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‘There’s Not a Magic Wand’: How Rural Community Health Leaders Perceive Issues Related To Access to Healthy Foods And Physical Activity Across The Ecological Spectrum

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'There's Not a Magic Wand': How Rural Community Health Leaders Perceive Issues Related to Access to Healthy Foods and Physical Activity Across the Ecological Spectrum

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Abstract

Research on successful strategies to promote access to healthy foods and places to be active in rural U.S. counties is lacking. This study investigated the perceptions of 37 key informants (K.I.s) from four rural—State—counties about the barriers and assets related to promoting healthy eating and physical activity. Transcripts from interviews with K.I.'s were analyzed and coded according to the categories of the ecological model to better understand how K.I.s addressed health issues from individual to systemic levels. Rural community leaders were aware of the complex challenges their communities faced in promoting healthy eating and physical activity. However, despite identifying and attempting to address the structural barriers that inhibited the adoption of healthy lifestyles, many K.I.s lamented individuals' resistance to changes and—in some cases—blamed them for the poor health outcomes in their communities. While many of the K.I.s in this study were attuned to structural inequalities, they did not always know how to address these issues and, in some cases, faced push-back from their communities for addressing equity, racism, or discrimination. Given these findings, we recommend that rural health programs increase their capacity-building efforts in order to enhance the ability of rural county leaders to foster change within their communities across all levels of the ecological model. Additionally, this research demonstrates that health interventions in rural communities must be attentive to the ways that class and race impact health outcomes and shape how people are able to access services.

Keywords: rural health, physical activity, food access, inequality, ecological model

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1.0 Introduction

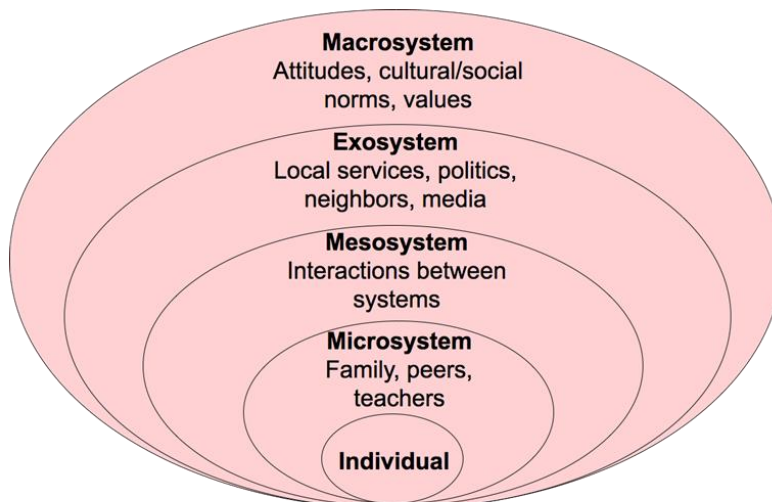
In the United States (U.S.), in general, rural (nonmetropolitan) areas and counties have higher rates of poverty and unemployment than urban counties (USDA ERS, 2019; USDA ERS - Rural Poverty & Well-Being, 2020). Additionally, many residents of rural counties have limited access to healthy foods and safe places to be active (Gustafson et al., 2018; Smith & Morton, 2009). Rural residents consume fewer fruits and vegetables than urban residents (Dean & Sharkey, 2011; Ettienne-Gittens et al., 2013; Liu et al., 2012) and are less likely to be physically active (Edwards et al., 2014; Parks et al., 2003; Trivedi et al., 2015). Residents of rural counties also experience high rates of chronic diseases such as type 2 diabetes, heart disease, and stroke (Moy et. al, 2017). These health disparities—and corresponding disparities in mortality rates—are compounded by structural inequalities related to unequal access to healthcare, racism, and patterns of disinvestment in rural areas (James & Cossman, 2017). At the same time, rural communities also possess assets that promote positive health, including a strong sense of social cohesion, histories of agricultural knowledge, and increased access to natural resources (Umstattd Meyer et al., 2016).

Many public health organizations and frameworks advocate an ecological approach to improving access to healthy foods and places to be active (Committee on Accelerating Progress in Obesity Prevention et al., 2012), but there are significant barriers to implementing interventions to promote healthy eating and physical activity in rural communities (Barnidge et al., 2013). Existing interventions often target urban communities. There is a lack of research on successful strategies in rural

places. Public health research encourages a systems-level approach to address the persistent health inequities faced by low-income and communities of color, particularly in rural counties (Committee on Accelerating Progress in Obesity Prevention et al., 2012; Cossman et al., 2017; James & Cossman, 2017). Similarly, public health researchers and practitioners have adopted community-based strategies in health promotion, emphasizing that community voices, assets, and partners are central for program design and implementation (Jakes et al., 2015). However, little is known about how leaders of community organizations in rural counties address the complex issue of healthy eating and physical activity across the levels of the ecological spectrum. What do they see as the most pressing issues facing rural residents? How do they describe the assets and challenges to increasing access to healthy foods and places to be active? What strategies do they employ to address these issues?

Qualitative research is particularly relevant for investigating these types of complex, nuanced questions across multiple sectors (Franzosi, 1998; Kirk et al., 2017; Manning & Cullum-Swan, 1994). This study explores the ways community leaders describe their efforts to address healthy eating and physical activity across the levels of the socio-ecological spectrum (see Figure 1). Although carried out in 2017–2018, before the COVID-19 pandemic began, this study provides a valuable lens for understanding how key community stakeholders, which we call key informants (K.I.s), make meaning of their work and understand inequities that the pandemic has laid bare. K.I.s were defined for this study as people who lived or worked in the counties where our project took place and whose work intersected at some level with issues of access to healthy food or places to be active. We found that while K.I.s acknowledge how structural inequalities shaped access to healthy foods and places to be active, many also continued to rely on individual blame narratives as they tried to make meaning of the complexities of the health issues that plagued their counties. We argue that understanding these meaning-making processes is critical for researchers, health professionals, and policymakers who want to address the structural issues that are the root causes of health inequities in diverse rural communities.

Figure 1. Bronfenbrenner's Socio-Ecological Model (Bronfenbrenner, 2005).



2.0 Methods

2.1 Study Design & Participants

In 2016, researchers at North Carolina University received a grant from the Centers for Disease Control and Prevention (CDC) to partner with local Cooperative Extension offices to improve access to healthy eating and physical activity in four North Carolina counties that were identified by the CDC as having adult obesity rates over 40% at the time of funding. These four counties also report relatively low overall health rankings and high levels of household food insecurity (see Table 1). Three of the counties were majority Black; one had a higher percentage of Latino/a/x residents than the state overall. According to the USDA's Rural-Urban Continuum Codes (RUCC), three of the four counties are considered non-metro (rural) (USDA ERS - Rural-Urban Continuum Codes, 2020); although one is considered a metro county, this is because a larger city spans the border of this and a neighboring county. Our project did not focus on this city, but instead focused on the rural areas of the county, and therefore we report the results here as representative of four rural communities in North Carolina.

The project's Principal Investigators (PIs) worked closely with local Cooperative Extension staff and trained them to conduct the interviews in their counties. To identify initial K.I.s to interview, Cooperative Extension staff purposely selected community leaders and stakeholders whose organizations worked across their counties to address healthy eating and physical activity. Subsequent K.I.s were recruited by Cooperative Extension staff using snowball sampling techniques until we reached 8-10 K.I.s per county. K.I.s were eligible for this study if they lived or worked in one of the four project counties and did work related to healthy eating or physical activity. In most cases, K.I.s were not from the same organizations and represented organizations like Cooperative Extension, public health departments, park and recreation departments, local government, and non-profit organizations. The final pool of 37 key informants was 40% Black, 5% Latino/a/x, and 49% white. They were all interviewed by local Cooperative Extension staff trained as part of this project.

Table 1. *County Demographics*

Characteristic	**County A**	**County B**	**County C**	**County D**	**State**
% Non-Latino/a/x African American Residents[1]	57.0%	19.0%	58.0%	53.0%	21.0%
% Latino/a/x Residents[1]	4.1%	19.2%	2.0%	2.6%	8.2%
Percent of population below 100% of Federal Poverty Line[1]	25.7%	18.3%	28.5%	26.8%	16.9%

Table 1 continued

Food Insecurity Rate[2]	25.3%	13.8%	25.1%	24.7%	18.0%
Adult Obesity Rate[3]	40.7%	29.9%	38.7%	39.1%	29.6%
Adults Reporting No Leisure Time Physical Activity[3]	30.9%	24.6%	28.8%	30.2%	25.0%
Percentage of individuals in a county who live reasonably close to a location for physical activity[4]	61.0%	78.0%	23.0%	56.0%	76.0%
Health Outcome Ranking (out of 100 –state-- counties)[4]	97th	61st	92nd	94th	-

1. U.S. Census Bureau. American community survey, 2012–2016 American Community Survey 5-year estimates, using American FactFinder. See https://www.census.gov/programs-surveys/acs

2. Feeding America. Mapping the Meal Gap, Food Insecurity. http://map.feedingamerica.org/ Food insecurity is defined by the USDA as, "At times during the year, these households were uncertain of having, or unable to acquire, enough food to meet the needs of all their members because they had insufficient money or other resources for food. Food-insecure households include those with low food security and very low food security." See https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/

3. Centers for Disease Control and Prevention. CDC behavioral risk factor surveillance system & prevalence data; data analysis tools. See https://www.cdc.gov/brfss/data_tools.htm

4. Robert Wood Johnson Foundation. North Carolina, county health rankings and roadmaps. County Health Rankings & Roadmaps Web site. See http://www.countyhealthrankings.org/app

Table 2. *Demographic Information for Key Informants*

Race/ethnicity	**Female (N=21, 57%)**	**Male (N=16, 43%)**
African American (N = 15, 41%)	10	5
Latino/a/x (N = 2, 5%)	0	2
Native American (N=1, 3%)	0	1
White (N=19, 51%)	11	8

2.2 Procedure

Interviews lasted between 40 and 90 minutes and were digitally recorded. The socio-ecological model provided a framework for the interview guide, and questions probed how K.I.s thought about health and health promotion across systems and contexts (Table 3). All participants provided verbal consent to participate, and study procedures were approved by the North Carolina State University IRB.

Table 3. *Interview Guide Sample Questions*

Category	**Example question**
Understanding changes in physical activity and healthy eating	▪ What are some of the changes you've noticed over time in the county/community related to residents' physical activity and/or healthy eating? ▪ What do you think are some of the things related to those trends?
Barriers to effecting change	▪ What are some of the challenges you encounter in your work that make it difficult to reach your goals? ▪ What challenges limit your engagement with community members? ▪ What challenges do you encounter in program delivery and design? ▪ Why do you think those challenges exist? ▪ What steps have you taken to address them?
Facilitators to effecting change	▪ What are some of the resources in your [county/community] that help you reach your goals? ▪ What facilitates your engagement with community members? ▪ What resources support you in program delivery and design?

2.3 Data Analysis

Interviews were transcribed verbatim and checked by the project team for accuracy with the recordings. The project team read through all of the transcripts and collaboratively developed an initial coding framework using a grounded theory approach (Chamaz, 2014). We held several meetings to discuss thematic codes and important concepts for discussion and analysis, including general topics that came up in the interviews and emergent themes observed in the K.I.s' responses. From this process, we developed a codebook made up of 13 thematic codes, along with their definitions, potential cross-codes, and example quotations that aligned with each theme from interview transcripts. Transcript files were imported and coded using the codebook in NVivo 11 (QSR International Pty Ltd., Doncaster, Victoria, Australia). When all transcripts were coded, the authors reviewed the code reports, finding that two codes—barriers and facilitators to change—were particularly data-rich. Drawing on the interview guide, and recognizing the need for understanding

how barriers and facilitators to change emerge across various levels of the broader environment, we re-coded barriers and facilitators to change along with Bronfenbrenner's ecological model (Bronfenbrenner, 1979; see Figure 1). This included sub-codes of both the barriers and facilitators thematic codes along with the individual, micro-, meso-, macro-, and exo-system levels. The coding was conducted by two researchers. After each round of coding, several coded interviews were checked by a project PI to ensure that the two coders were working consistently to apply the codes. The coders met with the PI to review any discrepancies.

3.0 Results

K.I.s identified a range of barriers and facilitators to increasing access to healthy foods and safe places to be active in their communities.

3.1 Barriers

3.1.1. Individual Level. K.I.s expressed worry about the 'obesity crisis' in their communities and talked about ways in which community members did not—or could not—prioritize health. While some recognized that broader structural factors like poverty or adverse childhood experiences shaped people's behaviors and attitudes, other K.I.s blamed 'laziness' or a reliance on technology and quick meals for people's reluctance to engage in healthy eating or physical activity. A few talked about how obesity had become normalized, expressing concern that people didn't care or know about the 'obesity crisis.' A white woman who worked in education in County A said, "People are lazy. We used to have to get up to change the channel on the television. Now people click a button. Everything is so easy, and in this county thirty years ago, parents stressed for their children to get out and be active." Similarly, some K.I.s talked about how technological advances had engendered a new cultural shift toward laziness- people no longer wanted to cook healthy meals because it took too long, they preferred electronics to outdoor play, or they didn't want to walk as a form of transportation.

Many K.I.s identified a lack of education and health literacy in the populations they served, which, for them, meant that individuals did not know how to buy or prepare healthy foods or engage with broader health services. They emphasized that these educational gaps were exacerbated by structural factors that were beyond many people's control, like poverty or lack of access to services or healthcare. As one Black community volunteer and advocate in County A said, people often do not understand "the role of not exercising and not eating properly, and then when they become ill and sick, they don't have the money to go to the doctor, so most of them end up staying in the house sitting, and whatever they can eat, they eat." This quote is indicative of how informants perceived community members' lack of knowledge, and tied that to systemic inequality, demonstrating the interactions between the levels of the ecological model in shaping individual behavior.

3.1.2. *Micro-system Level.* K.I.s in all four counties identified micro-system level barriers. K.I.s felt that time constraints made it hard for families to cook healthy foods and that adults were not spending enough time taking children outside to play or teaching them how to grow or cook healthy foods. Many blamed these time constraints on shifts in family dynamics—for example, an increase in the share of mothers working outside the home or in the share of grandparents raising grandchildren. They believed these shifts had caused people to turn to convenient,

processed foods and to spend less time playing outside. A white leader of a faith-based non-profit in County C said:

> I've met a number of people my age whose mothers didn't really cook and so they didn't really learn how to cook other than boxed meals, so that's what they prepare for their children...And some of the people are going shopping once or twice a month and so they're buying things that are going to stay good for longer…

K.I.s talked about how earlier generations worked on farms or had gardens, which served as both a source of physical activity and of healthy foods. A white Cooperative Extension Agent in County A said, "What I remember growing up is we had more gardens. People gardened more than they do now."

Other K.I.s, particularly in predominantly Black counties, talked about how 'traditional' Southern foods like sweet tea, barbecue, and fried foods were part of a strong cultural history of resilience and community, particularly for Black families. A Black leader of a public health organization in County A talked about how food traditions were tied to slavery, "Enslaved people were fed the scraps, what was left over from serving those who were well off... Not necessarily the most nutritious or nutritious at all, but it's a tradition." Although these foods represented the resilience of Black communities in the face of intense hardship, K.I.s also worried that these foods weren't healthy, and therefore noted that their organizations were working to help families grow and prepare these foods in healthier ways.

3.1.3. Meso-system Level. K.I.s talked about barriers at the meso-system level, particularly related to how their organization worked—or failed to work—with communities to promote health. Despite several counties having health coalitions, K.I.s felt that organizations in their counties competed against each other for limited grant dollars and lacked long-term funding and strategies to support projects. A Black pastor in County A said:

> "I think that individually all of us have been pretty effective [with grant funding] and we've done a good job with it and we've had a lot of success. The challenge for us is having sustainable success. We'll do something good one year or two years or even five years and then you look up and it's gone."

Many K.I.s described the need for better coordination across sectors to encourage long-term, sustainable change.

Across counties, K.I.s mentioned that the same people often directed multiple community initiatives, which led to leadership burnout. These fractures in long-term planning and partnership-building had concrete impacts in the counties. In addition, K.I.s felt that residents were often unaware of programs or services due to a lack of communication and transparency from the county organizations.

K.I.s' perceptions also varied by county. For example, in County A, a predominantly Black county, K.I.s discussed how fear of police surveillance kept people from feeling like they could safely walk in their neighborhoods. As one K.I. stated:

> Just like going out for a walk in your neighborhood, you go out for a walk and the police are stopping you and just harassing you...so they know that I live in the neighborhood, but they're still harassing me, so now I don't even want to go out.

Recent flooding in County A had also damaged property and contributed to a loss of resources for families and organizations, which hindered organizational capacity to implement programs and services. In County B, which has a large share of Latino/a/x residents, K.I.s commented that a lack of resources to translate materials into Spanish prevented them from making connections with that community. K.I.s felt that because of fears of deportation and government surveillance, Latino/a/x individuals were afraid to access county resources, and when they did ask for support, resources were not always translated or delivered in culturally appropriate ways.

3.1.4. Exo-system Level. Several K.I.s talked about how difficult it was to promote health in their county, given that the state and federal government neglected rural people. For example, several K.I.s commented on the lack of physical activity infrastructure like parks or sidewalks. In County B, a white leader of a local non-profit said, "I think we're park poor...when we work with people, one of the biggest problems is finding a place that is easily accessible for them to get to go walk safely in a safe neighborhood." K.I.s also talked about the role of the food environment, including the rising costs of healthy foods and the closing of retail food outlets in their rural communities. Transportation was a common topic, and K.I.s talked about how difficult it was for people to access healthy foods because they did not have reliable access to a car or public transportation.

When discussing the processes that contributed to limited access to food and physical activity, K.I.s in all counties cited structural inequalities, including job loss, a lack of public transportation, and inadequate funding for healthy eating and physical activity in schools. A Black government official in County D explained that the biggest challenge improving health was a lack of jobs: "If we had more job opportunities I think a lot of [people] would work, and the more they work, I think it will be less of so many things that we're having now." As a white, retired physician in County C noted regarding schools, "They've knocked out recess. They've knocked out physical activity. They're knocking out art. They're knocking out music....I'm just saying there's a real barrier in...the rural areas." K.I.s also talked about how County And town governments did not have the funds to support necessary projects and improvements.

3.1.5. Macrosystem Level. Most K.I.s described how the 'problem of obesity' did not happen overnight. They attributed rising obesity rates to long-standing and persistent inequalities that shaped how people in their communities were able to access resources. One Black woman who leads a health initiative in County A pointed out how these historical patterns and shifts were shaped by generations of oppression and histories of slavery, as noted above. She reflected that the *chitterlings and the barbeque* that many people loved to eat were some of the foods that enslaved people resourcefully created out of the leftover scraps that they were given each week. Importantly, three of the project countries are majority Black. Several K.I.s, particularly K.I.s of color, pointed out that racism and structural

inequities tied to race shaped the services available and the perceptions of those services in their counties. A Black leader in A County stated:

> It's not that people don't want to take care of their health. When you live right at the poverty line which we have very low incomes in [our] County, most people, when a family member's parents, they're thinking about just making sure their children eat. They're not even concerned so much about what they eat, just the fact that they can eat.

These inequalities were compounded by immigration policies for Latino/a/x residents. A Latino leader of a civic and educational organization told us about how difficult it was to get families to trust their organization and seek help because of the current political environment for immigrants and refugees.

Multiple K.I.s tied rising obesity rates to cycles of poverty that kept people from having the resources to do things like prepare healthier foods or be more physically active. As a Latino leader of a local non-profit said:

> [The issue is] time...the way people work has changed in many communities where people have to hold more than one job where they have to figure out how to get from Point A to Point B ...they don't have the time or really the capacity to engage in some of this stuff and so I think it's time plus like the stress and anxiety that poverty brings with it.

As a white leader of a faith-based non-profit in County D said, this lack of time and the resultant anxieties are a result of the systemic nature of poverty that limits people from having access to the resources and support they need. She went on to say:

> There's a limit to funding and to what different groups are able to do, but the long term impacts of really being able to help people move out of [poverty] and achieve that level of independence and dignity even, to earn their way, would be so much greater than just meeting their minimum need on a regular basis forever.

K.I.s recognized that these broad systemic issues did not happen suddenly and that they didn't always know how to address entrenched structural inequalities. As a Black pastor in County A said, "We have some very serious health issues in our community. They can get better but they're not going to get better overnight. There's not a magic wand."

3.2 Assets and Facilitators

K.I.s in all counties were far more likely to discuss barriers than assets (to illustrate, the code report for barriers was twice the length of the exported code report for facilitators). However, they also identified several assets and facilitators that could be harnessed to promote health. K.I.s described a strong sense of community pride and love for the people and places where they worked. They appreciated the

abundance and beauty of the green space and natural resources in their counties. They also felt invested in these places because many had grown up in the communities they now serve. As a Black educator in County D said:

> The reason I'm back is because I was born and raised here, so I know what it's like...and I want the people, the new generation to understand, hey [if you want] something [to be] better, then you can come back and make it [better].

3.2.1. Individual Level. K.I.s in the four counties described how some programs helped people eat healthier foods, for example, by providing education about meal planning or cooking. K.I.s also discussed the importance of intangible qualities like self-confidence, dignity, and passion in promoting health, emphasizing that people needed a sense of *hopefulness* that situations could improve. K.I.s explained that some existing programs promoted these affective qualities by providing free and easy-to-use resources, building trust, and promoting dignity. For example, a white leader of a faith-based non-profit in County D noted the importance of "...spending that time with [people] and actually having a real discussion...not just turning in an event and checking off your numbers." A Latino/a/x non-profit leader in County B similarly stated:

> Parents are really, really responsive to us, and I think it speaks to just our willingness to meet them where they are, to put effort into communicating with them in Spanish and really provide a program for them that they want and that is relevant for them.

K.I.s worked to build relationships, recognizing that the bonds they built with individuals could lead to longer-term changes in individual and community health.

3.2.2. Microsystem Level. Although some K.I.s identified a lack parental involvement as a barrier, others reported that parents' engagement in their children's lives was an asset that could be harnessed to support health. K.I.s mentioned that organizations could build on parental involvement in activities like band or sports practices, providing health programs in these places as a way to 'meet them where they are.' A white educational leader in County A explained that she engaged parents as volunteers to keep kids occupied with physical activity before school starts. Because of the nature of busy family life, K.I.s also talked about how they were proudest of the programs in their community that used flexible scheduling, accessed community social networks, and used technology to communicate with families.

Other K.I.s described innovative faith-based or volunteer-led programs as particularly promising in supporting family and social networks. In County B, K.I.s stated that faith-based organizations were a key asset because they could offer space for activities like cooking, nutrition, and fitness classes. For example, a white congregation in County B opened its building to house a Latino/a/x non-profit that offers English as a Second Language (ESL), citizenship, and nutrition classes. In this case, K.I.s were able to leverage the support of local community members and organizations to provide free or reduced-cost programs to promote health in their communities.

3.3.3. Meso-system Level. While some K.I.s identified limited funding and uncoordinated efforts as a barrier, others felt that limited funding facilitated cooperation by encouraging organizations to work together and coordinate programming in order to broaden impacts. These K.I.s emphasized the value in working together on projects like county health assessments or developing connections across programs, for example by combining nutrition classes with agricultural programs. Additionally, they valued the role that partners like faith communities, fitness centers, businesses, or healthcare providers played in health promotion. The hospital systems acted as strong partners in several counties, supporting county health assessments and coalition-building work out of their funding requirements through the Affordable Care Act. As a Black coalition leader in counties C and D stated:

> Being funded…the investment of providers like the physicians, as well as all of our partners…Those are the things that help support, and also sometimes leveraging resources, some of the resources that we have to partner with another organization to say, 'We can do this. Can you help support or do that?'

These coalitions and partnerships united around a common goal, and K.I.s talked about how this shared vision facilitated better outcomes.

3.3.4. Exo-system Level. Grant funding and coalition-building also helped engage town and county leaders in health promotion work. At the exo-level, these partnerships led to enhancements in community infrastructure, like farmers' markets, corner stores, trails and parks. When communities were able to obtain funding, K.I.s noted that the funding helped to engage governmental leaders, including school superintendents and school boards, local transportation and planning organizations, and businesses. As hospitals shifted to focus more on preventive care, a Black coalition leader who worked in both counties C and D explained that they saw that addressing health disparities could save them money: "It's just a lot better cost-wise to prevent things than to try to treat and cure them later on, and that's what the trend has been." K.I.s also cited how natural amenities like parks, green spaces, rivers and lakes could be harnessed to promote health. A Black mayor in County D talked about how a local canal trail had become a nationally-known tourist attraction. K.I.s felt that these assets are often unique to rural communities and should be protected and promoted to encourage physical activity and tourism.

3.3.5. Macrosystem Level. At the macro level, K.I.s talked about how crises—from floods and hurricanes to the obesity crisis—could sometimes serve as a catalyst for a broad-scale shift in norms and beliefs. Crises and transition times, K.I.s reflected, could provide a deeper awareness of problems and inspire residents and organizations to mobilize to address them. For example, in County A, two historic floods due to hurricanes in the last decade had decimated county resources, homes, and facilities. As a Black pastor said:

> We're reminded that recovery is not a one-day, one-week, someone-coming-in-trying-to-save-us event, but we're in a continuous recovery. And

> so these are the opportunities that tell us that the table that's been set for us, that we can't go back to the old table...We've got to do things different.

A white principal in the same county said that the hurricane and subsequent flooding helped her to see the vast network of resources that existed in her community:

> We're a school of two hundred and sixty-seven kids and of that two sixty-seven, we had a hundred and seven that were displaced but…every single kid that was displaced, a local church has come and just outfitted the kids totally...If anything, the flood really helped me realize that there are a lot of other agencies here that are willing to help...and so when the flood happened, there was at least a definable, 'this is exactly what we need,' and I mean we got that plus.

For K.I.s in County A, the flood was a time of crisis; however, as they worked together during the recovery efforts, they discovered new resources that could be engaged to promote health and well-being in the long-term.

K.I.s across the counties discussed the 'obesity epidemic' as another crisis that their communities faced. As with a natural disaster, they noted that a crisis could also leverage change and create new opportunities. These public health crises helped to build coalitions to address access to healthy eating and physical activity, which led to additional funding and programming support, both locally and nationally. K.I.s stated that increased attention to the 'obesity epidemic' (including initiatives like former First Lady Michelle Obama's *Let's Move* campaign, as well as state and local projects) led to increases in funding and resources that could be used to promote health. For example, as a white extension agent in County D told us, an influx of funds from a local foundation "sparked a lot of different initiatives...it kind of was a driving force to kind of pull a lot of different initiatives together...it kind of initiated a fire to start some initiatives in our community." K.I.s emphasized that funding to build coalitions and address access to healthy eating and physical activity led to additional funding and programming support, both locally and nationally.

4.0 Discussion

Interviews with 37 K.I.s in four counties revealed that they were aware of the challenges of promoting healthy eating and physical activity, particularly given the lack of resources and structural supports to enable broad-scale changes they believed their communities needed. On the one hand, these K.I.s were incredibly proud of their communities and happy to be working in places they cared about so much. However, K.I.s also worried about their communities, lamenting the loss of employment opportunities and persistent poverty they saw there. This resonates with what political scientist Katherine Cramer (2016) has described as 'rural consciousness,' a descriptive category of an 'identity rooted in place and class.' According to Cramer, rural consciousness describes "a strong sense of identity as a rural person combined with a strong sense that rural areas are victims of injustice" (Cramer, 2016, p. 89). However, unlike Cramer's participants, the K.I.s in this study recognized that although the problems they faced were complex, they emphasized that they *could* change the system, even if they could only do so within their

particular sphere of influence (for example, the church, a non-profit, or through nutrition education programming).

K.I.s described social cohesion and support as crucial assets, particularly given how most of their counties were often at the bottom of health ranking lists, most with higher than state averages of poverty, obesity, and food insecurity rates (see Table 1). This could be why these K.I.s emphasized the role that coalitions could and did play in addressing the broader structural or policy issues facing their communities. As noted above, these coalitions struggled at times with leadership, funding, and long-term collaboration, but they also felt that coalition and partnership building offered strategies for addressing health along with the ecological model, particularly in lower-resourced rural communities (Hebert-Beirne et al., 2018; Kirk et al., 2017).

Despite the recognition that structural racism, which several K.I.s linked to the continued impacts of slavery on their community, and poverty shaped individual behaviors related to healthy eating and physical activity, K.I.s struggled to identify ways they could affect change across these systems, instead often focusing on the work that they did to affect change for individuals and families. This phenomenon is not unique to the participants in this project. Gustafson et al. (2018) note that people often find it difficult to discern who should take responsibility for making broad-scale social or systemic healthy eating and physical activity changes, given the myriad issues that rural communities face. In the face of such complex problems like ‘obesity’ or a lack of access to healthy foods and places to be active, it can be easier to blame individuals for the problem, instead of taking steps to address the broader social inequities that shape and constrain individual behaviors. This was the case for many of the K.I.s in this study. Despite identifying and attempting to address the structural barriers that inhibit the ability of individuals to lead healthy lifestyles, many of these K.I.s lamented *individuals’* resistance to changes and—in some cases—blamed them for the poor health outcomes in their communities. Attributing obesity to individuals’ shortcomings is not unique to rural residents (Lusk & Ellison, 2013; Puhl et al., 2015) . Additionally, weight bias and stigma against people with larger bodies is prevalent throughout the US, and the belief that obesity is an issue of ‘personal responsibility’ fuels these biases (Puhl et al., 2015). As Kirk et al. (2014) have affirmed, this reflects a broader need in health care and preventive services to “challenge the social and political culture that currently seeks to blame individuals for a failure to maintain a healthy body weight” (Kirk et al., 2014, p. 797). On a related note, several K.I.s noted how changes in ‘family dynamics’ had contributed to a rise in obesity rates. This critique of new family norms can also be read as an implicit critique of the shifts in gender norms and economic realities that have led to more women working outside the home (US Department of Labor, n.d.). As K.I.s lamented the loss of family dinners and harkened back to earlier times when families gardened and cooked together, they also romanticized an idealized family mealtime that has never really been a reality in the U.S. (Brenton et al., 2019), particularly for poor women and women of color, who have historically had to care for others’ children and homes in addition to their own (Wallace-Sanders, 2014). Compounding this, statements about ‘laziness’ and a lack of personal responsibility can also reflect the ‘racialized politicization of food assistance’ and the ways that discourse about obesity prevention can also blame and shame low-income and communities of color for health outcomes that are attributable to structural forces (Elliott & Bowen, 2018).

While it is beyond the scope of this paper to provide an in-depth comparative analysis of the K.I. responses by race and gender, we note that many K.I.s of color offered a pointed analysis of the ways that race and racism impacted the cycles of poverty and inequality that they saw in their counties. They were acutely aware of the ways that racism, discrimination, and poverty intertwined to produce and reproduce social inequalities that led to poor health outcomes in the communities they served. As studies have pointed out, mortality rates are higher for Black rural residents than their white rural or urban counterparts; these outcomes are highly linked to poverty (James & Cossman, 2017). Despite common media tropes, rural America is not monolithically white, especially in the South (Lichter, 2012). As K.I.s in this study affirm, health interventions in rural communities must be attentive to the ways that structural inequalities—in particular, in this case, poverty and racism—impact health outcomes and shape the ways that people are able to access vital services. The K.I.s of color in this study were attuned to these structural inequalities that shaped individual and social behaviors; however, they didn't always know how to address systemic issues like poverty and racism, and in some cases, faced push-back from their communities for addressing health equity and discrimination, for example by providing Spanish language programming or designating community resources for underserved and marginalized populations. As researchers have noted, systemic racism is a fundamental public health concern that all public health professionals need to address by acknowledging its impacts, recognizing and dismantling racist systems that unfairly benefit some over others, and training current and future public health professionals to address these critical issues (Jee-Lyn García & Sharif, 2015). Additional research that takes an intersectional approach to community-based rural health is needed to understand and address these long-standing systems of oppression and marginalization (Bowleg, 2020).

Although these interviews were conducted pre-COVID-19, they reveal how community health leaders make sense of the complex health issues their communities face. Additionally, *Black Lives Matter* and other social justice movements have pushed public health and community development research and practice to acknowledge and address the ways that racism, poverty, and other systemic inequalities shape health outcomes (US Department of Health and Human Services, n.d.). The rural community leaders in this study were aware of the challenges of promoting healthy eating and physical activity, particularly given the lack of resources and structural supports to enable the broad-scale changes they believed their communities needed. However, while most K.I.s acknowledged these structural issues, many also blamed individuals for the health failings in their community, in turn reflecting (even if unintentionally) the harmful blame and shame narratives that have politicized health policy and denigrated people of color and people living in poverty.

This study reveals that the need for additional work and training to shift from blaming individuals to developing complex frames for understanding—and appreciating—people's lives and actions in public health practice. Such trainings can identify the ways our meaning-making systems, internal biases, and ingrained perceptions of self may unintentionally contribute to upholding the status quo instead of questioning, dismantling, or working to transform oppressive systems (Jee-Lyn García & Sharif, 2015). Additionally, programs to build the skills of leaders to facilitate more inclusive processes and to improve their capacity to create diverse coalitions are needed. While the K.I.s may have voiced a genuine

desire for the inclusion of diverse voices in local health promotion efforts, the coalitions often did not represent the county's racial and ethnic profiles. Community-based participatory approaches to research and practice, particularly those that are attentive to and rooted in communities' health assets, offer promising approaches to understanding and addressing issues communities face related to structural oppression and persistent poverty (Anderson et al., 2015; Jakes et al., 2015; Kirk et al., 2017).

There are some key limitations to this work. Cooperative extension staff were able to interview between eight and ten individuals in each county, so these perspectives do not represent the views of the county residents across the communities they serve. Additionally, because they only interviewed individuals who represented organizations doing work in the area of access to healthy foods and places to be active, the results do not include the views of people who are engaged in other areas of community development. Additionally, because the staff who carried out the interviews were working in the communities as well, the responses may have been affected by the relationship the interviewers had with participants. This research is novel in that it offers an understanding of the barriers and facilitators to health across the ecological spectrum, something that is not well-understood, particularly in rural communities. It is one of the few studies to investigate the ways that community health practitioners understand and navigate the elements of the socio-ecological model in their work. Given public health recommendations to address healthy eating and physical activity across the socio-ecological spectrum, these findings are particularly relevant for researchers and community development practitioners who are partnering with rural communities to improve health.

K.I.s described addressing healthy eating and physical activity in rural communities as a complex issue that required broad-scale solutions with multiple partners. Research suggests that building capacity is an important factor in influencing health status on a county or systems level (Emery & Flora, 2006; Flora et al., 2016; Garney et al., 2017). This involves building the skills of leaders to facilitate more inclusive processes and also building the knowledge, comfort, and desire of community members to effectively engage in health efforts, ideally through broad-based coalitions with leadership that reflects the diversity of the county. Additional efforts are needed at the county level to help stakeholders address the structural and systemic issues that their communities face.

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