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**RESEARCH** Commentary



# Structural Barriers Influencing Food Insecurity, Malnutrition, and Health Among Latinas During and After COVID-19: Considerations and Recommendations



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OOD INSECURITY–DEFINED AS LIMITED OR UNCERtain availability of nutritious and safe food, or the limited or uncertain ability to acquire adequate food in socially acceptable ways–is a multidimensional concept encompassing food quantity, quality, and variety. Food secure households are able to provide all members consistent access to sufficient, nutritious, and safe foods to live an active, healthy life.<sup>1</sup> Being food insecure is associated with lower-quality diets<sup>2-4</sup> and several negative health conditions and outcomes, including psychological distress,<sup>5</sup> depression,<sup>6</sup> chronic illness,<sup>7,8</sup> and even premature death.<sup>9,10</sup>

During the coronavirus disease 2019 (COVID-19) pandemic, mass unemployment and loss of income contributed to rapid increases in food insecurity in the United States.<sup>11-13</sup> Latino households (18.5% of the population)<sup>14</sup> have especially faced multiple health, social, and economic vulnerabilities.<sup>15-17</sup> Latinas have been particularly hard hit by the pandemic's economic crisis. Latina workers suffered among the largest labor market losses during the early months of the pandemic–24% lost their job compared with 18% of Latino workers

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(February-April 2020).<sup>16</sup> By September 2020, 11% of Latinas remained unemployed compared with 7.4% of Latino men.<sup>18</sup> More than half of Latinas (57.1%) reported a loss of employment income since the start of the pandemic.<sup>19</sup> The economic crisis has drastically accelerated food insecurity levels in Latino households. A recent study found 45% of Latino households in Los Angeles reported serious problems affording food compared with only 6% of White households,<sup>17</sup> adding to evidence of the pandemic's disproportionate effects on low-income communities of color<sup>20</sup> and immigrant communities.<sup>21</sup>

Beyond documenting food inequalities, there is an urgent need to examine and understand how food-insecure households and individuals are coping<sup>22</sup> and to address structural barriers that impede access to food and nutrition assistance among populations at high risk for malnutrition and dietrelated health disparities. In the United States, food insecurity has been consistently associated with obesity in women.<sup>23-27</sup> The interrelated issues of food insecurity, malnutrition, and obesity are particularly challenging for Latinas<sup>8,28,29</sup> and their families. Vulnerability to economic and social disadvantages<sup>30,31</sup> may contribute to this phenomenon,<sup>26</sup> as do gendered effects of poverty and discrimination<sup>32-34</sup> that reduce access to nutritious food. The pandemic has further highlighted the importance of understanding and addressing food insecurity and health issues among Latinas.

There is a critical need for increased awareness among nutrition professionals regarding these interconnected issues and the structural barriers influencing food insecurity, as well as additional research and policy to inform sustainable, culturally sensitive nutrition interventions for Latinas. Registered dietitian nutritionists and nutrition and dietetics technicians are ideally positioned to address food insecurity and malnutrition among vulnerable populations.<sup>35</sup> For these efforts to be successful, social, cultural, and economic determinants of dietary behavior and key structural barriers to food assistance programs need to be understood and integrated into dietetics counseling and nutrition education efforts with Latina clients.<sup>36</sup> Effectively tailoring questions and information about food security during the nutritional care process involves understanding barriers to federal and community food and nutrition assistance programs. In the policy domain, a cadre of diet and nutrition-focused practitioners and scholars across the country can advocate on behalf of

populations at high risk of malnutrition due to economic and food insecurity in related policy debates.

This commentary elaborates on the structural determinants of food insecurity for Latinas in the United States during and after the COVID-19 pandemic. In addition to considering the impact of pandemic-related stressors on Latinas' nutrition and health, we highlight macro- and microenvironment level factors that influence Latinas' access to nutritious food, including the role of structural barriers, economic constraints, gender, immigration policy, and food support programs. We provide recommendations for practitioners to integrate structural considerations into the nutrition care process for Latinas, promote community-level initiatives, and advocate for policy change.

# THE PANDEMIC'S IMPACT ON MULTIPLE DIMENSIONS OF FOOD SECURITY AND NUTRITION

There are multiple pathways at the social and economic level through which COVID-19 is likely worsening food insecurity and health.<sup>22</sup> The economic crisis is the most direct pathway, reducing financial resources for households and individuals to access preferred foods and contributing to high levels of unmet basic needs.<sup>21</sup> More indirectly, pandemic-related policies (eg, shelter-in-place orders, social distancing, school closures) may have also reduced access to key sources of social support and public resources for communities that were already constrained.

Before the pandemic, food environment disparities were apparent at the neighborhood level,<sup>37</sup> and fresh fruits and vegetables and outlets that provide nutritious options were limited in low-income minority neighborhoods.<sup>38-40</sup> COVID-19 may have shifted availability and access to fresh fruits and vegetables or culturally preferred food items through impacts on supply chains and prices. As the demand for charitable food programs has increased,<sup>41</sup> their impact on the food environment has as well. And although charitable food programs can serve as critical local resources to alleviate hunger, a high percentage provide food of limited nutritional value, potentially contributing to malnutrition.<sup>42</sup> Since dietary intake among food pantry clients who are food insecure may be worse compared with food secure clients,<sup>43</sup> improvements in the quality of food options offered by these sources are needed to avert unintended widening of disparities.

Early research suggests there is an increased reliance on calorie-dense snack foods during the pandemic overall,<sup>44</sup> suggesting an increased risk of poor diet quality and nutrition-related health outcomes. A shift in food procurement and utilization may reflect a substitution of nutritious and socially and culturally acceptable food items with non-preferred energy-dense foods that are inexpensive, ready to eat, and convenient to access.<sup>45-48</sup> It may also reflect continued and increased targeted marketing of poor nutritional quality food to minority communities like Latinos.<sup>38,49-51</sup>

# STRUCTURAL BARRIERS INFLUENCING FOOD SECURITY AND NUTRITION AMONG LATINAS

Recommendations to help address food insecurity have previously included screening for food insecurity and connecting clients with nutrition assistance programs.<sup>52</sup> Consideration of structural factors impeding Latinos' access to food resources during and after the COVID-19 pandemic, however, is critical for culturally sensitive nutrition advice that effectively leads to achieving desired nutritional goals. A thorough understanding of these factors can empower nutrition professionals to advocate for increased access to nutritious food at community and institutional levels, thereby promoting change beyond the individual level.

At the macroenvironment level, the COVID-19 employment crisis is likely worsening existing economic instability for Latinas. Prior to the pandemic, Latinos had considerably lower earnings compared with other groups and were more likely to be employed in low-wage occupations. In 2018, Latinas had the lowest earnings (ie, median usual weekly earnings of \$617) of any group among full-time and salary workers.<sup>53</sup> For Latinos in rural agricultural regions, cyclical food insecurity can be exacerbated by a lack of permanent (and nonseasonal) employment opportunities.<sup>54</sup> In the current crisis, sustained high unemployment rates among Latinas signal their ongoing economic vulnerability during and beyond the pandemic.<sup>16,18</sup>

In the policy domain, nutrition assistance programs influence food access and utilization. The largest US federal nutrition assistance program is the Supplemental Nutrition Assistance Program (SNAP), which aims to alleviate risk of food insecurity for low-income households.<sup>55-57</sup> During the pandemic, the federal government modified nutrition assistance policies and programs to ameliorate food insecurity and ensure safer distribution. The 116th Congress enacted multiple policies to expand assistance in the early months of the pandemic. For example, the Families First Coronavirus Response Act (HR 6201, signed on March 18, 2020) authorized states to request waivers to provide emergency allotments to increase SNAP benefits to the maximum monthly allotment for household size<sup>58</sup>-representing a 40% increase in overall SNAP benefits per month.<sup>59</sup> The Coronavirus Aid, Relief, and Economic Security (CARES) Act (HR 748, signed on March 27, 2020) provided an additional \$15.8 billion in reserves for the SNAP program for additional costs and increased program participation.<sup>60</sup> However, Latinosparticularly immigrant Latinos and those with limited English proficiency-may be deterred from accessing these benefits due to a lack of awareness, confusion about eligibility, and concerns about citizenship and stigma.<sup>56,61-63</sup>

The US Department of Agriculture also granted waivers for school districts to provide safe, alternative models to distribute school meals (eg, grab-and-go, home-delivered options)<sup>64</sup> and expanded their online SNAP pilot purchasing program to several states, allowing participants to purchase groceries online with electronic benefits transfer payments. It is unclear how many low-income and racial/ethnic minority households are accessing school meals or purchasing groceries online, especially since users have to be aware of these options and navigate information online. For online SNAP purchases, recipients may also have to pay delivery fees. Additional barriers that can further deter access to these adapted modalities and other sources of emergency food assistance among Latinos include fear of discrimination, language access issues, and limited accessibility (ie, distance, lack of transportation).<sup>21,64,65</sup> Rapid implementation research examining the reach of food assistance policy adaptations across racial/ethnic groups is needed to assess who

benefitted from these modifications and who still needs to be reached.

For immigrant Latinas, the intersecting impact of policy domains, such as immigration policy at federal and state levels, deserves special consideration. For example, a new public charge federal immigration rule (effective February 2020) can deny immigrants, found to be or likely to become a public charge, admission to the United States or permanent residency if they participate in certain federal safety net programs like SNAP. A recent study found a declining trend of SNAP participation among recently arrived immigrant mothers and their US-born children facing high food insecurity rates.<sup>66</sup> This trend—referred to as the "chilling effect" has been increasingly observed in immigrant communities, even among those eligible for benefits such as mixed immigration status families.<sup>67</sup> Evidence suggests concerns about both public charge and immigration enforcement result in eligible individuals avoiding publicly funded resources. Other studies have similarly found that immigrants in states with high levels of deportations were less likely to enroll their children in Medicaid and those concerned about anti-immigrant policies were more likely to avoid routine activities, including shopping for food.<sup>68-70</sup> This policy environment can curtail Latinos' willingness to seek food assistance and decrease participation in government assistance programs, including COVID-19 federal relief programs.<sup>21</sup> Compounding the chilling effect, state policies treat Latino immigrant groups differentially based on citizenship, thus creating inequitable contexts across states in which immigrants experience distinct barriers to material conditions (including food resources) in addition to fear, stress, and isolation.63,71

Latinos are also more likely to turn to the media and trust health information from mass media sources compared with White people.<sup>72</sup> This trust in media may relate to the positive experiences they have with ethnic media and may be a function of the real disparities in access to care but also the negative treatment Latinas experience in clinical settings.<sup>73</sup> During the pandemic, rampant misinformation about COVID-19<sup>74</sup> and exposure to resources circulating in the media and interpersonal networks may have exacerbated diet-related health disparities.<sup>75-77</sup> High levels of misinformation coupled with targeted marketing of food of poor nutrition quality in minority communities may have further disadvantaged multiple generations of Latinas. Research is urgently needed to examine marketing of low-quality food targeting Latinas and their families during the pandemic.

At the microenvironment level, an individual's neighborhood, culture, and family shape food access and utilization within households. Existing strategies to reduce household food costs, like shopping at multiple stores or group store trips, may have been disrupted given recommendations to physically distance<sup>78</sup> or fear of infection.<sup>52</sup> The disproportionate economic impact on low-wage workers is directly contributing to strained financial conditions for Latino households. Within a household unit, increased stress and anxiety may be predominantly affecting mothers who often manage household food resources. For women, managing family roles, feeding, and expectations can constrain their access to nutritious food within a household.<sup>79</sup> Women may prioritize feeding higher-quality diets to a child or sacrifice their own meals when they encounter food insecurity.<sup>80,81</sup> In terms of nutrition and health outcomes, gendered expectations associated with motherhood and childcare responsibilities can increase the risk of weight gain.<sup>82</sup> Although intrahousehold food distribution and familial expectations are important factors, they have been insufficiently examined among Latina mothers in the United States.

The COVID-19 pandemic may have also aggravated social and gender inequalities that limit employment for lowincome Latinas. Voluntary/involuntary job loss and reduced childcare opportunities and in-person schooling may have led to constrained decisions to stav home and rear children full time as opposed to continuing to work. The cumulative stress of increased economic vulnerability, childcare responsibilities, and school closures may be contributing to disrupted, binge, or emotional eating of food of poor nutritional value, worsening health outcomes for Latinas in particular. Increased stress, anxiety, and concern about finding socially and culturally acceptable food to feed a family may result in worse health outcomes. Pathways linking food insecurity and obesity may include psychological distress (ie, anxiety, worry) and maladaptive coping behaviors in response to food insecurity, stigma, and constrained economic resources or social conditions. Existing research demonstrates a positive relationship between food insecurity and multiple indicators of psychological distress,<sup>5,83,84</sup> contributing to high levels of emotional<sup>85</sup> and binge eating.<sup>86</sup> A (prepandemic) study that examined the mediating role of emotional eating in the association between food insecurity and obesity among Latinas in Massachusetts found emotional eating was positively associated with obesity and explained 21% of the association between food insecurity and obesity.87

Food insecurity may also elicit feelings of powerlessness, shame, stress, or guilt.<sup>88,89</sup> Perceived adversity may lead to excess consumption of affordable and highly palatable food of low nutritional quality<sup>47,90-92</sup> as a compensatory coping mechanism in response to multiple stressors.<sup>88,93</sup> This can trigger a positive distress-maladaptation feedback loop compounded by cyclic or episodic food scarcity.<sup>94</sup> During the pandemic, symptoms of psychological distress have been highest among certain subgroups, including young adults, low-income households, and Latinos,<sup>95</sup> who may be in particular need of dietary counseling and nutrition education in addition to behavioral health services. Research is needed on coping behaviors among food-insecure households during the COVID-19 pandemic and the impact on Latinas' diet quality and physical and mental health.

## RECOMMENDATIONS TO INTEGRATE STRUCTURAL CONSIDERATIONS INTO THE NUTRITION CARE PROCESS, PROMOTE COMMUNITY-LEVEL INITIATIVES, AND ADDRESS FOOD INSECURITY AMONG LATINAS

- Screen routinely for food insecurity using brief screening tools<sup>52</sup> available in English and Spanish, such as the 2-item Hunger Vital Sign tool<sup>96</sup> or US Department of Agriculture's 6-item short form of the food security survey module.<sup>97</sup>
- Understand microenvironment level factors affecting Latinas' ability to secure nutritious food and impacting their dietary behavior (eg, changes in food

procurement and utilization of socially and culturally preferred foods, eating behavior maladaptation due to psychological distress).

- Understand macroenvironment level factors that mediate Latinas' access to nutritious food (eg, impact of targeted marketing, food assistance awareness and barriers to participation, especially those related to nutrition and immigration policy).
- Document micro- and macroenvironment level factors affecting food choices as part of the assessment step.
- Incorporate documented micro- and macroenvironment level factors and related nutrition disparities as contributing risk factors and indicators (respectively) in diagnosis statements (ie, PES [problem, etiology, and signs and symptoms] statement).
- Apply a client-centered approach to set realistic and culturally appropriate nutrition intervention goals that are also affordable and economical. The use of motivational interviewing techniques and trauma-informed care approaches<sup>98</sup> are encouraged.
- Collect data and report on barriers aggravating food insecurity during the pandemic. To advance racial equity, disaggregate data by race/ethnicity, gender, and race/ethnicity-gender to identify varying structural conditions for different subpopulations.
- Pilot and test the effectiveness of a food prescription program for food-insecure clients, with considerations for patients with special dietary and accessibility needs.
- Learn about pandemic-related modifications to government nutrition assistance programs and their availability in your state and region (eg, online SNAP pilot purchasing program; implementation of meal distribution among schools,<sup>64</sup> including the Pandemic Electronic Benefits Transfer or P-EBT program<sup>99</sup>).
- Familiarize and connect clients with available local food distribution resources and emergency food programs (eg, food pantries, food banks, meal delivery services, community gardens, farmers' markets, mobile food markets) as well as local educational resources to promote healthy eating (eg, nutrition workshops, SNAP-Ed, Expanded Food and Nutrition Education Program [EFNEP] classes), emphasizing needs-based programs with limited/no out-of-pocket costs for participants.
- Partner with community-based organizations and Cooperative Extension services to offer culturally and linguistically appropriate nutrition education workshops for families on low-cost meal preparation, family meal planning, and healthy eating in times of crisis.
- Advocate to mitigate and address policy barriers for racial/ethnic groups and immigrant communities in state and federal legislative and regulatory processes.
- Advocate for expanded eligibility and increased utilization of federal nutrition assistance programs (ie, SNAP and the Special Supplemental Nutrition Program for Women, Infants, and Children).
- Advocate for improvements to local food resources (eg, food pantries) and government nutrition assistance programs to ensure recipient diet quality and provide subject-matter assistance to develop nutrition policies that incentivize healthful food choices.<sup>57</sup>

### CONCLUSIONS

This commentary provides a comprehensive overview of key structural barriers that may impede Latinas' access to food and nutrition assistance during a crisis. The recommendations can improve the nutrition care process, mitigate rising food insecurity rates, and promote equitable policies and practice to improve the dietary behavior and health of Latinas during and beyond the pandemic.

#### References

- Coleman-Jensen A, Rabbitt MP, Gregory CA; Measurement. US Department of Agriculture, Economic Research Service. Published 2020. Accessed January 4, 2021. https://www.ers.usda.gov/topics/ food-nutrition-assistance/food-security-in-the-us/measurement/.
- Berkowitz SA, Gao X, Tucker KL. Food-insecure dietary patterns are associated with poor longitudinal glycemic control in diabetes: Results from the Boston Puerto Rican Health study. *Diabetes Care*. 2014;37(9):2587-2592.
- 3. Morales ME, Berkowitz SA. The relationship between food insecurity, dietary patterns, and obesity. *Curr Nutr Rep.* 2016;5(1):54-60.
- Seligman HK, Jacobs EA, López A, Tschann J, Fernandez A. Food insecurity and glycemic control among low-income patients with type 2 diabetes. *Diabetes Care*. 2012;35(2):233-238.
- Allen NL, Becerra BJ, Becerra MB. Associations between food insecurity and the severity of psychological distress among African-Americans. *Ethn Health.* 2018;23(5):511-520.
- 6. Leung CW, Epel ES, Willett WC, Rimm EB, Laraia BA. Household food insecurity is positively associated with depression among low-income Supplemental Nutrition Assistance Program participants and income-eligible nonparticipants. *J Nutr.* 2015;145(3):622-627.
- Seligman HK, Laraia BA, Kushel MB. Food insecurity is associated with chronic disease among low-income NHANES participants. *J Nutr.* 2010;140(2):304-310.
- 8. Fitzgerald N, Hromi-Fiedler A, Segura-Pérez S, Pérez-Escamilla R. Food insecurity is related to increased risk of type 2 diabetes among Latinas. *Ethn Dis.* 2011;21(3):328-334.
- **9.** Banerjee S, Radak T, Khubchandani J, Dunn P. Food insecurity and mortality in American adults: Results from the NHANES-linked mortality study. *Health Promot Pract.* 2021;22:204-214.
- **10.** Sun Y, Liu B, Rong S, et al. Food insecurity is associated with cardiovascular and all-cause mortality among adults in the United States. J Am Heart Assoc. 2020;9(19):e014629.
- Niles MT, Bertmann F, Belarmino EH, Wentworth T, Biehl E, Neff R. The early food insecurity impacts of COVID-19. *Nutrients*. 2020;12(7):2096.
- 12. Fitzpatrick KM, Harris C, Drawve G. Assessing U.S. Food Insecurity in the United States During COVID-19 Pandemic. Fayetteville, AR: University of Arkansas; 2020.
- 13. Schanzenbach D, Pitts A. Food Insecurity in the Census Household Pulse Survey Data Tables. Chicago, IL: Northwestern University Institute for Policy Research; 2020.
- Noe-Bustamante L, Lopez MH, Krogstad JM. U.S. Hispanic population surpassed 60 million in 2019, but growth has slowed. Pew Research Center. Published 2020. Updated July 7, 2020. Accessed September 5, 2020. https://www.pewresearch.org/fact-tank/2020/07/07/u-shispanic-population-surpassed-60-million-in-2019-but-growth-hasslowed/.
- **15.** Figueroa JF, Wadhera RK, Lee D, Yeh RW, Sommers BD. Communitylevel factors associated with racial and ethnic disparities in COVID-19 rates in Massachusetts. *Health Aff (Millwood)*. 2020;39(11):1984-1992.
- **16.** Gould E, Perez D, Wilson V. *Latinx Workers–Particularly Women– Face Devastating Job Losses in the COVID-19 Recession*. Washington, DC: Economic Policy Institute; 2020.
- 17. Blendon RJ, Benson JM, Findling MG, et al. *The Impact of Coronavirus on Households in Major U.S. Cities.* NPR, Robert Wood Johnson Foundation, Harvard T.H. Chan School of Public Health; September 2020.
- Ewing-Nelson C. Four times more women than men dropped out of the labor force in September. National Women's Law Center. Published 2020. Accessed November 26, 2020. https://nwlcciw49tixgw5lbab.stackpathdns.com/wp-content/uploads/2020/10/ september-jobs-fs1.pdf.

- Tucker J, Ewing-Nelson C. Black, non-Hispanic women and Latinas are facing severe COVID-19 impact. National Women's Law Center. Published 2020. Accessed December 1, 2020. https://nwlc.org/wpcontent/uploads/2020/10/pulseFS-1.pdf.
- **20.** Wolfson JA, Leung CW. Food insecurity and COVID-19: Disparities in early effects for US adults. *Nutrients*. 2020;12(6):1648.
- Bernstein H, González J, Gonzalez D, Jagannath J. Immigrant-Serving Organizations' Perspectives on the COVID-19 Crisis. Washington, DC: Urban Institute; 2020.
- **22.** Leddy AM, Weiser SD, Palar K, Seligman H. A conceptual model for understanding the rapid COVID-19-related increase in food insecurity and its impact on health and healthcare. *Am J Clin Nutr.* 2020;112(5):1162-1169.
- **23.** Franklin B, Jones A, Love D, Puckett S, Macklin J, White-Means S. Exploring mediators of food insecurity and obesity: A review of recent literature. *J Community Health*. 2012;37(1):253-264.
- 24. Townsend MS, Peerson J, Love B, Achterberg C, Murphy SP. Food insecurity is positively related to overweight in women. *J Nutr.* 2001;131(6):1738-1745.
- **25.** Larson NI, Story MT. Food insecurity and weight status among U.S. children and families: A review of the literature. *Am J Prev Med.* 2011;40(2):166-173.
- 26. Frongillo EA, Bernal J. Understanding the coexistence of food insecurity and obesity. *Curr Pediatr Rep.* 2014;2(4):284-290.
- Adams EJ, Grummer-Strawn L, Chavez G. Food insecurity is associated with increased risk of obesity in California women. J Nutr. 2003;133(4):1070-1074.
- 28. Leung CW, Williams DR, Villamor E. Very low food security predicts obesity predominantly in California Hispanic men and women. *Public Health Nutr.* 2012;15(12):2228-2236.
- 29. Hernandez DC, Reesor LM, Murillo R. Food insecurity and adult overweight/obesity: Gender and race/ethnic disparities. *Appetite*. 2017;117:373-378.
- **30.** Torrez DJ. The role of gender and race in the older Latinas's economic well-being. *Race Gend Cl.* 1997;4(2):73-89.
- Himmelstein KEW, Venkataramani AS. Economic vulnerability among US female health care workers: Potential impact of a \$15per-hour minimum wage. *Am J Public Health*. 2019;109(2):198-205.
- **32.** Paradies Y, Ben J, Denson N, et al. Racism as a determinant of health: A systematic review and meta-analysis. *PLoS One*. 2015;10(9): e0138511.
- Phojanakong P, Brown Weida E, Grimaldi G, Lê-Scherban F, Chilton M. Experiences of racial and ethnic discrimination are associated with food insecurity and poor health. *Int J Environ Res Public Health.* 2019;16(22):4369.
- **34.** Derose KP, Payán DD, Fulcar MA, et al. Factors contributing to food insecurity among women living with HIV in the Dominican Republic: A qualitative study. *PLoS One*. 2017;12(7):e0181568.
- **35.** Holben DH, Marshall MB. Position of the Academy of Nutrition and Dietetics: Food insecurity in the United States. *J Acad Nutr Diet*. 2017;117(12):1991-2002.
- **36.** Chapman-Novakofski K, Diaz Rios LK. Education and counseling: Behavioral change. In: Raymond J, Morrow K, Mahan L, eds. *Krause and Mahan's Food & The Nutrition Care*. 15th ed. St. Louis, MO: Elsevier; 2021.
- Lucan SC. Concerning limitations of food-environment research: A narrative review and commentary framed around obesity and dietrelated diseases in youth. J Acad Nutr Diet. 2015;115(2):205-212.
- Payán DD, Derose KP, Flórez KR, Branch CA, Williams MV. The food environment in 3 neighborhoods in South Los Angeles, California: Access, availability, quality, and marketing practices. *Prev Chronic Dis.* 2020;17:E61.
- **39.** Lowery B, Sloane D, Payán D, Illum J, Lewis L. Do farmers' markets increase access to healthy foods for all communities? Comparing markets in 24 neighborhoods in Los Angeles. *J Am Plan Assoc.* 2016;82(3):252-266.
- **40.** Hendrickson D, Smith C, Eikenberry N. Fruit and vegetable access in four low-income food deserts communities in Minnesota. *Agric Human Values*. 2006;23(3):371-383.
- Morello P. The first months of the food bank response to COVID, by the numbers. Feeding America. Published 2020. Updated July 21,

2020. Accessed September 5, 2020. https://www.feedingamerica. org/hunger-blog/first-months-food-bank-response-covid-numbers.

- **42.** Simmet A, Depa J, Tinnemann P, Stroebele-Benschop N. The nutritional quality of food provided from food pantries: A systematic review of existing literature. *J Acad Nutr Diet.* 2017;117(4):577-588.
- **43.** Wright BN, Tooze JA, Bailey RL, et al. Dietary quality and usual intake of underconsumed nutrients and related food groups differ by food security status for rural, Midwestern food pantry clients. *J Acad Nutr Diet*. 2020;120(9):1457-1468.
- **44**. Adams EL, Caccavale LJ, Smith D, Bean MK. Food insecurity, the home food environment, and parent feeding practices in the era of COVID-19. *Obesity*. 2020;28(11):2056-2063.
- 45. Ramírez AS, Golash-Boza T, Unger JB, Baezconde-Garbanati L. Questioning the dietary acculturation paradox: A mixed-methods study of the relationship between food and ethnic identity in a group of Mexican-American women. J Acad Nutr Diet. 2018;118(3): 431-439.
- **46.** Ramirez AS, Diaz Rios LK, Valdez Z, Estrada E, Ruiz A. Bringing produce to the people: Implementing a social marketing food access intervention in rural food deserts. *J Nutr Educ Behav.* 2017;49(2): 166-174.e161.
- **47.** Dhurandhar EJ. The food-insecurity obesity paradox: A resource scarcity hypothesis. *Physiol Behav.* 2016;162:88-92.
- Payán DD, Sloane DC, Illum J, Farris T, Lewis LB. Perceived barriers and facilitators to healthy eating and school lunch meals among adolescents: A qualitative study. *Am J Health Behav.* 2017;41(5):661– 669.
- **49.** Lucan SC, Maroko AR, Sanon OC, Schechter CB. Unhealthful foodand-beverage advertising in subway stations: Targeted marketing, vulnerable groups, dietary intake, and poor health. *J Urban Health*. 2017;94(2):220-232.
- **50.** Moran AJ, Musicus A, Gorski Findling MT, et al. Increases in sugary drink marketing during Supplemental Nutrition Assistance Program benefit issuance in New York. *Am J Prev Med.* 2018;55(1):55-62.
- Dowling EA, Roberts C, Adjoian T, Farley SM, Dannefer R. Disparities in sugary drink advertising on New York City streets. *Am J Prev Med.* 2020;58(3):e87-e95.
- 52. Handu D, Moloney L, Rozga M, Cheng F. Malnutrition care during the COVID-19 pandemic: Considerations for registered dietitian nutritionists evidence analysis center. *J Acad Nutr Diet*; 2020.
- US Bureau of Labor Statistics. Labor force characteristics by race and ethnicity, 2018. US Bureau of Labor Statistics. Published 2019. Accessed December 1, 2020. https://www.bls.gov/opub/reports/ race-and-ethnicity/2018/home.htm.
- Melgar-Quiñonez H, Kaiser LL, Martin AC, Metz D, Olivares A. Inseguridad alimentaria en latinos de California: Observaciones de grupos focales. Salud Publica Mex. 2003;45:198-205.
- **55.** Mabli J, Ohls J. Supplemental Nutrition Assistance Program participation is associated with an increase in household food security in a national evaluation. *J Nutr.* 2015;145(2):344-351.
- **56.** Bleich SN, Moran AJ, Vercammen KA, et al. Strengthening the public health impacts of the supplemental nutrition assistance program through policy. *Annu Rev Public Health*. 2020;41:453-480.
- 57. Kennedy E, Guthrie JF. Nutrition assistance programs: Cause or solution to obesity. *Curr Obes Rep.* 2016;5(2):176-183.
- 58. Families First Coronavirus Response Act, Public Law No: 116-127, 187-188, §2301-2302 (2020).
- USDA. USDA Increases Monthly SNAP Benefits by 40%. USDA. Published 2020. Accessed November 24, 2020. https://www.usda.gov/ media/press-releases/2020/04/22/usda-increases-monthly-snapbenefits-40.
- 60. Coronavirus Aid, Relief, and Economic Security Act, Public Law No: 116-136, 508 (2020).
- **61.** Kaiser L. Why do low-income women not use food stamps? Findings from the California Women's Health Survey. *Public Health Nutr.* 2008;11(12):1288-1295.
- **62.** Feeding America. *When the Pantry Is Bare: Emergency Food Assistance and Hispanic Children*. Chicago, IL: Feeding America; 2010.
- **63.** Philbin MM, Flake M, Hatzenbuehler ML, Hirsch JS. State-level immigration and immigrant-focused policies as drivers of Latino health disparities in the United States. *Soc Sci Med.* 2018;199:29-38.

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- **64.** McLoughlin GM, McCarthy JA, McGuirt JT, Singleton CR, Dunn CG, Gadhoke P. Addressing food insecurity through a health equity lens: A case study of large urban school districts during the COVID-19 pandemic. *J Urban Health.* 2020;97(6):759-775.
- **65.** Algert SJ, Reibel M, Renvall MJ. Barriers to participation in the food stamp program among food pantry clients in Los Angeles. *Am J Public Health.* 2006;96(5):807-809.
- Bovell-Ammon A, Cuba SE, Coleman S, et al. Trends in food insecurity and SNAP participation among immigrant families U.S.-born young children. *Children*. 2019;6(4):55.
- Bleich SN, Fleischhacker S. Hunger or deportation: Implications of the Trump administration's proposed public charge rule. *J Nutr Educ Behav.* 2019;51(4):505-509.
- **68.** Rodriguez N, Paredes CL, Hagan J. Fear of immigration enforcement among older Latino immigrants in the United States. *J Aging Health*. 2017;29(6):986-1014.
- Vargas ED. Immigration enforcement and mixed-status families: The effects of risk of deportation on Medicaid use. *Child Youth Serv Rev.* 2015;57:83-89.
- Bernstein H, Gonzalez D, Karpman M, Zuckerman S. Adults in Immigrant Families Report Avoiding Routine Activities Because of Immigration Concerns. Washington, DC: Urban Institute; 2019.
- Young M-EDT, Wallace SP. Included, but deportable: A new public health approach to policies that criminalize and integrate immigrants. *Am J Public Health.* 2019;109(9):1171-1176.
- 72. Valdez Z, Ramírez AS, Estrada E, Grassi K, Nathan S. Community perspectives on access to and availability of healthy food in rural, low-resource, Latino communities. *Prev Chronic Dis.* 2016;13: E170.
- Ramirez AS, Graff K, Nelson D, et al. Who seeks Cita Con El Doctor? Twelve years of Spanish-language radio program targeting U.S. Latinos. *Health Educ Behav*. 2015;42(5):611-620.
- Cuan-Baltazar JY, Muñoz-Perez MJ, Robledo-Vega C, Pérez-Zepeda MF, Soto-Vega E. Misinformation of COVID-19 on the internet: Infodemiology study. *JMIR Public Health Surveill*. 2020;6(2): e18444.
- Ramírez AS, Arellano Carmona K. Beyond fatalism: Information overload as a mechanism to understand health disparities. Soc Sci Med. 2018;219:11-18.
- **76.** Swire-Thompson B, Lazer D. Public health and online misinformation: Challenges and recommendations. *Annu Rev Public Health*. 2020;41:433-451.
- Southwell BG. Social Networks and Popular Understanding of Science and Health: Sharing Disparities. Baltimore, MD: Johns Hopkins University Press; 2013.
- Kinsey EW, Kinsey D, Rundle AG. COVID-19 and food insecurity: An uneven patchwork of responses. J Urban Health. 2020;97(3):332-335.
- Olson CM. Food insecurity in women: a recipe for unhealthy tradeoffs. Top Clin Nutr. 2005;20(4):321-328.
- **80.** Radimer KL, Olson CM, Greene JC, Campbell CC, Habicht J-P. Understanding hunger and developing indicators to assess it in women and children. *J Nutr Educ.* 1992;24(1):36S-44S.
- McIntyre L, Glanville NT, Raine KD, Dayle JB, Anderson B, Battaglia N. Do low-income lone mothers compromise their nutrition to feed their children? *CMAJ*. 2003;168(6):686-691.

- Martin MA, Lippert AM. Feeding her children, but risking her health: The intersection of gender, household food insecurity and obesity. Soc Sci Med. 2012;74(11):1754-1764.
- **83.** Myers CA. Food insecurity and psychological distress: A review of the recent literature. *Curr Nutr Rep.* 2020;9(2):107-118.
- Martin MS, Maddocks E, Chen Y, Gilman SE, Colman I. Food insecurity and mental illness: Disproportionate impacts in the context of perceived stress and social isolation. *Public Health*. 2016;132:86-91.
- **85.** López-Cepero A, Frisard C, Bey G, Lemon SC, Rosal MC. Association between food insecurity and emotional eating in Latinos and the mediating role of perceived stress. *Public Health Nutr.* 2020;23(4): 642-648.
- **86.** Rasmusson G, Lydecker JA, Coffino JA, White MA, Grilo CM. Household food insecurity is associated with binge-eating disorder and obesity. *Int J Eat Disord*. 2018;52:28-35.
- López-Cepero A, Frisard C, Lemon SC, Rosal MC. Emotional eating mediates the relationship between food insecurity and obesity in Latina women. J Nutr Educ Behav. 2020;52(11):995-1000.
- Coates J, Frongillo EA, Rogers BL, Webb P, Wilde PE, Houser R. Commonalities in the experience of household food insecurity across cultures: What are measures missing? J Nutr. 2006;136(5):1438s-1448s.
- Dinour LM, Bergen D, Yeh MC. The food insecurity-obesity paradox: A review of the literature and the role food stamps may play. J Am Diet Assoc. 2007;107(11):1952-1961.
- Spinosa J, Christiansen P, Dickson JM, Lorenzetti V, Hardman CA. From socioeconomic disadvantage to obesity: The mediating role of psychological distress and emotional eating. *Obesity*. 2019;27(4): 559-564.
- **91.** Laran J, Salerno A. Life-history strategy, food choice, and caloric consumption. *Psychol Sci.* 2013;24(2):167-173.
- **92.** Bratanova B, Loughnan S, Klein O, Claassen A, Wood R. Poverty, inequality, and increased consumption of high calorie food: Experimental evidence for a causal link. *Appetite*. 2016;100:162-171.
- **93.** Peng W, Dernini S, Berry EM. Coping with food insecurity using the sociotype ecological framework. *Front Nutr.* 2018;5:107.
- **94.** Nettle D, Bateson M. Food-insecure women eat a less diverse diet in a more temporally variable way: Evidence from the US National Health and Nutrition Examination Survey, 2013-4. *J Obes*. 2019;2019:1-9.
- **95.** McGinty EE, Presskreischer R, Han H, Barry CL. Psychological distress and loneliness reported by US adults in 2018 and April 2020. *JAMA*. 2020;324(1):93-94.
- **96.** Hager ER, Quigg AM, Black MM, et al. Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics*. 2010;126(1):e26-e32.
- Coleman-Jensen A, Rabbitt MP, Gregory CA. Survey tools. US Department of Agriculture, Economic Research Service. Published 2020. Accessed September 15, 2019. https://www.ers.usda. gov/topics/food-nutrition-assistance/food-security-in-the-us/surveytools/.
- Collin-Vézina D, Brend D, Beeman I. When it counts the most: Trauma-informed care and the COVID-19 global pandemic. *Dev Child Welf.* 2020;2(3):172-179.
- Food Research & Action Center (FRAC). State P-EBT Programs Map. FRAC. Published 2020. Accessed December 1, 2020. https://frac.org/ research/resource-library/state-p-ebt-programs-map.



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