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ORIGINAL ARTICLE

Food security for survivors of intimate partner violence: Understanding the role of food in survivor well-being

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Abstract

Intimate partner violence (IPV) and food security are two leading public health issues that disproportionately impact women in the United States. Despite this connection, the relationship between IPV and food security has been relatively unexplored. While food security is a known factor in increased well-being, it is not often explicitly included in care for survivors. As part of a larger study on survivors of domestic violence who are receiving services from a domestic violence and sexual assault agency in the Southern United States, we analysed participant responses (n = 26) to various scales (i.e. depression, anxiety, PTSD, disability, well-being, hope, food security) to determine the relationships between mental health and food-related variables. Importantly, findings from our study show that survivors experience low food security at higher rates (53.8%) than the U.S. national average (11.5%). Additionally, the proportion of survivors in our sample who are receiving some form of food aid and remain food insecure is high (26.9%), leading to questions about the adequacy of food aid. Finally, our results underpin the relationship between food security and mental health for survivors, as low food security is positively correlated with depression, PTSD, disability, trouble concentrating, lack of hope and decreased well-being. These findings have implications for how we evaluate food security and the role it plays in well-being for survivors.

KEYWORDS
domestic violence, hunger, mental health, nutrition, women

1 | INTRODUCTION

Women are disproportionately impacted by both intimate partner violence (IPV) (Black et al., 2011; Breiding et al., 2020) and food security (Coleman-Jensen et al., 2016; RTI International, 2014). IPV is a leading public health issue and is defined as physical or sexual violence, stalking, psychological aggression or coercion by a past or current intimate partner. Food security exists when "…all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 1996). Survivors often face depression (Gulati & Kelly, 2020; Kessler et al., 2001), housing instability (Baker et al., 2010), and financial hardship (Hahn & Postmus, 2014) all of which can be a result of or risk factor for IPV. While it can be assumed that issues such as housing and economic instability would impact food security, scant work has been done to examine

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the relationship between food security and IPV, particularly in the United States (U.S.). As a result of this gap in research, food-related services are often not explicitly included in care for survivors. In this paper, we highlight our study which utilises an interdisciplinary lens to approach two confounding public health crises: intimate partner violence and food security.

It is estimated that 37.3% of women experience violence by an intimate partner during their lifetime (Smith et al., 2017), often resulting in consequences for both physical and mental health (Breiding et al., 2014; Campbell, 2002). The consequences of IPV also extend to economic instability with adverse implications for housing and children (Adams et al., 2008; Adams et al., 2012; Hahn & Postmus, 2014; Jasinski et al., 2002; Klein et al., 2019; Owen et al., 2007). As survivors face housing instability, they may utilise emergency shelters to secure a safe and stable place to live (Grossman & Lundy, 2011; Panchanadeswaran & McCloskey, 2007) as well as receive supportive services such as advocacy and counselling (Baker et al., 2009). Advocates in these organisations typically assist survivors in meeting goals, such as securing housing or employment, while staying safe and healing from trauma (Goodman et al., 2016; Rivas & Vigurs, 2018).

Another leading public health crisis is that of low food security. Despite the $68 billion allocated to the Supplemental Nutrition Assistance Program (SNAP) and other food assistance programs (Center on Budget and Policy Priorities, 2019), 11.5% of the U.S. population experiences low or very low food security (Feeding America, 2018). High levels of food security have been long associated with increased well-being as well as other positive physical and mental health outcomes (Stuff et al., 2004). More specifically, there is evidence that individuals suffering from low food security have increased chances of experiencing depression (Leung et al., 2015) anxiety and/or stress (Martin et al., 2016; Tarasuk et al., 2013) and PTSD (Whittle et al., 2019). Additionally, those with a physical or psychological disability tend to have lower food security (Brucker, 2016; Coleman-Jensen & Nord, 2013). Those who are unhoused also have lower rates of food security when compared to those who are stably housed (Gundersen et al., 2003). While food assistance can aid in food access, it is noted that oftentimes it is insufficient (Chilton et al., 2014; Melchior et al., 2009).

It is crucial to explore the intersection of these two issues in order to better care for and serve those who have experienced IPV. Though both food security and IPV are leading health issues in the U.S., their nexus is seldom evaluated. Generally, it has been found that women who have low food security experience more violence than their food secure counterparts (Breiding, Chen, & Black, 2014), while others have explored more specific relationships between different types of intimate partner violence (i.e. sexual, physical, psychological) and low food security (Conroy et al., 2019; Ricks et al., 2016).

Several pathways linking IPV and low food security are possible, though most of this work is located outside of a U.S. context. Lentz (2018) identifies that a survivor's food security can be impacted if a perpetrator withholds food/resources or the survivor flees an abusive situation, potentially changing their financial stability. Additionally, mental health problems, as a result of IPV, can impact a woman's motivation to purchase and prepare food, seek food aid or maintain a job – all of which have the potential to impact food security (De Moraes et al., 2016; Marazziti et al., 2010; Melchior et al., 2009; Power, 2006). It is also hypothesised that, like poverty, low food security can promote stress, placing individuals at an increased risk for IPV (Conroy et al., 2019). Finally, given that IPV is the leading cause of homelessness (Pavao et al., 2007), and those who are homeless experience lower rates of food security (Gundersen et al., 2003), IPV has direct implications for food security for women and children.

Given the limited research on this intersection and the implications that it has on the lives of survivors, it is important to advance our understanding of this issue and the specific ways in which survivors are impacted. More specifically, it can inform the food-related services that organisations and shelters provide beyond the provision of meals during a survivor's stay. This study further highlights the importance of this issue, drawing relationships between food security and other facets of well-being. The objectives of this study are to examine (1) the rate at which survivors experience low or very low food security levels, (2) the challenges and benefits of food aid for survivors and (3) the relationship between well-being and food security in our sample of survivors.

What is known

- Particularly in international contexts, women who experience violence are more likely to experience low food security.
- Among the general population, those who experience low food security face more barriers in achieving good mental health.

What this paper contributes

- Survivors in the U.S. who are actively receiving services from a domestic violence agency are disproportionately burdened with low food security.
- Intimate partner violence's relationship with mental health, disability, concentration, hope and well-being suggests food security is an important consideration for survivors to reduce negative impacts of intimate partner violence.
- Survivors may face barriers in obtaining food aid, and it may be inadequate for those that do receive it.

2 | MATERIALS AND METHODS

For this study, participants were invited via flyer at a domestic violence and sexual assault agency in the Southern U.S. This agency serves approximately 1500 women, children and men annually, offering a 24-hour crisis hotline, emergency shelter, housing programs and a variety of ancillary services (e.g. counselling, legal, career development, etc.). Participants were eligible if they were over 18 and currently receiving

services from the agency. If a participant agreed, they were asked to complete three semi-structured interviews every months. Given disruptions to research caused by COVID-19, participants only completed two semi-structured interviews. The focus of this paper is on the quantitative components of the initial semi-structured interview data, which consisted of assessments that measure depression, anxiety, PTSD, well-being, hope and food security. These assessments were built into a Qualtrics form which interviewers read aloud to participants and entered as responses. All quantitative measures included in this interview were read verbatim and scored according to the assessment instructions. Participants were first interviewed in February 2020, with interviews taking on average roughly 1 hour. All interviews took place in-person and were audio recorded. All data were stored on secure servers at a large midwestern university. Identifiable information was removed from transcripts and stored separately. A licensed counsellor was available for survivors to be referred to should they become distressed during the interview. This study was part of a larger study examining clinical intervention, and so we focused only on aspects of the interview related to food security, with particular emphasis on the initial interview. A total of 26 people were interviewed. All audio recordings were sent to an external transcription agency approved for this type of research. Ethics approval for this study was obtained by Michigan State University's Institutional Review Board. All participants participated in informed consent.

2.1 | Sample

Our sample consisted of participants who were currently or had previously utilised services at this agency in the Southern U.S. at the time of their initial interview. This domestic violence and sexual assault agency defines IPV as physical or sexual violence, stalking, psychological aggression or coercion by a past or current intimate partner (Black et al., 2011). Our sample (see table 1) consisted of all women-identified participants who have currently or previously utilised intensive services (e.g. shelter).

TABLE 1 Sample demographics ($n = 26$)

Race/ethnicity	%	*n*
White	32	8
Hispanic	32	8
Black	27	7
Asian	8	2
Other	4	1
Education		
8th grade or less	4	1
9th-12th grade	8	2
High school graduate	78	2
GED	8	2
Vocational training	34	1
Some college	23	6
Associates degree	12	3
Bachelor's degree	32	8
Advanced degree	4	1

Notes. Educational and racial/ethnic information for study sample

2.2 | Measures

Assessments were selected for their ties to well-being in survivors of intimate partner violence and their relationship to food security. The following assessments have been previously utilised in research with survivors of intimate partner violence. Additionally, the measures for depression, anxiety, PTSD and disability are regularly included in the intake procedures at the agency featured in this study.

2.2.1 | Depression

The 9-item Severity Measure for Depression, otherwise known as the PHQ-9, was used to assess depression. The PHQ-9 has been reported to have excellent internal reliability with a Cronbach's α of 0.89 (Kroenke et al., 2001). This scale asked for responses to items about feeling down or avoiding certain situations. Answer responses ranged from not at all (0) to nearly everyday (4). Total scores were between 0 and 27 with higher scores indicating higher levels of depression.

2.2.2 | Anxiety

The 10-item Severity Measure for Generalised Anxiety Disorder (GAD) was used to assess anxiety. A recent study found this measure to have a Cronbach's alpha of 0.93 (Möller & Bögels, 2016). This scale asked for responses to items about feelings such as nervousness, worry and panic. Answer responses ranged from never (0) to all the time (5) on a 5-point Likert scale. The average score was calculated with higher scores indicating higher levels of anxiety.

2.2.3 | PTSD

The 9-item National Stressful Events Survey PTSD (NSESSS-PTSD) Short Scale was used to assess PTSD. The NSESS-PTSD has been reported to have strong internal consistency with a Cronbach's alpha of 0.90 (LeBeau et al., 2014). This scale asked for responses to items about events such as flashbacks or becoming easily startled. Answer responses ranged from not at all (0) to extremely (5) on a 5-point Likert scale. Total scores were between 0 and 36 with higher scores indicating higher levels of PTSD.

2.2.4 | Disability

The 36-item World Health Organisation Disability Assessment Schedule 2.0 (WHODAS) was used to assess disability over six

domains – cognition, mobility, getting along, life activities (household and work), and participation related to physical or mental health conditions. In one study, Cronbach's α coefficients were reported as follows: cognition (6 items), 0.86; mobility (5 items), 0.90; self-care (4 items), 0.79; getting along (5 items), 0.84; life activities for home (4 items), 0.98; life activities for work (4 items), 0.96; and participation in society (8 items), 0.84 (Ustun et al., 2010). Furthermore, the total internal consistency of the WHODAS 2.0 was reported as 0.96 for 36 items (Ustun et al., 2010). The WHODAS 2.0 cognition domain includes an item about concentrating that was used to assess concentration in this analysis. Answer responses ranged from none (1) to extreme or cannot do (5) on a 5-point Likert scale. Total scores (0–180) were calculated by adding scores on all items with higher scores indicating higher levels of disability. Total scores varied based on completion of subscales dependent on participant responses.

2.2.5 | Well-being

Survivors' overall *quality of life* was measured by a modified version of Andrews and Withey's (1976) Quality of Life measure (9 items). This scale asked for responses to items such as "How do you feel about your life overall?". Answers ranged from extremely happy (5) to unhappy (1) on a 4-point Likert scale. Average scores were calculated with higher scores indicating a greater quality of life.

2.2.6 | Hope

Herth's (1992) 12-item Hope Scale was used to examine change in hopefulness over time. This measure has an alpha coefficient of 0.97 with a two-week test–retest reliability of 0.91. Criterion validity has also been established. This scale asked for responses to items such as "I have a positive outlook towards life". Answers ranged from strongly disagree (1) to strongly agree (4) on a 4-point Likert scale. Scores ranged from 12 to 48 with higher scores indicating higher levels of hope.

2.2.7 | Food Security

Food security was assessed using the U.S. Household Food Security Survey Module: Six-Item Short Form (Blumberg et al., 1999). This survey asked about running out of food without having money to buy more, affording balanced meals, cutting the size of meals and eating less as a coping mechanism, and going hungry because of a lack of money for food. This survey tool can be used to refer to an individual or household. The number of affirmative responses was added together to create a score where 0–1 indicated high or marginal food security, 2–4 indicated low food security, and 5–6 indicated very low food security, with possible scores ranging from 0 to 6.

2.3 | Analysis

The interviews included the aforementioned assessments for variables individually hypothesised to have a relationship with food security in survivors of intimate partner violence. This reported quantitative data is the focus of this analysis. Each assessment was scored according to the provided scoring guide. Scores were then inspected to examine potential relationships or differences. This analysis included comparing mean scores and running Spearman's correlations to identify significant relationships. Given that this study does not have a common null hypothesis and the difficulty in providing meaningful adjustments to pairwise error rates, we report all correlations after inspecting for patterns (see Perneger, 1998).

3 | RESULTS

Of the women in our study ($n = 26$), 53.8% ($n = 14$) identified as having low or very low food security according to the USDA 6-item short-form household food security module. Additionally, when broken down into three levels defined by the USDA, we found that 46.2% ($n = 12$) identified as having high or marginal food security, 19.2% ($n = 5$) having low food security, and 34.6% ($n = 9$) having very low food security (see Table 2).

Only 46.1% ($n = 12$) of participants reported having food aid (e.g., SNAP or WIC), 26.9% ($n = 7$) of which still had low food security at some level (see Table 3).

Combined levels of low and very low food security had higher means among those who were non-white, were responsible for the care of children, utilised supportive housing (e.g., shelter or transitional housing), who had experienced abuse (e.g., physical, sexual or emotional) in the last 3 months, and who had food aid (e.g., food stamps). The mean score indicates lower food security for these groups (see Table 4).

In order to assess if there was a relationship between food security and the identified variables, Spearman's correlations were conducted (see Table 4). These correlations indicated a strong positive relationship between low food security and depression ($rs[24] = 0.504$, $p = <0.01$), PTSD ($rs[24] = 0.540$, $p = <0.01$), disability ($rs[24] = 0.404$, $p = <0.05$), and concentration ($rs[24] = 0.428$, $p = <0.05$). Strong negative correlations were found between low food security and well-being ($rs[24] = -0.463$, $p = <0.05$) and food security and hope ($rs[24] = -0.496$, $p = 0.01$). There was no significant

TABLE 2 Food security rates for survivors according to USDA module ($n = 26$)

Food security level	*n*	%
High or marginal food security	12	46
Total food secure	12	1
Low food security	5	19
Very low food security	9	35
Total food insecure	14	54

TABLE 3 Food security levels cross-tabulated with food aid status for survivors ($n = 26$)

Food aid status	*n*	%
Food secure with no food aid	8	31
Food insecure with no food aid	6	23
No food aid	14	53
Food secure with food aid	5	19
Food insecure with food aid	7	27
Food aid	12	46

TABLE 4 Mean food security scores (range: 0–6) of identified sub-groups ($n = 26$)

	Sub-group	Mean	SD
Housing	Non-supportive	2.80	2.62
	Supportive	2.36	2.84
Race/Ethnicity	Person of colour	2.72	2.71
	White	2.38	2.72
Children	Has children	3.62	2.63
	Has no children	1.62	2.40
Food aid	Has food aid	3.33	2.64
	Has no food aid	2.00	2.63
Recent abuse	Yes	3.46	2.57
	No	1.77	2.59

correlation between food security and anxiety ($rs[24] = 0.371$, $p > 0.05$). However, anxiety was trending towards significance and should be a site for future exploration (Table 5).

TABLE 5 Correlations with combined low and very low food security ($n = 26$)

	Spearman correlation	Sig. (2-tailed)
Depression	0.504**	0.009
Anxiety	0.371	0.062
PTSD	0.540**	0.004
Disability	0.404*	0.041
Well-being	−0.463*	0.017
Concentration	0.428*	0.029
Hope	−0.49**	0.01

*$p < 0.05$., two-tailed.; **$p < 0.01$., two-tailed.

4 | DISCUSSION

The goal of this study was to evaluate food security levels for survivors, the adequacy of food aid, and the relationship between different facets of well-being and food security. Our findings suggest that survivors experience less food security than the general population. Additionally, over half of our sample did not have access to food aid, and those that were receiving food aid were not protected completely from low food security. Furthermore, our findings highlight a relationship between food security and mental health, cognitive function (e.g., concentration), well-being and hope.

The combined low and very low food security rate in our sample was 53.8% ($n = 14$), over four times the U.S. National Average (Feeding America, 2018). Federal food assistance programs such as TANF (Temporary Assistance for Needy Families), SNAP and WIC (Supplemental Nutrition Program for Women, Infants, and Children), have long been strategies for tackling low food security in the U.S. However, over half of the women who were receiving food aid in our sample were still faced with low food security, consistent with the findings of Carlson (2019) that half of all households who participate in SNAP struggle with food security. Another group of women in our sample did not have food aid even though they were food insecure, leading to questions about access and eligibility standards. In the state where the agency is located, SNAP benefits reach 12% of the population, and only 73% of those who are eligible participate. Qualifying for and maintaining SNAP may be challenging for survivors due to benefit limits for single adults, income level or work search requirements (Texas Health and Human Services, 2021). Other barriers may be homelessness or lack of permanent address, English language skills or being an undocumented citizen (Algert et al., 2006). To address these barriers, food pantries, food banks, food kitchens/meal centres or shelters may offer additional aid in food access.

While mental health (i.e. depression, anxiety, PTSD) has been long associated with IPV and low levels of food security individually, much less is known about the relationship between food security and mental health in survivors. We found that depression and low food security have a significant positive association for this group of survivors, which is consistent with the findings of Chilton et al. (2014). PTSD has also been significantly associated with low food security in our sample, underpinning the findings of Whittle et al., 2019. Additionally, anxiety was trending towards a significant positive relationship with food insecurity. Among more general populations it has been found that anxiety and stress are associated with low food security (Tarasuk et al., 2013). Relatedly, disability (as defined by WHODAS) was associated with low food security in our sample.

Our findings also show a relationship between food security, hope and well-being. Research suggests self-efficacy, hope and optimism are related (Magaletta & Oliver, 1999) and that survivors well-being is improved through increases in self-efficacy and hope (Sullivan, 2018). Hope is considered to be important for reducing mental health concerns such as depression, anxiety and PTSD (Gilman et al., 2012; Larson et al., 2007; Wu, 2011) and improving overall well-being (Snyder, 2002). Given that an overarching goal of services for survivors is to improve well-being, and the inextricable connection between hope and well-being, the relationship between food security and hope and well-being is an important one. Lower levels of food security have negative implications for hope

and well-being, posing barriers for overall improvement regardless of other supports.

4.1 | Practical implications

Our results highlight the importance for community-based agencies to consider food security in approaching care for survivors, which we argue is crucial for well-being, particularly for survivors. We incorporated Ericksen's (2008) food security components (availability, access, utilisation and stability) into our framework for food in survivor care, Food C.A.R.E. (Create Access to Resources Equitably) for Survivors (see Figure 1). It is important to consider all aspects of food security when promoting the well-being of survivors. Our findings suggest that community-based agencies should focus on availability, access, utilisation and stability, to include partnering with our organisations that may help meet these needs. At the level of availability, it is important that food is available to survivors. Local food banks/pantries, grocery stores and restaurants must be present and well stocked. Additionally, it is necessary for meal schedules to be flexible in order to accommodate appointments, work or activities of children. Next, access for a survivor may mean reliable income or food aid. Public transportation or access to a car and food preparation tools (e.g., can opener, stove, etc.) are also important factors that enable survivors to access food. Utilisation is also important; food options must be sufficient to meet dietary needs (e.g., gluten-free or dairy-free diet), fresh enough for consumption (e.g., not expired or damaged) and healthful or nutritious foods (e.g., fruits, vegetables, meats). Additionally, survivors and their families at various stages in life may have different dietary requirements, and food options must be adequate at each stage as they progress in life (e.g., toddlers, adults, elderly citizens). Survivors need to be able to access food with dignity. Often, IPV organisations are bombarded with canned or boxed goods. While these goods are helpful, they often come with barriers that make it difficult to feed survivors and their families (e.g., access to can opener, stove, etc.). We recommend that this model be used and applied to specific contexts or populations—in considering each component of food security, it should be decided upon what is most crucial for that population.

Our findings highlight the relationship between food security and other variables, including mental health, which is often a consequence of, but also a risk factor for, IPV (Gulati & Kelly, 2020; Kessler et al., 2001). Food insecurity has the potential to exacerbate factors, such as depression or disability, that put women at greater risk for IPV and compromise survivor well-being. We argue that food security should be (a) explicitly included when considering the well-being of survivors and (b) considered a critical component when addressing IPV, as addressing food security and related considerations has the potential to be more effective in improving the well-being for survivors over time.

4.2 | Limitations

Our study does have several notable limitations. First, the sample in this study is limited ($n = 26$) and only reflects participants from one domestic violence and sexual assault agency in the Southern U.S. As such, generalisability of the findings may be limited. Furthermore, this study utilises existing measures for food security (U.S. Household Food Security Survey Module: Six-Item Short Form). While this instrument remains the most widely used tool to capture food security, we suggest this may not be adequate to understand the full score of needs and barriers for survivors experiencing low food security.

5 | CONCLUSION

The findings from this study have implications for both research and practice. First, to date, most work on IPV and food security has been conducted in international contexts. This work begins to contribute to the understanding and conceptualisation of food security in the U.S. Second, a more holistic approach to survivor well-being, which includes an emphasis on food security, should

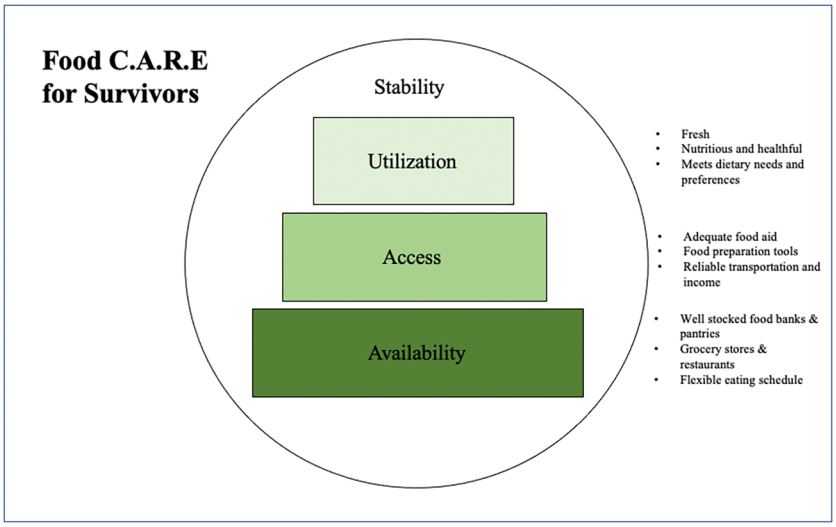

FIGURE 1 Food C.A.R.E. (Create Access to Resources Equitably) for Survivors framework.

be taken. However, it is not enough to just have food – an approach that includes all four food security components should be considered for survivors. We argue that the current USDA household food security module does not adequately capture all four food security components, specifically lacking focus on the aspect of utilisation. The current module should be revised to more explicitly include all four elements. Additionally, future research should explore the role of food security in survivor well-being, as well as the ways in which IPV-focused organisations are providing support for achieving food security.

In practice, IPV organisations should assess the availability, access, utilisation and stability of food for clients. Using the model, we propose (see Figure 1), agencies can identify leverage points that have the potential to improve overall survivor well-being. IPV organisations should consider ways in which they can help confront food insecurity by connecting survivors to resources such as TANF, SNAP and WIC. However, as our study highlights, these resources may be inadequate and attention should be paid to the role community organisations can play in helping to fill these gaps. There are several key takeaways from our study. First, IPV survivors experience low food security at rates higher than the general population. Second, there may be barriers for obtaining food aid, and it may be inadequate for those that are able. Third, IPV's relationship with mental health, disability, concentration, hope and well-being suggests food security is an important consideration for survivors to reduce negative impacts of IPV. Through our findings, we have proposed a model through which food security for survivors can be addressed by assessing availability, access, utilisation and stability. These tenets capture the various barriers and considerations survivors may face in achieving food security. IPV and food insecurity are their own respective public health crises, yet it cannot be overlooked the ways in which these crises intersect to keep those impacted from meeting basic needs that promote healing and wellness.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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