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Appalachian Women's Perceptions of Their Community's Health Threats

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Abstract

Context—Decades of behavioral research suggest that awareness of health threats is a necessary precursor to engage in health promotion and disease prevention, findings that can be extended to the community level.

Purpose—We sought to better understand local perspectives on the main health concerns of rural Appalachian communities in order to identify the key health priorities. While Kentucky Appalachian communities are often described as suffering from substandard health, resource, and socioeconomic indicators, strong traditions of community mobilization make possible positive, home-grown change.

Methods—To assess what women, the key health gatekeepers, perceive as the most significant health threats to their rural communities, 10 focus groups were held with 52 Appalachian women from diverse socioeconomic backgrounds. Tape-recorded narratives were content analyzed and a codebook was developed. Measures designed to increase data trustworthiness included member checks, negative case evidence, and multiple coding.

Findings—The following rank-ordered conditions emerged as posing the greatest threat to the health of rural Appalachian communities: (1) drug abuse/medication dependence; (2) cancer; (3) heart disease and diabetes (tied); (4) smoking; (5) poor diet/overweight; (6) lack of exercise; and (7) communicable diseases. These health threats were described as specific to the local environment, deriving from broad ecological problems and were connected to one another.

Conclusion—Drawing on participants' community-relevant suggestions, we suggest ways in which rural communities may begin to confront these health concerns. These suggestions range from modest, individual-level changes to broader structural-level recommendations.

Health behavior models posit that acknowledging a health behavior or outcome as problematic is a necessary precursor to addressing that concern.[1] Similarly, when a community perceives that a particular disease or condition constitutes a health threat, they are more likely to mobilize efforts to address the threat.[1,2] Thus, at the heart of a successful health promotion effort is the recognition of what the community considers a meaningful health threat. In this article, we explore what a diverse group of middle-aged rural Appalachian women consider the most pressing health threat to their communities. Women, most especially those in their midlife, are a particularly essential group to involve in a health threat assessment as they frequently serve as health gatekeepers, monitoring, facilitating,

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and providing direct care for their family members, and sometimes for other community members.[3] These generalities may be especially pertinent in the rural Appalachian context, which has a strong tradition of female leadership in both familial and community health promotion.[4]

Methods

Field Site

This study was conducted in 4 rural counties in Appalachia. Our 2 larger counties, each of which contained approximately 30,000 residents, have a Rural-Urban Continuum Code of 7 ("urban population of 2,500 to 19,999, not adjacent to a metro area"), while our smaller counties have 17,649 and 25,277 residents, respectively, and a Rural-Urban Continuum Code of 9 ("completely rural or less than 2,500 urban population, not adjacent to a metro area").[5]

The features of Appalachian Kentucky are similar to rural locations throughout the United States and other nations, perhaps differing in the magnitude of both the challenges faced by rural residents and the assets embedded within the community.[6,7] For example, during fiscal year 2006, the Appalachian Regional Commission listed the 4 counties, in which this research took place, as distressed counties on the basis of low per capita income and high rates of poverty and unemployment.[6] Like many other rural dwellers, Appalachian residents have low socioeconomic and health status indicators, live in areas with severe shortages of health care providers, and experience underfinanced health services.[8]

In contrast to these deficits, Appalachian residents and some researchers have described the plentiful assets of this rural region, including a strong community-mindedness; traditional value systems that include independence, neighborliness, and honesty; a challenging but beautiful terrain; and a strong sense of pride. There is a well-documented history of Appalachian community capacity and activism that lends promise to community-based health promotion.[9,10] The first step in harnessing this capacity and activism lies in identifying community members' concerns about their health, which is the underlying purpose of this paper.

Research Approach and Conduct

We conducted focus groups, a qualitative approach that not only facilitates efficient data collection but also uses interpersonal dynamics to encourage debate and dialogue that can move communities closer to locally grown solutions.[11,12] Given the familiarity of many women in this population with one another and the strong oral communication traditions, the focus group format represented a comfortable method of eliciting insights.[11] Such an approach is particularly useful when administering open-ended questions in which participants describe perspectives unfamiliar to researchers, use their own vocabulary, and select anecdotes to frame their experiences.[12,13]

Sample Recruitment

Theoretical sampling, wherein participants are selected less for being representative and more for being relevant to the issue under investigation, was employed to obtain a broad cross section (income, education, occupation, and health status) of the relevant population (Appalachian middle-aged women), while still ensuring sufficient homogeneity to capture culturally consistent themes.[14] Participants were recruited using a snowball sampling technique that began with women's groups at churches, workplaces, and organizational meetings. Women were approached by staff and invited to participate in a discussion group, with dinner and a small honorarium provided.

Data Collection

With approval by the institutional review board at the University of Kentucky, we administered informed consent, obtained sociodemographic information, and initiated the discussion. Our moderators asked a series of open-ended questions, which were developed by the research team with extensive input from local residents about the greatest health threats to the community, and probes were used to elicit anecdotes, elaborations, and explanations. Interviews took place in churches, social halls, and public meeting spaces and generally lasted for 45 minutes to 2 hours, depending on the level of detail and the group dynamics.

Data Analysis

The tape-recorded sessions were transcribed verbatim and subjected to content analysis, wherein 2 researchers read the transcripts multiple times in order to become immersed in the content and flow of the discussion. Line-by-line analysis guided our initial coding, eventually leading to a detailed code book.[13,15,16] The researchers engaged in refinement of the codebook multiple times, debating coding categories and interpretations of data. Qualitative analysis tends to be recursive; thus, data collection, immersion in the transcripts, and subsequent coding and development of a codebook occurred simultaneously.[15]

Determination of the rank order of the health threats required extensive probing and dialogue engagement. For the vast majority of qualitative research, simply counting the number of times an issue was mentioned has the potential of error and oversimplification, including representing the voice of the most loquacious or audible to the exclusion of those who might be more reserved or quiet. Instead of counting the number of times a condition was mentioned, we compiled a list of those conditions which were mentioned as the most serious health threats faced by their community. Since our moderators would ask for extensive follow-up discussion, these lists would expand and contract. Thus, in every single focus group, substance abuse was mentioned and discussed repeatedly by the vast majority of participants, while communicable diseases only came up in a limited number of groups and, even in those groups, was mentioned by a relatively small portion of respondents.

We did not use any qualitative data analysis software; however, we took several steps to ensure the rigor and trustworthiness of the data analysis. First, the moderators and assistants who supplied memo writing and field observations also provided member checks (since they, too, were from the Appalachian communities). In addition, our research team's significant and diverse experience (anthropology, nursing, health education, and Appalachian community expertise) helped us to examine the transcripts from varying perspectives, forcing us to justify and explain our approaches and techniques more explicitly.[17] Another strategy employed to enhance trustworthiness and general rigor was the examination of negative case evidence or those narratives that departed from initial codes and impressions.

Results

Sample

Ten focus groups were held, each with 4 to 6 participants. The 52 focus group participants had a mean age of 52 (SD = 8.8). The majority (82.7%) of the sample was white and the other 17.3% (n = 9) was African American. Most (65%) of the women were currently married or partnered, all but 1 woman had children, and 69% had grandchildren. Just over one tenth (11.8%) had less than a high school education and 1 in 5 received a high school diploma, while 35 women (65%) attained more than a 12th grade education, similar to the educational attainment in the region (2000 Census data indicate that 63% of Appalachian

Kentuckians aged 25 and older report having at least a high school education).[6] Occupational status varied, with approximately 30% self-reporting as homemakers, one quarter as retired or unemployed, and the remainder representing a diverse array of careers, including retail sales (13.5%); professional positions, including nursing, teaching, and social work (13.5%); manufacturing (10%); clerical work (10%); and about 6% in other occupations. Thirty-one percent of our sample reported annual incomes below the median income for Appalachian Kentucky, while 48% earned the median or above (about 20% refused to disclose income); thus, our sample's income was slightly higher than that of many Appalachian Kentuckians (Census data indicate 22% of Appalachian Kentuckians reported incomes less than $10,000, while 20% had incomes greater than $50,000, similar percentages to our sample's reported income).

Several explanations might account for this higher income level, including volunteer biases that favor those with higher socioeconomic status (including the desire to be civically engaged and participate in the focus groups); a greater push for gender equality in public education beginning in the late 1960s and early 1970s that awoke the participants to newer possibilities and resulted in higher professional achievement; and the relatively high level of paid employment. Half of the women were involved in paid employment, contributing to greater household income than both younger households (where many women may stay at home with children) and older households (where women may have adhered to the more traditional gender roles that discourage work outside the home). Finally, women with higher income might have had fewer barriers to overcome to participate in the focus groups. Additional sociodemographic and health data are shown in Table 1.

Seven key health issues were described as the most serious threats to the health of rural Appalachian communities. From gravest to least concern, they include: (1) drug abuse/ medication dependence; (2) cancer; (3) heart disease and diabetes (tied); (4) smoking; (5) poor diet/overweight; (6) lack of exercise; and (7) communicable diseases. It should be noted that because of the limited sample size, we were not able to identify any differences in perspectives according to the demographic characteristics.

Drug Abuse/Medication Dependence

Focus group participants generally considered substance abuse the most significant health problem in their community owing to its pervasiveness, lack of predictability, and the severe ramifications for close-knit rural communities. Discussions centered on the growing problem of crime, particularly violence, driving impairment, and property theft (as one participant said, "It's everywhere; you just look at the police log." HC 3 [codes represent focus group locations and numbers]); the destruction of families; and the associated health threats and general unraveling of the social fabric so important to these women. Another focus group member said:

> "And they're becoming addicted to everything. I mean if you look in our family, and this will show in our families, our homes, I mean drugs are just killing us, ruined our whole way of life here. It really is." HC 5.

Discussing the reasons why drugs have become endemic, participants cited 3 sources that contributed to illegal drug or prescription medication abuse: people poorly equipped to deal with life's harsh realities, particularly those without economic opportunity; problems in the community's social organization; and physicians who are all too ready to get out their prescription pads.

Some participants indicated that there are some people who just can never seem to get their lives together, which in combination with scarce economic opportunities and instant habit-forming gratification makes for an explosive situation. Some women discussed the

challenges of finding decent work in counties where the poverty rate hovers around 30%.[8] Although careful to point out that their community has always had some "bad apples," participants noted that most citizens used to know one another's families, helped out when in need, and muddled through the challenges of Appalachian life. Drug abuse was deemed symptomatic of a society that had lost its priorities, become a sicker place to live, and had become uncaring.

> "(D)rugs is, to me it's a symptom. The disease is a lot deeper. Look at the disease or we're never going to be able to get rid of the symptoms… If we want to tackle it we've got to start in elementary school, we've got to get these children active, we've got to get them to feeling good about themselves. We've got to get them into a society that's accepting and caring to them and in homes that's accepting and caring for them. And when we do that we won't have to worry about the drug issue." KC 3

Finally, participants noted that physicians encourage prescription abuse by their willingness to address many problems through medication. Many of the women decried how physicians no longer spend time talking with patients and families, preferring instead to simply prescribe, in the words of 1 participant, "a quick fix."

> "There's a pill for everything. If you've got an ache, a twinge, a pain, just drive through the doctor's office and he'll write you something for a pill. I went to go get checked (for the flu) and the first thing—oh, here's you a pill. I don't want that. Just tell me what's wrong with me." LC 4

Throughout the focus groups, similar views were expressed about the substitution of prescriptions for caring, on professional, societal, and familial levels. One elementary school teacher expressed her concern about both the parental and professional tendencies to medicate rather than socialize children:

> "They're putting children on anti-depressants in kindergarten. Okay, so they're telling them from when they're six, oh, you're so depressed. I have 3rd grade this year and you won't believe what's in my classroom right now. It breaks my heart because they come in and they say, "oh, he can't do this he's stressed," "we took him to the doctor and they put him on new medication," and "he's depressed and he can't be…". And I'm like, he's 8 years old, let him play, let him be a child and quit treating them like they're little adults. They are raising their parents. Those little adults are raising their parents. We've got to keep them medicated so our lives will be better." LC 4

Cancer

Like drug abuse, participants viewed cancer as an epidemic deriving from multiple causes and connected to an unhealthy environment. One of the chief concerns expressed by the focus group participants was the slow and steady increase in cancer rates in the Appalachian communities, as expressed by a nurse from a local health department:

> "The first 15 years I worked at that clinic I knew one person, *one person* that had cancer. And right now and I could sit down and name you person after person after person after person. I mean the first 15 years I knew one lady. And now I mean I could name you over and over and over." KC 3

Another participant noted, "I have been noticing recently seems like everyday I hear of another woman who has breast cancer, seems like a lot of talk of breast cancer." Another echoed her view, "On C Creek within a two-year period there was like four women that had gotten breast cancer. We need to be checking in on these things." LC 3

Others pondered over the contributions of behavior, the environment, the prevalence of smoking, and low socioeconomic status regarding the high rates of cancer.

> "Is our rate higher here because we are not being tested, because we are not going (*to get tested*) or because of the environment, or is it social economical? We have more smokers in this area. The majority of people who come in with cervical cancer, are they socially economically depressed?" HC 3

Heart Disease and Diabetes

Some participants suggested that poor individual choices (eg, laziness) brought on these conditions, while others cited community-level factors (eg, lack of high-quality grocery offerings or changing expectations about chores) that they felt brought on the disease. Unlike substance abuse or cancer, which were viewed as an unanticipated and frightening scourge, heart diseases and diabetes were discussed as an unfortunate result of changing community circumstances, occurring from the inside. As many viewed it, the transition from a farming and mining economy to a service economy accounted for changes in lifestyle (food choices, physical activity) that ultimately took its toll on health.

Smoking

Like the chronic diseases mentioned above, participants linked smoking with other health issues, specifically respiratory illnesses and chronic diseases like cancer. Participants were especially attentive to the all-consuming, addictive nature of smoking, gravitating between feeling sorry for smokers' dependency and expressing contempt.

> "And I mean they'll be coughing and coughing and you'll hear them all over the building and then you'll see them out there standing against the building, in the rain. One of them was out there today in the rain huddled against the side of the building smoking a cigarette." HC5

Perhaps even more concerning to these women was the burden that smoking places had on the physical and financial health of people's families, as echoed in the words of a nurse from a community hospital:

> "But what bothers me more is that they'll take their child to the doctor; they've been in the hospital, that child has asthma, and I will ask, did the doctor say anything about smoking? Oh yeah, he said I shouldn't smoke around them. And right in his arms (*he is smoking*)." LC 3

Another noted:

> "I know this is not right to say but I'm going to say it anyway, you have these people on welfare and I know how expensive cigarettes are, look what they take from their family. Most of the time the husband and the wife both smoke, and look what they're taking from the welfare check and look what could they, because they have to be spending $50 or $60 a week. They have to be. And what that would do for the family. And what their children have to give up for that addiction." HC 5

Poor Diet/Overweight and Lack of Exercise

Participants similarly debated the relative contribution of individual choices versus environmental circumstances for these "lifestyle conditions." Many participants were highly critical of local diet and exercise regimens, some even suggesting that lack of intelligence or character deficits contributed to overeating or lack of physical activity.

> "The diet of people around here is deplorable. It's like they think they can eat all of this garbage without it doing them any harm. You wonder what it's going to take to wake folks up." KC 5

And,

> "When our parents were growing up they could eat food like that because after they got done eating from the dinner table they went outside and worked all that off. They only had a certain amount of that food. They couldn't have four or five plates of it. They worked harder. This is a lazy generation. We don't work hard. We sit down and watch TV." HC 3

Others expressed more empathy with the challenge of eating nutritiously and getting enough exercise in a world that encourages fast food and yet is too fast paced for a good walk. Contrary to the image of rural communities as bucolic healthy environments where most people are busily ensconced in lifestyles of physical activity and wholesome diets, the women reported that their fellow community members engage in many of the same rushed lifestyles as their suburban counterparts, now made complete with the full range of fast food places and convenience stores. Their Appalachian environment, however, presents some additional challenges. A scarcity of jobs means no matter how pressing the work schedule is, you must adjust your life to the hours, perhaps foregoing midday medical appointments or outdoor exercise. Insufficient resources like fitness centers and well-stocked produce shelves challenge optimal health.

Participants also discussed how, in a location where people are hungry for entertainment, the relatively recent availability of media (cable TV and increasingly the Internet) was welcomed but had some unintended consequences. Rather than getting out, people congregate indoors by the television ("You go by the house and you always see that blue shine. Used to be people got out and walked to the neighbors." PC 8). Women even discussed how greater access to private transportation, a necessity for off-farm employment, has negative implications for physical activity.

> "(W)e don't even wear coats in the winter time because we never have to walk anywhere. I mean what few steps we've got to take I've noticed, you buy a new coat and it's going to hang in your closet. Because we pull right in front of the store. We don't have to walk anywhere… right in front of the church." LC 3

Like many other concerns, the women particularly emphasized the toll that these health threats take on children.

> "(I)t's almost the lack of physical activity for children. Because I think that contributes a lot. I think the very fact that they're not very active in their lives contributes to that boredom and that discontent. But the big health issue, it is, I think with children it's obesity. I mean it's, and that's your heart disease, that's obesity—it's all connected." PC 1

Communicable Diseases

This final category of health threats was described in much the same way as the drug abuse epidemic. Like drug abuse, the associations with illicit behaviors and social upheaval increased women's concerns.

> "All you hear of around here and we never know how many cases there is of it or anything else, AIDS and Hepatitis. Because of the drug problem here." PC 8

Like the substance abuse concern, many women expressed dismay over these "new" diseases that they had never heard of when they were growing up, and they were not familiar

with many of those who contracted the diseases. AIDS typified the struggle of facing what always seemed to be an urban problem. Now that "urban" problems like drug abuse have drifted into rural areas, associated health threats like infectious diseases loom large.

> "You know I never thought about AIDS though personally. But God, you better probably should, but I hadn't. I never thought I would have to. But, yeah, there's more people with AIDS." LC 3

Participants felt unsettled that it is unknown exactly how many cases of communicable diseases exist in their communities. Women speculated that it is difficult to get an accurate count of the rates of certain communicable diseases because those who have contracted the diseases are so stigmatized and move so frequently.

> "Yeah. See a lot of them (*with HIV/AIDS*) come from other counties here. And a lot of them that's got AIDS in X County goes to other counties. So they're not really sure how many in X County because they don't want them to know." PC 8

Discussion

Epidemiological evidence corroborates the gravity of health threats expressed by the focus group participants. In addition, media coverage may increase local and national attention to these issues. In particular, the proliferation of coverage of abuse of pain control medications such as oxycontin, in conjunction with the scarcity of substance abuse treatment facilities in Appalachian Kentucky, has heightened concern among policymakers, elected officials, and local residents about how to manage this crisis. In a 2003 article, the most widely read newspaper in Central Kentucky reported that, "in an analysis of federal data, on a per capita basis, eastern Kentucky drugstores, hospitals, and other legal outlets received more prescription painkillers than anywhere else in the nation."[18] From 2000 to 2002, 2,600 drug-related deaths took place in Kentucky, half of which occurred in the mountains of eastern Kentucky, which has only 20% of the state's population.[19]

While Appalachian Kentuckians express widespread concerns that substance abuse is contributing to a general unraveling of the fabric of their communities, such perspectives are also common throughout rural America. As noted in a National Institute of Drug Abuse monograph, rural substance abuse has become to be viewed as a "problem that spreads, like a contagious disease, outward from the urban areas into rural America" (20: 422). Congers[21] has pointed out a comparable prevalence of substance abuse in rural and urban areas, but noted that rural areas have unique challenges, including significant gradients in population and resource density that impact community mobilization, and fewer specialized mental health and substance abuse treatment facilities. On the other hand, unique assets, including more extensive and intense bonds of social interaction, enhance the viability of prevention and monitoring, especially among younger individuals.[21]

Other health threats mentioned by our study participants, including cancer, heart diseases, diabetes, smoking, poor diet, and exercise behaviors, also constitute a disproportionate burden on the residents of Appalachia, with the 5 leading causes of death in Kentucky (disease of the heart, cancer, cerebrovascular disease, chronic lower respiratory disease, and unintentional injuries) accounting for 69.2% of deaths.[22] Compared to national averages, Appalachians suffer excessive rates of death from heart diseases (651 deaths per 100,000 compared to 585 deaths per 100,000 nationally), from all cancers (422 compared to 416, with the greatest disparity for lung cancer, 125 compared to 117), and from diabetes (41 compared to 37).[23] Lifestyle-related health threats that comprise core risk factors for these diseases are similarly problematic. Kentucky leads the nation in the rate of smoking, with the Appalachian region having the unfortunate distinction of having the greatest percentage of smokers in the state; in 2002, smoking rates in rural Appalachia were as high as 40%.[24]

Some areas in Appalachian have the highest rates of obesity and physical inactivity in the entire country.[23–25] Thus, the magnitude of the health threats cited by our respondents conforms to the existing data.

As with other health threats, chronic disease concerns reflect national rural disparities, differing among regions of the United States, perhaps only in magnitude. In a mail survey of state and local rural health leaders, chronic disease prevention and control ranked among the top areas of concern.[26] Community leaders noted that heart diseases, stroke, and diabetes were of chief concern in their mission of improving rural health, just after access to quality health services. As in our focus groups, tobacco use and cancer mortality reduction also were ranked at high priority.[26]

Although not mentioned by our respondents, unintentional injury, the fourth leading cause of death in Kentucky, is also a major health threat in Appalachia and other rural locations. Motor vehicle crashes were the greatest single cause of unintentional injuries resulting in death, responsible for almost half (43.5%) of such deaths. In 2002, there were 134 fatal occupational injuries in the state, 25 agricultural and 109 nonagricultural. One possible explanation for the lack of recognition of unintentional injury as a serious health threat is its gradual decline due to mining and other occupational safety measures that have been implemented in the last decade.[22] In addition, injuries may be viewed as unavoidable, as opposed to substance abuse or cancer, which might be seen as a personal choice or a failure in the health care system.

Our respondents' keen awareness of the health problems plaguing their local communities constitutes an initial step toward improving the situation. For example, our results repudiate the perception that people in this tobacco growing state do not recognize smoking as a health risk.[27] If negative perceptions of smoking were as pervasive in rural Appalachia as suggested by our study, cessation programs could deemphasize knowledge and attitude barriers in favor of community-relevant cessation approaches, such as eliminating high school smoking lounges and implementing smoking bans.

Rather than simply being aware of these health threats, many of our respondents expressed both outrage and alarm at these health problems. Solutions included a range of approaches, from small to broader ecological changes.[1,2,25,28,29] These community-relevant health promotion ideas include advocating for healthy foods, especially more fresh produce, to be available from local retailers; workplace smoking cessation and drug treatment programs; changing the content of school breakfasts and lunches; increasing the accessibility of fitness facilities; and dramatically increasing gym time for children. Awareness of such health threats in combination with creative approaches has the potential of reducing an imminent health threat, as can be seen in the environmental justice movement. As an example, an African-American community in North Carolina came together to address soil contamination related to the municipal sewer system. The community members complained of horrible odors, standing sewer water, household back-ups, insects, and concerns for children playing outdoors. The community members and researchers surveyed the local population, collected and analyzed water samples, and presented findings to the community and the local health department. These steps provided documentation for grant applications, and the town received more than half a million dollars to rectify sewage conditions.[28]

But as Goodman and colleagues[29] suggest and our participants support, reducing health threats generally involves more extensive changes in the social ecology. The complicated and inextricably linked factors that gave rise to these health threats challenge both local residents and community-based researchers to go beyond health education pamphlets and public service announcements to address social, physical, and built environment inequities.[2]

As one participant explained: "(F)or these problems, there are no quick fixes. We've gotten into this mess slow and it's going to take something to get us out." KC 5

That "something," according to many of the participants, requires addressing the complex web of social relations, economic constraints, and societal change. These long-term changes, however, also have multiple intervention strategies and they target varying social strata. For example, frustrated Appalachian residents initiated Unlawful Narcotics Investigations, Treatment and Education (UNITE) which has developed community coalitions to address a spectrum of illegal drug issues, including preventing substance abuse initiation through education, assisting with undercover drug operations, and coordinating treatment efforts.[30] A county ban on smoking came close to passing in one of the most rural counties in the sample, and many women advocated for a second attempt at the ban. Other long-term community-based interventions (for example, controls on physicians' liberal prescription-writing practices) might take years in the making, but are feasible. Even more challenging to address are those newly established but now entrenched social norms, like the reliance on automobiles and passive home entertainment, which have eroded physical activity and community cohesiveness.

As participants suggest and ecological-level community interventions have demonstrated, the best chance for successfully addressing social and health concerns lies in a unified effort to enable the community to address these pressing concerns. Coalitions targeting particularly troublesome community health problems, including Unlawful Narcotics Investigations, Treatment and Education or Mothers against Drunk Driving, might offer the best community-based opportunities to confront problems on a range of relevant levels. As researchers and public health advocates, we can best facilitate community health promotion by respecting existing community knowledge, priorities, and capacities through community-research partnerships that point to proven intervention practices.[31]

Limitations

Certain research design issues pose limitations on our findings. First, since we included only women (the primary community and familial health gatekeepers); we cannot speak for what men perceive as community health threats. In addition, our sample was comprised of more educated women with slightly higher incomes than standard for their rural Appalachian communities, perhaps a reflection of volunteer bias and historical trends. Finally, although we suspect that the health threats perceived in our rural Kentucky field site are similar to other rural communities, we cannot necessarily be confident that they are generalizable to other locations.

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Table 1

Demographic Characteristics (N = 52)

Variable	n (%)
Marital status	
Married/partnered	34 (65.4%)
Divorced	9 (17.3%)
Widowed	3 (5.8%)
Insurance	
Private insurance	7 (13.5%)
Company sponsored	28 (53.8%)
Medicare	8 (15.4%)
Medicaid	4 (7.7%)
None	5 (9.6%)
Occupational categories	
Homemaker	15 (28.8%)
Not currently employed/retired	12 (23.1%)
Retail/service	7 (13.5%)
Professional (including health care)	7 (13.5%)
Clerical	5 (9.6%)
Manufacturing	5 (9.6%)
Other	3 (5.8%)
Health status	
Excellent	4 (7.7%)
Very good	12 (23.1%)
Good	13 (25.0%)
Fair	15 (28.8%)
Poor	7 (13.5%)
Annual income	
<$10,000	11 (21.2%)
$10,001–15,000	4 (7.7%)
$15,001–20,000	1 (1.9%)
$20,001–25,000	4 (7.7%)
$35,001–40,000	3 (5.8%)
$40,001–50,000	8 (15.4%)
>$50,000	10 (19.2%)
Health conditions	
Cancer	9 (17.3%)
Heart disease or high blood pressure	21 (41.2%)
Diabetes	7 (13.5%)
Other chronic disease	11 (22%)