Social Determinants Of Health And The Effects On Quality Of Life And Well-Being In 2 Rural Appalachia Communities

By: **Adam Hege, PhD**; Lanae Ball, PhD; Richard W. Christiana, PhD; Conner Wallace, BS; Cami Hubbard, BS; Danielle Truesdale, BS; Jennifer Hege, MDiv; & Howard Fleming, MDiv

Abstract

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The Community Members' Perspective and Implications for Health Disparities

Adam Hege, PhD; Lanae Ball, PhD; Richard W. Christiana, PhD; Conner Wallace, BS; Cami Hubbard, BS; Danielle Truesdale, BS; Jennifer Hege, MDiv; Howard Fleming, MDiv

Recent evidence highlights health disparities among rural communities. The purpose of this study was to learn from members of 2 Appalachia communities in North Carolina about barriers to health and well-being. Researchers conducted 3 focus groups (n = 24), which were coded and analyzed by a team of researchers to identify themes. Researchers identified 5 themes: (1) poverty/lack of economic opportunity; (2) access to health care and health resources; (3) social/mental health challenges; (4) food insecurity/hunger; and (5) youth/older adults being most vulnerable to health disparities. Ample evidence suggests that rural Appalachia is in dire need of public health attention.

Key words: health disparities, quality of life, rural Appalachia, social determinants of health

HEALTHY PEOPLE 2020 has a predominant emphasis on further understanding of social and environmental barriers to health frequently associated with health disparities across the United States as the nation pursues health equity.[1] Much research has highlighted the importance of social determinants of health, commonly referred to as "root" or "upstream" causes of health, in relation to health outcomes and behaviors.[2-5] Many argue that for the United States to achieve health equity, there must be more importance placed on the social determinants of health, which include employment and economic development opportunities, geographic location, and poverty, to name a few.[6-8]

As it pertains to social and environmental influences, researchers are quick to target the significance of socioeconomic status (SES) as the driving force.[9] It is widely accepted that those with a lower education attainment will have limitations in the form of employment opportunities and subsequent income capacity.[2,10] Socioeconomic status further plays a considerable role in one's living conditions and where one resides; much work in recent years has signified the importance of health occurring where we live, work, and play.[11,12] As a result, many people with a lower SES live in neighborhoods with lacking infrastructure, built environments not conducive to health, and a lack of health and medical resources. In addition, they are much less likely to have access to health insurance to cover health or medical needs.

The discussion of social determinants of health in the United States, in particular, has focused on the nation having the highest spending on health care among developed nations and among the poorest health outcomes in return.[6,7,13] Within this discussion is the underlying realization that the United States does not provide universal health care coverage to its citizens.[6,14] Furthermore, it highlights the limits of a focus on medical care, with the shorter life expectancy and "healthy" life expectancy and reduced quality of life experienced among many American citizens.[6,15] Researchers have found disparities in health behaviors and outcomes rooted in social determinants to include obesity and its associated comorbidities, physical inactivity, poor nutrition and lack of access to nutritious foods, and

mental health, to name a few.[16-19] It is also worth noting that children, adolescents, and older adults are among the demographic segments most affected by and vulnerable to social determinants of health.[7]

In further exploring geographic location and its role in elucidating and potentially exacerbating common social determinants of health, in recent years, it has been shown that there are vast differences in health outcomes and access to health resources when comparing urban and rural settings.[20-22] A 2015 study found that the most significant health challenges facing rural America includes access to health care, nutrition and weight status, diabetes, mental health/disorders, substance abuse, cardiovascular disease, physical inactivity, and older adult health.[23] This is especially relevant and concerning due to the fact that 75% of the US counties, or more than 90% of the landmass, have been deemed rural.[24,25] Specifically, the rural settings found in the southeastern region of the United States are prone to poor health outcomes and many have suggested the linkage with social determinants of health.[22,26,27] The southeast has many states with high poverty rates, lower SES, and reduced health care access, and coupled with these challenges, researchers have found increased rates of obesity, physical inactivity, food insecurity and food deserts, diabetes, poor mental health status, and older adult health concerns.[28-31]

As important and pressing as these findings are, what is often missing are the stories and lived experiences from community members residing in rural settings. Qualitative research can provide enhanced details as to why citizens consider the aforementioned challenges as such.[32,33] Specifically, focus groups can afford community members the opportunity to share and learn from each other; in addition, it can allow for participants to reflect and make connections with their peers.[34,35] For researchers and practitioners in public health, it assists in building trust with community residents and hearing viable solutions from those actually experiencing the challenges to their health.[35-37]

One specific and large rural portion of the United States encountering significant health disparities is the Appalachia region,[38] which spans 13 states and more than 400 counties.[39,40] This region of the country, over the past 50 plus years, has encountered a continual diminishing of economic opportunity, increase of poverty, reduced quality of life, and environmental barriers to health.[39,41] Recent national media headlines have focused on the burgeoning opioid crisis[42] and the widening disparities in relation to infant mortality and life expectancy.[43] However, much of this is known through survey and quantitative data, with limited attention to working with the people within their context to inform and develop interventions that meet their needs and capability.

Therefore, the purpose of the current study, which took place in 2 neighboring rural Appalachia towns in North Carolina, was to hear from community members in a series of focus groups about their perspectives regarding some of the most pressing health challenges in their neighborhoods. This study is a portion of formative research conducted as a part of developing community-level interventions aimed at food access and improved health. The goal of the study is to utilize results from the focus groups conducted to help inform interventions and policy development, while working collaboratively with local leaders and residents.

METHODS

Research design and setting

In the spring of 2016, 2 United Methodist churches in neighboring rural North Carolina towns began a collaborative effort aimed at addressing food access issues in their local communities. The 2 towns, located in one of the aforementioned counties found in the Appalachia region, have populations of approximately 4000 and 1000, respectively, in a county of just more than 80 000.[44] The county's percentage of those with an educational attainment of high school graduate or higher (76.7%) is nearly 10% lower than the state rate (85.8%); regarding those with a bachelor's degree or higher, 13.7% of residents meet the criterion, which is much lower than the state's 28.4%. One in 5 people (19.6%) fall below the federal poverty level, compared with 16.4% across the state, and the county has more than a 7% unemployment rate, whereas the state's unemployment rate is slightly lower than 7%. Table 1 provides an overview of the demographic makeup of the towns and the county as a whole.

Prior to the decision to partner, the churches were working independently to address the issues in their respective communities through a local food pantry and a weekly free meal offered by one of the churches. In addition, the larger of the 2 churches had recently implemented a community garden on its property. When deciding to corroborate their efforts, the church leaders sought out technical assistance and evaluation assistance from university researchers. As a result of this, the church leaders and university researchers determined that it would be best to hear from local residents and gather perspective on what the barriers were to health to be able to more effectively address the issues.

In the present formative assessment, researchers sought to gather insight into barriers to health

TABLE 1. Town and County Characteristics

Characteristic	Town 1,[a] n (%)	Town 2,[a] n (%)	County,[a] n (%)	North Carolina,[a] n (%)	Appalachian Region,[b] n (%)	United States,[a] n (%)
Population						
Total population	4 683	846	81 758	9 845 333	25 367 886	321 418 821
Number of households	1 706	330	31 566	4 417 210	…	118 208 250
65 y and older	(15.1)	(16.7)	(17.1)	(14.2)	…	(16.4)
14 y and younger	(18.9)	(12.3)	(17.5)	(19.3)	…	(18.3)
Race						
White	(93.5)	(95.2)	(90.6)	(69.5)	…	(73.1)
Educational attainment (of those 25 y or older)						
High school graduate or higher	(77.6)	(72.9)	(76.7)	(85.8)	(84.6)	(87.1)
Bachelor's degree or higher	(17.7)	(5.0)	(13.7)	(28.4)	…	(34.1)
Employment status (of those 16 y or older in labor force)						
Unemployed	(10.4)	(10.9)	(7.1)	(5.8)	…	(6.3)
Median household income, dollars	$43 409	$30 313	$35 763	$46 868	$45 585	$55 775
People below poverty level (past 12 mo)	(20.2)	(24.5)	(19.6)	(17.4)	(17.2)	(14.7)
Health insurance coverage						
No health insurance coverage	(23.7)	(24.1)	(16.2)	(14.4)	(15.8)	(9.4)
With Food Stamps/SNAP benefits in past 12 mo (households)	(15.5)	(22.4)	(18.4)	(14.6)	…	(12.8)
Veteran status (of those 18 y or older)						
Civilian veterans	(6.4)	(5.2)	(8.2)	(9.3)	…	(7.6)
Disability						
With a disability	(13.3)	(25.2)	(18.9)	(13.5)	…	(13.5)

Abbreviation: SNAP, Supplemental Nutrition Assistance Program.
[a]From US Census Bureau.[44]
[b]From Appalachian Regional Commission.[40]

among residents of the 2 rural towns, with a particular interest in food insecurity and physical inactivity. In this article, we hone in on the 3 focus groups that were conducted. The focus groups involved a total of 24 adults, with the focus groups ranging from 6 to 10 participants. This study was approved by the institutional review board of Appalachian State University.

Participants

The participants of the focus groups were selected from people making use of the food pantry at one of the churches and those attending the community meal held each week at the other church. Researchers sought to have participants from varying backgrounds in order to elucidate diverse perspectives. As such, the first focus group (6 participants) involved older adult participants making use of the church food pantry. It was expected that this group could give much insight into the challenges of the aging population in the community. The second focus group (10 participants) involved people attending the weekly community meal and included people coming in need of a free meal as well as church members assisting with the preparation and delivery of the community meal. This particular focus group comprised mainly of people seeking access to a healthy free meal offered by the church as opposed to church members. The makeup included young to older adults. Based on the makeup of this group, the

third focus group (8 participants) sought to have a mix of church and other community members, with more of an emphasis on the perspectives from church officials, and took place at the weekly church outreach meal. The makeup of this group also involved young to older adults.

Focus group design/content

Researchers developed 5 core open-ended questions to be asked in each focus group, with probing questions to follow. The first question centered on participants' perspectives on what they perceived as the most pressing health issue facing their community. This was followed up with exploring why the issue was so critical and plausible influential factors. The second question addressed issues related to accessing nutritious food in the community. In addition, participants were asked to name reasons to back up their perspective. Next, participants were asked whether the community provided enough access to nutritious food. Again, participants were asked to elaborate on why and provide insight into their perspective. With this question, participants were also asked who in their community (age, race/ethnicity, occupation, etc) might be at most risk of not having access to enough nutritious food. A fourth question focused on whether participants thought that people in their community did not have enough food and why; it was followed up by gathering perspectives regarding who in the community (age, race/ethnicity, occupation, etc) might be at risk for not having enough food (hunger). The fifth and last question addressed the aforementioned questioning as it pertains to physical activity.

The focus groups were all conducted by a trained qualitative researcher and were each approximately 45 minutes in length. Participants were provided an opportunity to consent to their participation, and the focus groups were recorded for future transcription. Incentives of $10 cash were provided to participants at the end of the focus group session.

Data analysis

The audio-taped focus groups were transcribed verbatim by 3 students from the university studying either public health or nutrition. Once the transcribing was completed, 2 of the researchers and 2 of the students reviewed and coded the transcripts independently to identify possible themes across the focus groups. Next the 4 gathered together and utilized constant comparison to verify the themes that each had come up with on an independent basis. At this point, the 4 had minimal differences in interpretations and had highlighted specific quotes in support of the identified themes. Once this meeting was over, the 4 team members also went back and reviewed independently to confirm the final themes. During this time, it was discovered that the focus groups had explicated themes that were not originally anticipated going into the study; however, these findings indicate and highlight numerous underlying factors related to the issues of food insecurity and physical inactivity in rural areas.

RESULTS

When analyzing the focus groups, the researchers established 5 independent but interrelated themes: poverty, the lack of economic opportunity and its effect on quality of life; lack of access and barriers to health insurance and other health resources; social and mental health challenges; food insecurity and hunger; and older adults and youth being most vulnerable to health disparities. Table 2 provides the focus group questions and content along with the key influential factors or barriers that were identified by the participants.

Poverty and the effect on quality of life

Throughout the focus group sessions, many participants expressed their concerns with a lack of economic opportunity. As detailed by one participant, even among those employed, the wages were low, which is a key issue for those in the "working poor" of the community.

> I think the biggest problem, uh, is for people that does have jobs, or hadn't a worked for such low wages. It does not meet, uh, what everything costs in a store, and that's why everybody has to buy the cheapest they can get by. I'm making eleven bucks an hour, and I work for maintenance. And, uh, and I have to buy everything the cheapest I can and barely afford to get by. That's why. Everything goes up and then our checks don't, and it's, it's crazy.

Community members had a serious concern about veterans in their midst, who had come home from serving their country abroad and had limited opportunities for reestablishing their life upon their return. When driving through these 2 communities and looking over into the woods, it was apparent that numerous people were homeless and living there in tents.

> Cause I know there's 10 counties of homeless veterans I work with—in Disabled American Veterans—and, I see a lot of 'em livin in woods and stuff. And, and, they just don't have it! There's just no way.

Another factor in the community related to poverty and the way of life in the community was that many people are physically or mentally disabled. This creates additional challenges for a number of people in rural communities.

> I can't help I'm disabled. I'd love to be working, but it just runs in the family. Everyone in the family gets

TABLE 2. Focus Group Questions and Content

Question	Key Influential Factors or Barriers
1. What do you think is the most pressing health issue facing your community? Why? What are the most influential factors related to the issue? *Pressing health issues:* Hypertension Diabetes Poor nutrition Physical inactivity Mental health Obesity/overweight Health literacy Alcoholism/drug addiction	*Influential factors/barriers:* Health care access/affordability Medicaid/Medicare challenges Disability Income/poverty Lack of employment opportunity Rurality
2. Do you see any issues related to accessing nutritious food in your community?	*Influential factors/barriers:* Food environment/fast foods Cost/lack of income Transportation barriers Influx of processed foods/lack of family gardening Lack of cooking skills Challenges with government bureaucracy (food stamps, VA benefits, etc)
3. Do you think that people in your community have access to enough nutritious food?	
4. Do you think there are people in your community that do not have enough food or are hungry? If so, why? What contributes to it? If not, why? What contributes to making nutritious food Inaccessible or a lack of quantity of food/hunger?	
5. Do you think people in this community get enough physical activity? If so, why? If not, why? Who in your community does not get enough physical activity?	*Influential factors/barriers:* Crime/safety Technological advances Disability Culture change Lack of PE in schools Accessibility/affordability

Abbreviations: PE, physical education; VA, Veterans Affairs.

> it in their 40s. I'm just getting $754 a month and it takes all that to pay my bills. I have no dollar left what so ever. They only give me $114 in food stamps to eat off of.

Lack of access and barriers to health insurance and other health resources

Another common issue of concern in the communities was a lack of access and ongoing barriers to health insurance and other health resources. Many were frustrated that North Carolina, much like many other states with large rural populations, had not agreed to Medicaid expansion offered under the Affordable Care Act, and it is having profound negative consequences.[45]

> Especially in … County because the state didn't agree for federal funding. Is that right? For the Medicaid. To a certain income group. Who gets hurt by this is the poorest of the poor. The rest of the folks have some options, but the others have nothing that is available to them.

Because of the burden of paying for health insurance or not having access to insurance, many expressed that they had to make critical decisions when it came to their finances and their health and well-being.

> I find, uh, the biggest problem with my finances is health insurance!…. And medications … I'd have, I'd have access to, uh, better quality food, the fruits and vegetables that I love, but my health insurance is killing me.

Particularly among the elderly participants, transportation to and from health care and other resources presented a significant barrier.

> Cause I have no transportation, I'm walking … and I mean, I'm tired by the time I get to the door … and it didn't use to be that way. I don't have a vehicle or anything. So, I got no other choice. You either got to get out there and walk if you want it bad enough. They're like me, a lot of them at the senior center don't have transportation.

Social and mental health implications

The focus group discussions also highlighted the frustrations with the quality of life offered in the community. Participants related the profound mental health challenges and that there were numerous people turning to illegal and prescribed substances, namely, opioids, as an outlet.

> Well, now, there's different reasons—some of 'em is there on the street because they can't get a job. Some of 'em are veterans … and it's not because they choose to be homeless, but some of 'em, uh, can't get jobs because they're drunks or drug addicts—but they're not looking at *why* they're drunks or drug addicts.

Social stigma related to poverty was also prevalent in the discussions. Building upon the mental health implications, parents and grandparents of the youth in the community recognized that bullying occurs in the schools and that it can have lifelong repercussions.

> But that's hard for some kids too because, um, they identify the kids that get the free meals … and, um, those kids get teased or whatever at school because that's the way kids are and the way people are in general. They know the kids that are getting subsidized and … free food….

> I was abused in school because, because I was a poor kid. I was abused.

Food insecurity and hunger

Researchers knew going into the study that food insecurity and hunger were challenges in the communities. During the focus groups, participants discussed not only the expense of eating healthy but also the drastic changes that had occurred the last several years in which no one was gardening and cooking his or her own food anymore. They were almost entirely reliant on processed food and fast foods. In one exchange, participants relayed:

> Nutritious food is more expensive.

> Yeah, and so now, the ground is too hard for me to work it like I did when I was young. So I have to rely on wherever I can get it…. And it's not….

> … homegrown or healthy.

> …it's not easy to come by.

Another participant discussed that many in the community did not know how to cook and that, in turn, they were eating foods that wouldn't fill them up or sustain them, which leads to them actually eating more. Much discussion and debate about this has transpired in connection with the resulting obesity paradox that often occurs with food insecurity.[46,47]

> …and my guess is that convenience, lack of knowing how to cook with these things causes people to buy the convenient foods. And the perception that it's cheaper. But I think it doesn't wind up being cheaper in the sense that those foods do not fill you up.

Youth and older adults most vulnerable to health disparities

It was apparent that community members recognized that the youth and older adults of the community were most vulnerable. Many of their health decisions fall out of their control, as they are often dependent on others for their care.

> But the people who suffer the most that don't have the access are the children…. Because they're dependent on people who buy the food. And if the people who buy the food can get to the grocery store, they buy what they want to buy for whatever reason: money, taste, preference, it doesn't matter. Those children are the ones that don't have access. Or the elderly … and they can't get out.

Another intriguing topic of discussion was the cultural and generational divide that many of the older participants expressed. It could be summed up that they thought "things just aren't the same as they were back in my day."

> Plus, the environment—people are afraid to let their kids out.

> We had a 70-acre farm, and we had plenty to do. And we had somebody with us to do it—our parents, you know. But things are so different today.

Many of the adult participants were frustrated when talking about childhood obesity and that kids were just not physically active. Much of their disappointment revolved around how technology had taken over the youth of the community.

> Yeah, the availability of the computers and the toys that are not … uh … body-moving … it's, it's video games. It's, um, you know, whatever that is a sitting-down thing. And kids will say, "hey, I'm not going out in that hot air! I've got air conditioning here, and I've got my computer, and whatever." But two- and three-year-old kids don't even go out anymore. They've got these hand-held stuff.

Furthermore, the participants were not pleased with the limited amounts of physical activity and exercise offered during the school day.

> Well, back in schools, where I went to school, we had exercise period. Where we exercised every day, and uh, and I don't think now they don't have any … they go outside to play in the playground, but they don't have no kind of exercise routine.

It was also apparent that many residents, particularly the older adults, did not feel safe in certain areas of the community and that finances presented as a barrier to being physically active.

> you see a group of boys, years ago, you see a group of young men approaching, you know on a sidewalk, and they were just … you know going down the road and playing baseball or something. Now you see a group of young men and you worry. You don't know if they're gonna hit you or attack you. You don't know. But that's the first thing you see, think. You don't think, oh here's a bunch a guys are gonna go off and play in a field, you know maybe hockey, or s- or s- or soccer, whatever they do. But instead you, you know, pull your purse a little closer and you look around, you know, to make sure you can get away or scream because the first thing you think is these guys may hurt me….

> But if you, I think this is the economic factor…. You can't, if you can't afford the shoes, the gym, the this, the that (pounding for emphasis), then you can't really get the activity…. The only way you can do it is if you have, I think, whatever your age is, just enough money to afford, I'm gonna say it again, decent shoes. Then you can walk…. And when you buy a $10 pair of shoes at Wal-Mart, they fall apart within a month.

DISCUSSION

The present study adds to the existing knowledge around the challenges of health and quality of life in many rural communities in the United States, namely, in the Appalachia region, and aligns with recent calls for further understanding of rural health disparities often linked with social determinants.[22,48] Over the last several decades, residents have seen employment and economic growth opportunities come and go, which have led to stagnant wages and incomes and an increased burden of poverty. As a result, participants in this study reiterated their challenges with health care access and resources, social and mental health complications frequently associated with substance abuse, limited access to affordable healthy food options, and the increased rates of physical inactivity among youth. In addition, older adults expressed their frustrations and lack of understanding of cultural and social changes, which could imply a generational divide.

The findings from this study align with much of the previous work found in relation to health in the rural context. Research has shown that residents living in rural communities are much more likely to be uninsured, and if they are insured, the proportion of those enrolled in Medicaid or Medicare is much higher.[30] Many of the focus group participants in this study detailed their lack of access to health care and the bureaucracy difficulties involving the use of Medicaid or Medicare. Because of this, rural citizens are also much more likely to utilize services offered by their local health department, which have a double disparity in dealing with poorer health among the populace and a lack of public investment to support their efforts.[49] In the region where the present study took place, the local health department is on the other side of the county, approximately 15 miles and more than 30 minutes of driving time. Further complicating the issue of distance is that access to transportation is a major barrier.

With the limitation of health services, it is concerning that mental illness and substance abuse are such a burgeoning issue; in the present study, and not unique to rural areas, participants linked it with a growing problem among veterans of war and possible connections to posttraumatic stress disorder (PTSD). One study found significant differences in terms of risk and protective factors for PTSD among veterans when comparing rural and urban locations and that community features (employment status, community fit, locus of control) could be associated with the differences in prevalence of PTSD.[50] Not surprisingly, another study detailed that rural veterans are much less likely to receive treatment of psychological distress.[51] The mental health complications in adulthood, as portrayed by participants in this study, have been linked to childhood experiences with being impoverished, exclusion from social groups, and bullying during formative school years, which has lifelong implications and requires proper treatment.[52]

As has been reported in recent years regarding the growth in food insecurity among rural communities, the participants in this study discussed the ongoing changes (social, economic, built environment) to the food environment, both at a community level and at a household level.[53] The participants were also quick to identify those most vulnerable (youth and older adults) to the food insecurity problems as a result of the changes. Older adults living in rural areas are especially vulnerable to food insecurity, given that problems related to low income and poverty situations are exacerbated within this population.[54] In addition, food insecurity among older adults has been found to be associated with other health-related consequences such as chronic disease- and cost-related nonadherence to medications.[55-57] Therefore, addressing food insecurity in this population may have farther-reaching implications on health than just nutritional status. In addition, with the ongoing national political debates over social safety net programs, the importance of the Supplemental

Nutrition Assistance Program (SNAP) to rural settings cannot be overlooked.[58]

Participants in this study also recognized the limits to physical activity among the youth, particularly regarding technological and societal change. Specifically, older adults expressed the differences in activities, in which their entertainment revolved around being outdoors and being physically active when they were younger, as opposed to the increasing prevalence of video games and sedentary activities that youth are involved in today. Use of technology (computers, video games, and TV) among youth has been found to be associated with sedentary behavior that takes time away from being physically active.[59,60] In addition, decreased physical activity among youth has been found to be associated with negative parent perceptions of neighborhood safety, stemming from a decreased sense of community cohesion.[61,62] Similarly, participants expressed concerns about the built environment and policies related to physical activity. This has not gone unnoticed in the literature, as recent reports have made urgent calls for improvements in physical activity promotion in rural areas of the United States.[63,64] Access to places for physical activity may be especially problematic in rural areas, given the lack of transportation in these areas.[65] Research has consistently found that location and distance of places for physical activity (parks, open green space, indoor recreation facilities, etc) have an influence on physical activity levels in communities.[66]

As found in this study and in other examinations of health and quality of life in rural America, there are serious challenges and significant needs. However, as other researchers have expressed, there are also opportunities and rural communities should seek to first capitalize on their assets. Rural communities, such as the ones in this study, have a great sense of pride in their identity, a keen sense of social cohesion and networks and overall social capital, and a deep-rooted faith and religious convictions. All of these lead to community members being more willing to volunteer and help their neighbor.[67] This can also greatly assist in efforts to build coalitions and partnerships to address the needs of the community and overcome capacity limitations.[68,69]

While there are opportunities for improvement in many of our rural communities in Appalachia, such as found in the current study, it is also going to require a political voice that is often lacking and the political will to create and sustain change. To accomplish this, however, we argue that 3 key factors need to be addressed. First, as Adler and colleagues[6] argue, it is imperative that we begin to address the social determinants of health as a priority. Particularly in rural areas, we must understand the context and cultural influences surrounding the health and well-being of citizens.[70] Within this, it is critical to recognize that health issues, health care and health behavior, do not occur independent of each other and are heavily influenced by educational attainment and opportunities, employment opportunities, and infrastructure that are often lacking in rural Appalachia communities.[71] From a research standpoint, researchers must heed Cooper and colleagues[72] call for interventions targeting the social determinants of health to continue to build the evidence base. It should also involve community-based participatory research approaches that address power structures often serving as a root cause of health disparities and "Health in All Policies" framework. Second, within this notion, there must be a multilevel and transdisciplinary public health approach[72] rooted in an ecological perspective.[73] This should involve faith-based institutions partnering with local health departments that also partner with other local government, nonprofit, and private sector agencies. An approach such as this can lead to a greater understanding of structural systems-level barriers and how and where to more effectively intervene. Third, but just as importantly, there is an urgent need to continue to expand health care access and build upon momentum from the Affordable Care Act. This includes increasing the number and quality of health care professionals employed in rural areas. It can also center on the expansion of broadband coverage and telehealth opportunities.[74,75]

Limitations

While this study provided some great insight into the struggles experienced by rural residents in 2 rural Appalachia communities, there are a couple of significant limitations worth noting. First, the primary researcher was connected within the community and a member of one of the United Methodist Church communities. As such, this could create opportunities for bias to occur in terms of the reporting from participants. Also, the sample comprised participants taking part in community efforts addressing food insecurity—as someone either receiving aid or providing such at the church. Second, the present study took place in 2 small communities within the rural Appalachia region, with a small sample size, and could in no way represent the perspectives of the entire region. Thus, while this study helps identify the needs of the local community members, it is not generalizable to other rural locations.

CONCLUSIONS

As evidenced in this study, community members in rural Appalachia communities face stark challenges as it pertains to their health, well-being, and

quality of life. It can be said that place, and the context that comes with it, plays a major contribution in the health disparities experienced every day by the millions of people living in this region of the United States. As the evidence has mounted in recent years, it is now time for action from our community, state, and national leaders and policy makers. We, as health researchers, must be advocates for the most vulnerable among us as we seek health equity across our nation. There is no place more suited for public health attention than rural America—and, in particular, rural Appalachia.

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