

**A Participatory Action- Research and Action-Learning Project to Reduce Tobacco Use among Residents of a Low-Income Community in the United States**

Payam Sheikhattari<sup>1,2</sup>, Mark Bolden<sup>1</sup>, Patricia Cassatt<sup>3</sup>, Lelin Chao<sup>3</sup>, Darin Wall<sup>3</sup>, and Fernando A. Wagner<sup>1,2</sup>

1- Morgan State University Prevention Sciences Research Center, Baltimore, MD, USA  
2- Morgan State University School of Community Health and Policy, Baltimore, MD, USA  
3- Peoples' Community Health Centers, Baltimore, MD, USA

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**Introduction**

- Cigarette smoking is still a major public health problem in the USA, especially among minority and low-income populations.
- Low income and socially-disadvantaged ethnic groups are still smoking at very high rates and are less likely to quit smoking (Stillman et al., 2003)
- Approximately 60% of young adults from inner-city neighborhoods in Baltimore, Maryland, smoke cigarettes (Stillman et al., 2007)

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**Objectives**

- To conduct a participatory community needs assessment of an under-served urban area to better understand why people use tobacco products
- To learn about tobacco industry marketing strategies in poor urban areas and potential activities that may counteract these strategies
- To address some of the problems in partnership with the local community through participatory planning and implementation

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### Project Description and Activities

- Project design: participatory needs assessment and smoking cessation intervention with quantitative and qualitative methods
- Community Advisory Board (CAB) members (12 members) oversee the planning, development, implementation, and evaluation of the project

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### Project Description and Activities

- CAB recruited through an application and nomination process with peer-review
- CAB developed project identity as CEASE: "Communities Engaged and Advocating for a Smoke-free Environment"
- Three sub-committees formed by the CAB
  - Information Campaigns and Education (ICE)
  - Community Assets and Needs (CAN)
  - Community Connection Committee (CCC)

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### The Community

- A low-income urban area in Mid-Atlantic
- Higher proportion of low-income. Blacks and Whites equally represented; more Blacks compared to the U.S. population



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### Project Description and Activities

- Different questionnaires designed for target groups (e.g., as community residents, parents, and volunteers)
- Use of natural opportunities, such as Back-to-School Night; Mayor's Clean-Up Day, and Environmental Safety Association were identified and attended.
- A flyer was designed to introduce the CEASE initiative.

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### Population and Sample

- The *Community Health Urban Project*
  - A cross-sectional, face-to-face survey of the adult population (aged 18 and older) of two contiguous urban census tracts (n= 1,489).
- Intercept Surveys
  - Data collected through community events (n= 200)
- Focus Group Discussion and Interviews
  - Qualitative research with patients and clinical staff (n= 30)
- Baseline survey of the smoking cessation trial
  - A Randomized Controlled Trial comparing group vs. individual interventions (n= 270)

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### Measures

- Tobacco use was classified based on two yes/no questions:
  - “Have you ever smoked cigarettes regularly?” and “Do you smoke cigarettes now?”
- All persons were classified either as
  - Current smokers (i.e., those who endorsed currently smoking),
  - Former smokers (i.e., those who ever smoked but did not endorse current smoking),
  - Persons who never smoked (i.e., those who never smoked and correspondingly did not endorse current smoking).

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### Measures

- Demographic variables
  - Race, age, gender, marital status, and educational attainment.
- Psychosocial variables
  - Perceived stress adapted from the *Perceived Stress Scale* (Cohen & Williamson, 1988)
  - Social support (Broadhead et al., 1988)
  - Major Depressive Episode (MDE) adapted from the *Patient Health Survey (PHQ9)* (Kroenke, 2001)

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### Data Analysis

- Descriptive analysis of the main variables of the needs assessment
- Qualitative analysis of the interview and focus group discussions
- Two separate logistic regression analyses with multiple covariates
  - One for current smokers versus nonsmokers
  - One for former smokers versus current smokers

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### Results

- 55% of the participants were current smokers, 33% had never smoked, and 12% were former smokers
- Males had higher rates of smoking than females (62.3% vs. 49.0%)

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Table 1: Comparing results from two intercept surveys (n=113)

	George Washington Elementary 96 participants	Sharp Leadenhall St. Stephens 17 participants
Using tobacco currently?	Yes 29 %30.21	Yes 3 %17.65
Have you ever smoked tobacco regularly?	Yes 33 %34.74	Yes 11 %64.71
How many of your friends, relatives, and co-workers smoke?		
Just a few of them	Yes 39 %41.49	Yes 6 %35.29
Some of them	Yes 31 %32.90	Yes 4 %23.53
Most of them	Yes 16 %17.02	Yes 4 %23.53
None of them	Yes 8 %8.51	Yes 1 %5.88
How interested would you be in smoking prevention programs in your neighborhood?		
I don't smoke	yes 19 %20.00	n/a
Not interested at all	Yes 7 %7.37	Yes 2 %11.76
Somewhat interested	Yes 25 %26.32	Yes 3 %17.65
Very interested	Yes 44 %46.32	Yes 7 %41.18
Extremely interested	n/a	Yes 2 %11.76
How effective do you feel that acupuncture can be to help people quit smoking?		
Very effective	Yes 12 %12.50	n/a
Effective	Yes 17 %17.71	n/a
Slightly effective	Yes 11 %11.46	n/a
Not effective	Yes 6 %6.25	n/a
If you tried to quit smoking in the last 12 months, what made it more difficult?		
Withdrawal and craving were too bad	Yes 7 %26.92	Yes 2 %50
Gained too much weight	Yes 4 %15.38	0
I could not afford the treatment	Yes 1 %3.85	0
If you were planning to quit smoking, how would you do it?		
I would go "cold turkey" (just stop smoking at once)	Yes 9 %36.00	Yes 2 %50
If a program to quit smoking was made available at low or no-cost in this neighborhood, would you try it?	Yes 21 %80.77	Yes 3 %60

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TABLE 2- ESTIMATED ASSOCIATION BETWEEN CURRENTLY SMOKING COMPARED TO NEVER SMOKING (N = 1,050), & FORMER SMOKING COMPARED TO CURRENTLY SMOKING (N = 800) (DATA FROM THE COMMUNITY HEALTH URBAN PROJECT)

Characteristic	Current Smokers Versus Never Smokers			Former Smokers Versus Current Smokers		
	aOR	95% CI	P-value	aOR	95% CI	P-value
Gender						
Females	0.5	0.4,	0.7 <0.001	0.5	0.4,	0.7 <0.001
Males	1	(Reference)		1	(Reference)	
Race/ethnicity						
African American	0.6	0.4,	0.8 0.001	0.6	0.4,	0.8 0.001
White	1	(Reference)		1	(Reference)	
Marital Status						
Married	0.6	0.4,	0.9 0.005	0.6	0.4,	0.9 0.005
Single/Divorced	1	(Reference)		1	(Reference)	
Education (range 3-17)	0.9	0.8,	0.9 <0.001	0.9	0.8,	0.9 <0.001
Age						
25-29 years	1.1	0.6,	1.8 0.771	1.1	0.6,	1.8 0.771
30-39 years	1.6	1.1,	2.5 0.022	1.6	1.1,	2.5 0.022
40-64 years	2.6	1.7,	3.8 <0.001	2.6	1.7,	3.8 <0.001
65 and older	0.4	0.2,	0.9 0.019	0.4	0.2,	0.9 0.019
18-24 years	1	(Reference)		1	(Reference)	
Social Support						
Low	1.1	0.8,	1.5 0.493	1.1	0.8,	1.5 0.493
Medium	2	1.1,	3.5 0.021	2	1.1,	3.5 0.021
High	1	(Reference)		1	(Reference)	
Stress (range 10-50)	1	1,	1 0.843	1	1,	1 0.843
Major Depression (MDE)						
Yes	4	1.9,	8.7 <0.001	4	1.9,	8.7 <0.001
No	1	(Reference)		1	(Reference)	

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Table 3- Sample Characteristics of Patients Participating in Smoking Cessation Trial (n= 270)

Characteristics	%	Characteristics	%
<b>Age</b>		<b>Education</b>	
18-29	7.89	≤ High School	72.94
30-39	21.05	> High School	27.06
≥ 40	71.05		
<b>Gender</b>		<b>Nicotine Dependence</b>	
Male	38.11	Low	5.75
Female	61.85	Medium	39.08
<b>Race</b>		High	
White	27.66		55.17
African American	60.41		

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**Main Findings from Qualitative Research (n= 30)**

- Partnership suggestions to increase the effectiveness of services
  - ✓ Case-specific individual counseling
  - ✓ Group interventions such as “Smoke Busters or Fresh Start” program
  - ✓ Community-based outreach and follow up
  - ✓ An enhanced monetary contingency management
  - ✓ Use of Complementary Alternative Medicine such as auricular acupuncture

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**Main Findings from the Qualitative Research (n= 30)**

- **Challenges**
  - ✓ Maintaining an equitable Partnership
  - ✓ Fostering trust and a shared vision
  - ✓ Addressing dual addictions and co-morbidities
  - ✓ Transportation
  - ✓ Addressing underlying health and family crisis
  - ✓ Active follow-up and reminders of the next visit

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Main Findings from the Qualitative Research (n= 30)

➤ **Some quotes from the patients”**

- ✓ “I started smoking because my parents were smoking” .....“I used to buy cigarettes for my mom and that was how I picked it up”
- ✓ “... I didn't realize all the things that are in the cigarettes ... now at least, I can control my craving and that's different than my addiction”

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**Discussion**

- Consistent with previous studies indicating high prevalence of smoking among socially disadvantaged and ethnic groups (Stillman et al., 2007; CDC, 2004).
- Females and African Americans had lower odds of being current smokers relative to never smokers.
- In turn, gender and race were not associated with being a former smoker as compared to current smokers.

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**Discussion**

- Race/ethnicity, gender, marital status, educational attainment, age, and depression were associated with being a current smoker compared to those who never smoked
  - Due to more negative attitudes toward smoking among females and African American communities, possible greater psychological and practical support from those with a non-smoking partner, and greater health literacy among those with higher education, respectively.

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### Discussion

- Perceived social support, stress and major depression were not significantly associated with being a former smoker
- However, being married and more educated- indicators of partner's support and awareness- were associated with higher odds of being a former smoker in the context of a low-SES urban setting.

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### Comments

- Differences between non-smokers and current smokers
  - Some of the socio-demographic characteristics, as well as the presence of major depression.
- Age, education, and being married were associated with higher odds of being a former smoker
  - May help explain the role of support and awareness in the participants' ability to become former smokers.
- Treatment plans may become more effective among low SES and inner-city residents
  - If they include more supportive interventions and are more culturally sensitive.

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### Comments

- Integrating ALAR principles with rigorous scientific methodology presents unique strengths and challenges with potential to create scientific knowledge and translate it into meaningful practices.
- Use of mix methods research and data triangulation in partnership with local stakeholders provide better opportunities for translating knowledge and transforming the community

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### Next steps

- Developing a counter-marketing strategy against tobacco industry's targeted marketing approach
- Developing culturally sensitive information materials
- Designing a local smoking surveillance information system
- Sustaining community health education activities

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