survey 2012–2013. Nutrients. 2016 Aug 5; 9(12): 819-. https://doi.org/10.3390/nu8120819
[23] Morelli S, Nolan B, Palomino JC, Van Kerm P. The Wealth (Disadvantage) of Single-Parent Households. The Annals of the American Academy of Political and Social Science. 2022 Nov 28; 702(1): 188-204. https://doi.org/10.1177/00027162221123448
[24] Crosier T, Butterworth P, Rodgers B. Mental health problems among single and partnered mothers: The role of financial hardship and social support. Social Psychiatry and Psychiatric Epidemiology. 2007 Jan 3; 42(1): 6-13. https://doi.org/10.1007/s00127-006-0125-4
[25] Davidson L. Single Parent Statistics in 2023 (Mothers vs. Fathers Data) | Parenting Mode [Internet]. parentingmode.com. [cited 2023 Dec 1]. Available from: https://parentingmode.com/single-parent/
[26] UN Report: Global hunger numbers rose to as many as 828 million in 2021 [Internet]. Newsroom. [cited 2023 Dec 1] Available from: https://www.fao.org/newsroom/detail/un-report-global-hunger-SOFI-2022
[27] Chiu M, Rahman F, Vigod S, Lau C, Cairney J, Kurdak P. Mortality in single fathers compared with single mothers and partnered parents: a population-based cohort study. The Lancelot Public Health. 2008 Feb 14; 3(3):115-123. https://doi.org/10.1016/S2468-2667(18)30003-3
[28] Smith L, El Obeid AE, Jensen H. The geography and causes of food insecurity in developing countries. Agricultural Economics. 2000; 22(2):199-215. https://doi.org/10.1016/S0169-5150(99)00051-1

[29] World Population Review. Depression Rates By Country 2020 [Internet]. worldpopulationreview.com. [cited 2023 Dec 1]. Available from: https://worldpopulationreview.com/country-rankings/depression-rates-by-country
[30] Cain KS, Meyer SC, Cummer E, Patel KK, Casacchia NJ, Montez K, et al. Association of food insecurity with mental health outcomes in parents and children. Academic Pediatrics. 2022 Oct; 22(7):1105-1114. https://doi.org/10.1016/j.acap.2022.04.010
[31] Hazzard VM, Loth KA, Hooper L, Black Becker C. Food insecurity and eating disorders: a review of emerging evidence. Current Psychiatry Reports. 2020 Oct 30; 22(12):74-74. https://doi.org/10.1007/s11920-020-01200-0

Article Information
Managing Editor: Jeremy Y. Ng
Peer Reviewers: Emily Smith, Patricia Acosta
Article Dates: Received Dec 01 23; Accepted Jan 08 24; Published Apr 03 24

Citation
Please cite this article as follows:
Strickland JR. The relationship of food insecurity and mental health in single-parent households: A literature review. URNCST Journal. 2024 Apr 03: 8(4). https://urncst.com/index.php/urncst/article/view/554
DOI Link: https://doi.org/10.26685/urncst.554