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An Evidence-based Cessation Strategy Using Rural Smokers' Experiences with Tobacco

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Synopsis

Although tobacco use remains the single most preventable cause of death in the US, little is known about the most effective population-based strategies to reach rural smokers and motivate them to quit. The purpose of this study was to describe the personal narratives of current and former smokers living in an economically distressed, rural area of Appalachian Kentucky. Personal narratives were obtained from focus groups with smokers/former smokers (*N*=21). Data were analyzed using Atlas.ti 6

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Three categories of nine themes emerged: personal motivators to quit smoking, external influences, pride of place. Capturing personal narratives represents an evidence-based, data-rich strategy for development of culturally sensitive, population-based interventions aimed at rural smokers. Such strategies may be effective in reaching rural smokers and motivating them to quit, thereby reducing tobacco-related disease and premature death in rural, economically distressed communities.

Keywords

Smoking cessation; personal narratives; rural health; Rural adults; tobacco cessation

Introduction

Tobacco use is the major cause of preventable disease and death in the United States; contributing to nearly 500,000 premature deaths annually. Over 46 million US adults are current smokers (20.6%). Despite increasing efforts to provide tobacco-related programming and cessation assistance, the adult smoking prevalence did not change significantly from 2005 to 2009, suggesting a lull in the slight decline over the past decade.

The burden of tobacco use in the US is not evenly distributed. Nationally, higher smoking rates are found among men (23.5% vs. 17.9% in women), as well as those with less than a high school diploma (28.5%), living below the federal poverty level (31.1%) or in the South (21.8%) and Midwest (23.1%). According to the National Interview Survey (2007), national adult smoking prevalence among persons living in non-metropolitan areas is 24.5%, higher than either the prevalence for small metro areas (20.9%) or large metro areas (17.4%).²

Rural smoking prevalence rates vary by state. Kentucky, a tobacco-growing state, is a national leader in rural adult smoking prevalence at 31.8%, which is higher than the state and national averages and rates found in rural areas of other states. Rural areas of Utah, for example, have a much lower level of adult smoking prevalence at 12.5%. These authors also found that low socioeconomic status (as measured by educational level, income, and employment) was associated with higher smoking prevalence in a national rural study and explained part of the disparity in tobacco use among rural residents. Regardless of location, rural populations are disproportionately affected by tobacco use, exposure to secondhand smoke, and smoking-attributable disease and death.

Little is known about specific behavioral interventions that could enhance success rates among those who want to quit smoking, particularly those living in rural areas who are at higher risk and have less access to health care.⁵ Nationally, the majority (70%) of adult smokers report that they want to quit completely.⁶ In 2008, an estimated 20.8 million (45.3%) adult smokers had tried to quit and had stopped smoking for at least one day during the preceding 12 months.⁷ Although interventions designed to reach populations may have the greatest chance of success when they are tailored toward those at highest risk, they may not be as effective in rural areas due to limited access to health care.⁵ However, innovative approaches have been tested in rural areas, including telephone counseling⁸, web-based interventions⁹, and cessation contests¹⁰.

Unique cultural and social factors that exist in rural communities may affect tobacco use and treatment. For example, some communities may have social norms supportive of tobacco use (i.e., tobacco-growing communities), or be exposed to tobacco industry marketing campaigns such as sponsorships of rural sporting events. Proximity to tobacco growing in rural areas is another potential barrier to tobacco control efforts.⁵ Tobacco-growing regions

of the country often have fewer tobacco-related laws and fewer anti-smoking programs. ¹¹ However, all rural areas are not alike. Interventions that work well in one rural area may not necessarily translate to other rural areas.

Although rural communities are diverse, residents of rural communities tend to have strong family ties and close-knit social networks. ^{12, 13} Participation in local organizations is high and neighborliness is valued. Tobacco interventions which tap into existing social networks, engage stakeholders and gain the trust of rural residents could bridge the tobacco treatment gap in rural areas. ⁵ Because rural smokers are a population with a high potential for behavior change resistance, low levels of perceived vulnerability, and opposing social norms, they are an ideal population for an intervention based on the findings from personal narratives. ¹⁴

Personal narratives are an innovative approach to reaching smokers in rural communities and motivating them to consider quitting. Hinyard and colleagues (2007) found that personal narratives are effective because they are personal, relatable, believable, and memorable. They cited three major reasons as to why personal narratives are effective: 1) the ability to reduce counterarguments, 2) the facilitation of observational learning, and 3) the ability to identify with the story teller. Personal narratives have been used successfully with vulnerable populations to decrease tobacco, alcohol and marijuana use^{15–17} and show promise as an intervention to reach rural smokers to motivate them to think about quitting.¹⁸ Personal narratives from members of vulnerable populations are successful at encouraging behavior change because other members of those populations can more easily relate to the given message¹⁹ and have been shown to be an acceptable, culturally competent and effective way to reach populations to promote healthy behaviors.^{14, 20}

The use of personal narratives to motivate rural smokers to think about quitting is supported by the literature, innovative and timely. Therefore, the purpose of this study was to describe the personal narratives of current and former smokers living in an economically distressed, rural area of Appalachian Kentucky. The immediate aim was to identify themes and develop messages based upon the collected personal narratives which could be used in designing messages and interventions to motivate smokers to make a quit attempt. Data gathered in this research could potentially form the basis for culturally sensitive, cost-effective population-based tobacco cessation interventions designed to reach rural smokers. The ultimate goal is to improve health outcomes though decreased tobacco use and exposure to secondhand smoke in this high-risk population. This would in turn cut health care costs, reduce the number of illnesses requiring hospitalization as well as premature deaths, and improve the overall health of rural communities.

Methods

This was an exploratory focus group study using a qualitative approach to discover themes applicable in the design of future interventions. Qualitative interviews were used to elicit stories from current and recent former smokers. Current smokers were defined as those who had smoked at least one cigarette in the past 30 days; recent former smokers were those who had not smoked in the past 30 days.

Participants were invited to attend one of three scheduled focus group sessions held in different communities located in one economically distressed county in the Eastern Coalfield Region of Appalachian Kentucky (see Table 1). Counties are designated as distressed based on four indicators: income, unemployment, poverty, and infant mortality. Distressed counties have a median family income no greater than two-thirds of the national average and a poverty rate that is at least 1.5 times the national average.²¹ In addition, the

county is medically underserved, characterized as having too few primary care providers, high infant mortality, high poverty and/or high elderly population.²²

Focus group participants were provided with a meal and childcare to encourage attendance. Attendees were also given a \$15 gas card as an incentive to participate. Focus group sessions were facilitated by a graduate research assistant experienced in qualitative methods. An observer took field notes at all focus group sessions. All sessions were recorded using two tape recorders. Debriefing between the group leader and observer occurred immediately after each focus group.

Sample

Current and former smokers (*N*=21) were recruited via referrals from community key informants and through the use of recruitment fliers posted throughout the county. There was a close collaboration with the county Cooperative Extension Agents and the health department tobacco control specialist in identifying both potential participants and recruitment flier locations. Participants were 100% Caucasian and 79% female. The mean age was 51.3 years (range 30–67 years); 81% had high school education or higher. Forty percent were employed outside the home; 25% were homemakers and 35% were disabled or retired. The mean age of smoking initiation was 14.4 years (range 6–21 years), and the mean number of years they had smoked was 31 (range 8–50 years). Thirty-seven percent had not smoked in the past 30 days prior to the focus group. Eighty-six percent had tried to quit smoking in the past. Socio-demographic characteristics of the study county compared to state and national characteristics can be found in Table 1.

Interview Guide

The facilitator used a semi-structured interview guide which included broad open ended questions and a series of possible follow-up prompts (see Table 2 for sample questions). Questions were designed to capture respondents' personal narratives about tobacco use and to gain insights for the design of future tobacco interventions. Throughout the focus group sessions, the facilitator used motivational interviewing techniques, including reflection and restating, to verify statements made by participants and to encourage expansion of ideas.

Data Analysis

Recorded focus group sessions were transcribed for analysis, and the entire transcript was reviewed several times. Notes from the focus groups formed an early coding system which was checked with members of the research team for inter-rater reliability. Transcribed interviews were uploaded into Atlas.ti 6 software, and coded using the initial coding system as a reference. Codes were added as necessary to generate a complete coding system, which was again checked by the research team. Inter-rater reliability was 80%.

Using the code-quotation count feature in Atlas.ti 6, frequently occurring codes in the text were identified and reviewed for meaning. Codes of similar meanings were grouped, using the family manager feature. "Families" or themes from the grouped codes were interpreted and named. Themes and associated quotations were presented to the research team for feedback. Finally, the themes were presented to a small subset of the original focus group participants to verify accuracy.

Results

Nine focus group themes emerged from 357 data bits (see Table 3). The top themes, in order of prevalence were: 1) need for easy access to tobacco dependence treatment; 2) quitting with support of family and friends; 3) faith; 4) quitting for health reasons; 5) freedom of

individual choice; 6) pride of place; 7) Big Tobacco (ie the tobacco industry, including the larger tobacco companies); 8) meaningful messages to smokers; and 9) quitting for one's children.

Need for easy access to tobacco dependence treatment

Participants voiced a willingness to try pharmaceutical aids in an effort to quit smoking, yet stated that the cost was prohibitive. Prescription medications would be used if insurance covered the cost. In addition, cessation programs offering assistance with nicotine patches were cited as a motivation to quit.

One participant shared, "Incentives like our boxes that we got. I can't go out and afford to buy a \$35 box of patches. Or \$30 or however much they are; that to me was a big lure (to attend a tobacco dependence treatment program).

Quitting with support of family and friends

Participants stated it was helpful to have the support of family and/or friends when making a quit attempt. Participants said: "I need my best friend to basically do it together at the same time (quit smoking), and I know it would be successful"; "If you want your best friend to quit, then you quit with them if you're a smoker", and "Even if it's just me and the three of us going how did you do today" (group of smokers supporting each other).

Faith

Faith was both a motivator and a positive force when they were trying to quit smoking. A desire to please God motivated one respondent to quit smoking. "I was on my way to church one morning and I wanted a closer relationship with God and it was almost as though He physically said, until you leave those alone, we can't go any farther...I haven't smoked since...I really think that for Christ we will do things that we wouldn't do for anybody else." Another stated: "... I really believe if you quit for some other reason, you're going to fail at it because there's one thing stronger than anything else and that's the God of wonder."

Quitting for health reasons

Participants cited acute and chronic health problems as reasons to quit. Several voiced relief with improved health after quitting smoking: "I don't even feel like I smoked before. I feel cleaner. I treated myself to new perfume just because I felt so much better. I breathe better; I don't take my asthma and my allergy medicine. I just eel 100% better and that's like a treat to me, I treated myself to that", and "I don't cough when I laugh anymore. I used to; every time I'd start to laugh, man, a big old cough would come out."

Conversely, some said that experience with other people's illness caused them to smoke more: "Watching her try to breathe... I thought about stopping but then it turns out that I ended up smoking more after she died which I couldn't understand... I'm watching this poor lady die because she can't breathe and instead of quitting, I just smoked more."

Freedom of individual choice

Both current and recent former smokers stated that others should not intrude on their right to choose to smoke or not smoke and that smoking should be an individual choice: "... I really don't think it's any of my business if they smoke; I choose not to." Another stated: "I agree... that it's a choice... I made my choice." Some respondents voiced resentment at smoking restrictions: "No, I don't have the greatest habit in the world... but nor am I illiterate or a criminal because I smoke." Others made statements related to readiness to quit smoking that strongly supported freedom of individual choice: "When you're ready, when it

hurts bad enough you'll change it", and "For me, it got to be a burden, the cigarette you know. I had to be ready. I'm just thankful I don't have to worry about that burden anymore."

Pride of place

Participants voiced great pride in their community, and stated they resent negative stereotypes about Appalachia. Many spoke of the natural beauty of their surroundings, the talents of the people, and the feelings of closeness with family, friends and people within community organizations. "...It's very pretty. And I enjoy my church which is right here and the people...I really do enjoy where I live", and "What I like about it I think is the closeness... of the communities and friends. It's a lovely place to live".

Big Tobacco

Participants' views of the tobacco industry were ambivalent. There were sympathetic views toward tobacco farmers, and feelings that the tobacco fields were beautiful.

"I think the tobacco fields are beautiful... when it's topping out and just getting ready to be cut down, it's just so pretty". One said "To look at tobacco in the fields... to me it doesn't say cigarettes."

Some voiced suspicions of the cigarette manufacturers who they felt were deliberately trying to addict and hold on to smokers as customers: "I really think that these companies are... trying to keep us their customers. They don't want us to go away and they'll do anything they can do".

Others voiced similar beliefs related to the addictiveness of nicotine: "I don't know what's in it but now it's a little devil that pulls you back and it is so hard, it gets a hold of you and there it is" (on what's in cigarettes and trying to quit), and "I'm not addicted to drugs but I'm addicted to nicotine."

Meaningful messages to smokers

Current and recent former smokers stated that helpful messages to smokers during a cessation attempt should come from former smokers, and that others should be supportive of the smoker's decision to smoke or not smoke. One stated "...the only real support system that anybody could have as a smoker or even an addict is somebody that's been there themselves. If you've not smoked, you're not going to be a supporter for me because you don't know what I'm going through." Another suggested message was "Do it because you want to, not because someone says you have to...that's good. Be supportive and not judgmental." Others suggested that helpful messages may be "Let's do it together" (quitting smoking), and "I never felt myself breathe that well since I was a teenager" (what you would tell your best friend trying to quit).

Quitting for one's children

Children or grandchildren and the desire to either set an example for them or not expose them to secondhand smoke were frequently mentioned as motivation to quit.

One parent said, "Well my children...and being pregnant was my first two influences to try to quit smoking...my youngest daughter... was a thumb sucker and she said, mommy I will quit sucking my thumb if you'll quit smoking; fair trade. So I quit...the only [thing] ...that matters to me is my children".

Others voiced similar concerns: "I have one granddaughter that's allergic to it (smoke) and if she's around it very much then she has to get on the breathing machine," and "My son, you know, he said mommy are you smoking again. I know that I shouldn't smoke around

him but I do. I want to quit. I know I can but you know there is just something there that draws you and its addiction."

Discussion

The nine focus group themes can be classified into three groups: 1) personal motivators to quit smoking; 2) external influences; and 3) pride of place. Most of these themes are consistent with the findings of similar research conducted in Appalachia^{23–29} and with rural or disparate populations^{3, 10, 30, 31} but there are novel ideas that offer intriguing insights and implications for further research and intervention development in rural communities.

Personal motivators to quit smoking

Rural smokers and recent former smokers shared that health concerns and their children affected their smoking and decisions to quit. Our findings indicate that chronic illnesses can be both a motivator to quit smoking as well as a stressor that could actually deter cessation. This dichotomy is similar to findings of Hutcheson et al. who found that illness could both prompt thoughts about quitting and generate stress that lead to continued smoking among a sample of rural Kansans. Similarly, Rayens found that a major illness could influence readiness to quit smoking. However, in a study of smoking relatives of lung cancer patients, 91% of smoking family members still smoked following an educational intervention about the benefits of smoking cessation.

Our finding that concern for children as a motivator to quit to smoking is supported by other studies of rural populations. Appalachian respondents reported a desire to protect children from tobacco use in focus groups held in seven states (Meyer et al., 2008). A desire to set a good example for children and protect them from secondhand smoke was a facilitator of smoking cessation in rural Kansans. Burgess found that in a study of rural American Indians, women felt guilt and pressure to quit when smoking around children. This guilt was also echoed in statements from focus group participants in the study reported here.

Study results also revealed a strong theme of independence and a desire to be allowed the freedom to make choices. This is consistent with research that shows personal independence, individualism, self-reliance and price to be important in Appalachian culture. Our findings are similar to those of Ahijevych and colleagues who examined beliefs about tobacco use and cessation among current and former tobacco users in rural Appalachia. Our participants spoke of resenting smoke-free restrictions which they felt impinged on their rights to choose, stating that they were offended at being treated like a criminal. Hutcheson found that smoking restrictions engendered similar sentiments of "feeling like a second class citizen," but were also a facilitator of smoking cessation. Hahn reported that adult smoking prevalence decreased after enactment of a comprehensive smoke-free law. In our study it is unclear whether negative feelings about smoking restrictions were related to quit attempts, although some expressed the positive benefits of cessation related to smoking restrictions. Although smoking restrictions could also be considered external influences, the strongest part of this theme was consistent with the personal desire to make choices for one's self.

Our study offers some new insights regarding the role of faith in quitting smoking. While the tie between religious faith and health in Appalachia^{24–26, 28} and between faith and addiction³⁴ has been documented, our study adds a more detailed description of how faith might motivate some smokers to quit. Specifically, we found that the desire to please God with one's life and the belief that God would help the smoker through the quitting process were expressed by participants as motivational. Integrating tobacco dependence treatment into the faith community may be an effective reach strategy in rural communities.

External influences on smoking

Participants expressed the importance of ease of access to tobacco dependence treatment, quitting with the support of family and friends, and the influence of Big Tobacco, and they suggested messages that might be most effective in helping smokers quit. Easy access to treatment is difficult in rural areas, which typically lack public transportation and access to childcare, as well as other social and health services. Unemployment rates, poverty levels, low rates of health insurance and poor availability of health care are barriers to rural smokers who wish to seek tobacco dependence treatment.^{3, 31} Although rural Kansans were very willing to try pharmacological approaches to cessation, cost was a barrier.³¹ Similarly, our study revealed that easy access to tobacco dependence treatment was appreciated by the participants, and that they took advantage of cessation services that were either free or provided at reduced cost.

Our study identified quitting with support of family and friends to be a dominant theme. This is consistent with other studies. Appalachian culture is family centered with a social structure that is based on kinship. Social support from family and friends was found to be an important factor in making health–related decisions. Rayens (2008) found that positive partner support increased readiness to quit smoking among rural Kentuckians. Song & Fish found an association between partner support and nonsmoking among pregnant women in Appalachian West Virginia.

Although there was much pride voiced in this rural community and its people, there was not a connection drawn between tobacco use and tobacco growing. Meyer and colleagues also reported such a cognitive disconnect between growing tobacco and the harm of tobacco use in the minds of farmers, with respondents stating that farmers are not thinking about tobacco smoking when they were growing it. ²⁷ Ambivalence about tobacco was evident. While none of the participants in our study grew tobacco, they expressed sympathetic views toward tobacco farming. Suspicion and extremely negative views were voiced toward the cigarette manufacturers, or Big Tobacco. The beauty of the growing tobacco fields was not associated with the production or smoking of cigarettes in their responses.

In terms of messages that might be meaningful to smokers, it was important for our participants to know that the person giving the message was a current or former smoker, and that the message be nonjudgmental. The notion that other current or former smokers may be more effective at supporting quit attempts is one not found commonly in the literature, and can be utilized when designing culturally appropriate interventions for this population. The notion that messages be nonjudgmental, however, is well supported in the literature. For example, Falomir-Pichastor and colleagues found it essential for messages to be respectful toward smokers. Disrespectful messages can cause one to get defensive and, in return, become less receptive. ³⁶ Creating messages based on information gathered through personal narratives can help ensure the creation of respectful messages and therefore increase the receptiveness of the audience.

Our participants also identified relationships with and messages from family and friends as an important factor when trying to quit smoking. This is supported by Ahijevych and colleagues, who found evidence of the importance of family and personal independence in relation to tobacco use.²³ Meyer and colleagues found that tobacco education in Appalachia acknowledges the central role of the family, and that messages tailored to cultural themes may decrease prevalence.²⁷

The meaningful messages theme also revealed an interconnectedness with other themes that provides direction in devising the main messages that may be effective with rural smokers. The messages identified as most meaningful to those wanting to quit smoking included

statements that support the importance of individual choice (quitting when you are ready, not because someone else says you should), support from family and friends (quitting together), and quitting for health reasons. This overlap between themes has implications for appropriately framing a culturally sensitive message that may be meaningful in motivating rural smokers to consider quitting.

Pride of place

Pride of place was a strong theme heard throughout all three focus groups. There was great admiration and pride voiced for the famous people who were born and raised in the area (i.e., country music singers, elected officials, movie stars) and in the talents and products of the local crafts artists (i.e., quilting, woodworking). Prior research has confirmed this finding of loyalty to place among Appalachian residents. ¹³ There is a collective identity that is bound up in community and place of worship and creates great pride in both neighbors and community. This finding may be important in the use of personal narratives as vehicles for tobacco control messages. Messages that are respectful of community traditions may have greater reception than those that do not contain this element. ¹³

Conclusions

This study described the personal narratives of current and recent former smokers living in an economically distressed, rural area of Kentucky. Rural smokers face unique challenges in that there is often lack of resources, resulting in barriers to accessing evidence-based tobacco dependence treatment. It is important that tobacco control resources and efforts be allocated appropriately so that smokers living in rural, economically distressed communities have easy access to evidence-based tobacco dependence treatment. Because 20–25% of the US population lives in rural communities and smoking rates are disproportionately high, it is important to address the unique needs of rural smokers.³¹ Identifying the personal narratives and messages of rural smokers is important when considering how to best tailor both reach and efficacy interventions to meet their needs related to smoking cessation.

A potential limitation of the study is that the sample was small and participant selection was not random. These findings are not intended to be generalizable to other populations. An additional potential limitation is that this study was funded by earmark money, which may be interpreted by some as a conflict of interest. This study was conducted in accordance with scientific principles without influence from others, including the funders of the study.

Further research is needed to examine fidelity, acceptability, practicality, and reach of culturally sensitive interventions developed from the personal narratives and messages. The effects of these culturally sensitive reach interventions need to be tested on enrollment and attendance in tobacco dependence treatment, and on nicotine dependence and cessation outcomes.

Capturing personal narratives messages represents an evidence-based, data-rich strategy for the development of culturally sensitive, population-based interventions aimed at rural smokers. Use of personalized, culturally sensitive strategies may be effective in reaching rural smokers and motivating them to quit, thereby reducing tobacco-related disease and death in economically distressed rural communities.

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Table 1

Socio-demographic characteristics of the study county compared to state and national characteristics

Demographic	Study County	Kentucky	United States
Population ²⁹	16,443	4,269,245	307,006,550
Caucasian/African American ²⁹	98.7/0.3%	89.9/7.7%	79.8%/12.8%
Median Household Income ²⁹	\$29, 015	\$41, 489	\$52,029
Per Capita Income ²⁹	\$12,008	\$18,093	\$21,587
Persons Below Poverty Level ²⁹	27.1%	17.3%	13.2%
High School Graduates ²⁹	58.2%	74.1%	80.4%
Adult Smoking Prevalence ³⁰	31.0%	25.3%	20.6%

Table 2

Focus group interview guide sample questions

1 Tell us about your county and community. What are some of the things that you like most about living where you do?

- 2 Please describe your first experience with tobacco.
 - What were your feelings about tobacco then, and now?
 - How might your past or present experiences with tobacco be different than those of people who do not live where you do?
- 3 Please tell us about a time a time when you tried to quit using tobacco.
 - What people helped you the most in deciding to quit?
 - What words did they use to help you?
- 4 Tell us things that you think would help people to make a decision to quit using tobacco in your county.
 - Which of those things were most important to you to when you decided that you wanted to quit?
 - If your best friend were using tobacco, how would you go about encouraging them to quit? What words would you use?

Table 3

Focus group themes, sample quotes, and data bits

Focus Group Themes		Percent of Total
Need for easy access to tobacco dependence treatment programs "the health department having that program where the patches were so cheapthat's wonderful to me that they cared enough about their citizens."	61	17%
Quitting with support of family and friends "My husband and I tried to quit smoking one time at the same timehe said, I don't think I can do this. I said, yeah we can."		17%
Faith "I know that when the good Lord up above feels that I'm ready to do it, He'll help me through it."	55	15%
Quitting for health reasons " as I get older and my breathing is affected and I just had bronchitis for the 3rd timeknow something's gotta change."	42	12%
Freedom of individual choice "I don't think that the government should come along and tell me or my friend that lives over the hill over here that's a tobacco farmerthat I can't smoke in the citysomething sticks in my craw about that."		10%
Pride of place "We have more talent in this area, in this river, up and down this riverthe most beautiful quilts you've ever saw, some woodworking, you know, I mean there's talent here."		9%
Big Tobacco "I don't know what they're putting in them things that are so addictive and I think it's more addictive in the last 15–20 years than it ever was."	27	8%
Meaningful messages to smokers "Telling me to quit, you just need to quit, that's not support to mebeing able to understand what I'm going through."		7%
Quitting for one's children "My grandson said, oh Mamaw, you stopped smoking so I won't get so sick anymore. And I thought, oh my God, you know. You don't realize how they see it and it was like, oh praise the Lord, I never go back."	18	5%
TOTAL	357	100%