

Characteristics of Adult Tobacco Smokers and Their Smoking Cessation Outcomes After An Intervention Program

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Smoking Epidemiology in the United States

- Approximately 46 million smokers.
- 440,000 deaths yearly.
- Approximately 21% of all adults smoke.
- Highest level of prevalence ages 18 to 44.
- Smoking decreases lifespan by 13-15 years.
- National health objective: by 2010 to reduce smokers to 12% or less.

Miami-Dade County, Florida Demographic Risk Factors

- 22% of all Floridians smoke.
- Higher African American population than national, 14.6% to 12.3%.
- Higher Hispanic population than national, 16.8% to 12.5%.
- Cancer second highest cause of death, 22%.

Statement of the Problem

- Minority groups comprise more than two-thirds of all smokers.
- Low-income smokers at highest risk for lung cancer and associated diseases.
- Incidence of morbidity and mortality highly correlated with ethnic populations.
- Few studies conducted on smoking cessation effectiveness with these groups.

Purpose of the Study

- To describe characteristics of participants enrolled in a smoking cessation intervention program directed toward minority residents of Miami-Dade County, Florida.
- To examine the differences in general health, physical health, emotional health, level of activity, and stage of change predictive of smoking cessation after completion of the program.

Research Questions

- Research Question 1: Was there a significant change in the participants' self-evaluation of their general health, physical health, emotional health, level of activity, or stage of change immediately pre-intervention and at 12 months post-intervention?
- Research Question 2: If there was a significant change in the participants' self-evaluation of their general health, physical health, emotional health, level of activity, or stage of change, what were the relative contributions of these post-intervention scores in the prediction of smoking status at 12-month follow-up?

Inclusion Criteria

- Residents of Miami-Dade County, Florida.
- Ages 45 to 49: history of smoking at least one pack of cigarettes a day for last 10 years; immediate family history of lung cancer (father, mother, brother, sister).
- Ages 50 and over: history of smoking at least one pack of cigarettes a day for last 10 years.

Sample

- Primarily low-income participants from mixed racial and ethnic backgrounds.
- Randomly selected from individuals who completed the ELCAP smoking cessation program from inception in 2001 through 2005.
- Total study population from 2001 through 2005: 446.
- Power analysis: desired sample size = 129. With random sample, used 223 of total population of 446.

Data Collection and Analysis

- Selection of random sample from existing medical records.
- Computer entry with SPSS 14.0.
- Descriptive statistics for sample characteristics.
- Research Question 1: Paired *t* tests.
- Research Question 2: Logistic regression analysis.

Research Design

- Retrospective, longitudinal, cross-sectional study.
- Secondary data from two survey instruments.
- Two time periods: (1) at baseline pre- intervention and (2) at 12-month follow-up.

Instrumentation

- ELCAP Intake Survey: Taken at enrollment
 - 7 sections, 21 items,
 - Addresses smoking history, cessation efforts, stage of change, general health, level of activity, physical health, emotional health.
- ELCAP Follow Up Survey: Taken at 12-month follow-up
 - 5 sections, 16 items,
 - Addresses smoking activity past month, stage of change, general health, level of activity, physical health, emotional health.

Intervention

- Voluntary smoking intervention program.
- Eight 1-hour weekly sessions.
- Combination of smoking cessation modalities:
 - Individual and group counseling,
 - Nutrition and weight management,
 - Smoking aversion education,
 - Initial lung cancer CT imaging for screening,
 - Nicotine replacement therapy counseling by clinical pharmacist,
 - Community and social support.
- Sessions offered five to six times yearly with maximum of 15 participants per group.

Results: Description of Sample

- Age range: Highest percentage 61 to 65 (33.2%)
- Gender:
 - Males 49.8%
 - Females 50.2%
- Ethnicity
 - Spanish/Hispanic/Latino 40.8%
 - African American/West Indian/Caribbean 36.3%
- Education
 - Completed high school 28.7%
 - Completed trade school 27.8%
 - Did not complete high school 26.0%

Results: Means of the Five Variables Pre- and Post-Intervention

	Pre (<i>M</i>)	Post (<i>M</i>)
• General Health	2.96	3.20
• Physical Health	13.57	8.91
• Emotional Health	26.48	20.62
• Level of Activity	5.06	5.26
• Stage of Change	1.50	1.48

Results: Research Question 1: Paired *t* Tests

- General Health $p = .00^*$
 - Physical Health $p = .00^*$
 - Emotional Health $p = .00^*$
 - Level of Activity $p = .08$
 - Stage of Change $p = .69$
- * $p < .05$
- Significant differences were found between pre- and post-intervention measures of participants' self-evaluations of general health, physical health, and emotional health.

Results: Research Question 2: Logistic Regression

- General Health $OR = .80$
- Physical Health $OR = .91$
- Emotional Health $OR = .93$
- Odds ratio (*OR*) for each predictor variable was close to 1.0. This indicates that unit changes in that independent variable did not affect the outcome variable. Therefore, none of these variables, although significantly changed post-intervention, predicted post-intervention smoking status.

Results: Smoking Cessation

- Participants were long-term, heavy smokers who had previously tried but been unsuccessful in stopping smoking.
- Pre-intervention, approximately 93% indicated they were seriously thinking of quitting smoking within 30 days to 6 months.
- 12 months post-intervention, this number was essentially unchanged.

Recommendations for Future Research

Quantitative

- Larger, more heterogeneous populations, ethnically and socioeconomically .
- Different longitudinal periods (3, 6, 9, 24, 36 months post-intervention).
- Examination of relationships with other variables: gender, ethnicity, educational level, occupation, social support, stress.
- Studies with intervention and control groups.

Qualitative

- Explorations of experiences and observations of participants.
- Exploration of experiences and observations of participants' family members and significant others.
- Exploration of observations of participants' caregivers.

Conclusions and Summary

- ELCAP smoking cessation program was partially effective in decreasing level of smoking activity from pre-intervention to 12 months post-intervention.
- Program precipitated statistically significant increases in participants' general and physical health from pre-intervention to 12 months post-intervention.
- None of the five variables, general health, physical health, emotional health, level of activity, or stage of change predicted smoking cessation for this population at 12 months post-intervention.
- ELCAP program partially contributed to participants' decreased smoking and increased general and physical health from pre-intervention to 12 months post-intervention.
- Such programs can help minority, low-income individuals at risk of smoking-related diseases. Similar programs can be implemented through hospitals, community clinics, and private organizations to help minority, low-income patients lower their risks of smoking-related illnesses and increase their maintenance of smoking cessation.



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