Who Are Health Influencers? Characterizing a Sample of Tobacco Cessation Interveners

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Objectives: To describe characteristics of health influencers (HIs) prior to training in brief tobacco cessation interventions (BI). Methods: HIs (n=910) in Arizona were recruited for a randomized controlled trial comparing training modalities. Results: Typically middle-aged (M=43, SD=14), non-Hispanic white (68%), female (77%), non-tobacco users (93%), most identified personal (89%) rather than job-related (3%) motivators for becoming cessation interveners. Confidence about intervention ability was high (93%); knowledge scores, however, were low (M=55%, SD=13%). Conclusions: HIs exhibiting high motivation to intervene but lacking knowledge about BI strategies may be an untapped resource for tobacco cessation and a variety of other health promotion interventions.

Key words: brief intervention, cessation, tobacco, community

Tobacco use is the leading preventable cause of death in the United States, and a growing worldwide threat to public health.1-3 Use prevalence is mitigated by such factors as education level, occupation, and ethnicity, yet morbidity and mortality – chiefly heart disease, chronic obstructive pulmonary diseases (COPD), and lung cancer – resulting from tobacco dependence profoundly impact the lives of a broad range of individuals.4,5 Cessation strategies with proven efficacy have failed to reach most tobacco users, and the majority continue to attempt quitting without assistance.6 The efficacy of brief tobacco cessation interventions is well established. They appear to be the most cost-effective weapon in the cessation arsenal, and their broad reach can produce the greatest public health impact. According to Public Health Service Guidelines for treatment of tobacco dependence, a minimal tobacco intervention can increase overall tobacco abstinence rates.7 Multiple cessation studies in health care settings have demonstrated the effectiveness of single-contact interventions compared with extended multisession intensive tobacco interventions.8-10

Although proven efficacious, brief 3- to 10-minute interventions are not routinely implemented in the health care system.11,12 Physicians and other health care providers with training as cessation interveners have, over the past 2 decades, made little progress in consistently conducting interventions with patients or institutionalizing intervention strategies in the health care system.13-15 Investment
in tobacco dependence treatment research that includes (1) broad public health and translational priorities and (2) community mobilization are among the top 10 recent expert recommendations to address gaps in cessation services. Brief interventions delivered via community-based avenues and utilizing lay persons as interventionists provide a complementary cessation approach potentially impacting a large number of tobacco users.

Increasing the scope of interventions and their consequent impact on reducing tobacco use prevalence can be fortified through disseminating cessation skills to a broader audience. Nonmedical interventionists who provide health behavior advice and information are characterized in numerous ways in the literature, most commonly as natural helpers, lay health advisors or educators, and community health workers. The highly motivated, self-selecting group of “health influencers” (HIs) are an untapped and potentially highly effective tobacco cessation resource to disseminate BIs within the community. In providing health advice and influencing behavior change in weight loss, CPR, sexually transmitted diseases, and smoking cessation, HIs have been shown to be both efficacious and effective. HIs have the ability through their professional and community roles to influence a substantial number of tobacco users. Understanding the motivators, barriers, and opportunities that HIs bring to the intervention process is a key element in developing training programs.

Studies examining the role and performance of HIs in tobacco cessation are limited but suggest that learning BI knowledge and skills is both feasible and practical, with training results comparable to those of health care professionals. Research highlights potential for community-based cessation activities in the context of other tobacco control services, with results from the COMMIT project and others indicating a combination of tobacco control strategies can provide a context that enhances the use and outcomes of community-driven interventions. Pre-post data from BI training shows significant increase in confidence among HIs learning Basic Skills, the Arizona state certification course. Participants (n=947) included a large proportion of public health professionals (45.6%) working in tobacco control, as well as, educators, behavioral health and medical professionals, and social workers. Scores on knowledge tests averaged 90% after training. Demographics, attitudes, behaviors, knowledge, and confidence for the broader group of HIs without tobacco control experience have not been systematically examined.

Project Reach was a large-scale, randomized controlled trial comparing methods of training HIs to conduct brief tobacco cessation interventions. Baseline data from this relatively homogeneous population allows for description and assessment of HIs prior to participation in intervention skills training. Analysis of HI demographics, behaviors, attitudes, confidence, and knowledge provides important information about a sample of individuals strongly motivated to learn tobacco cessation skills and potentially integral to broadening the scope and impact of tobacco cessation.

**METHODS**

**Recruitment**

All study volunteers for Project Reach who completed screening and consent procedures were included in the baseline sample presented here. Participants were recruited over a period of 13 months using multiple methods, including paid advertising (print, TV, radio, community college catalogs) and community outreach presentations (workplace/campus events, neighborhood association meetings). Recruiting systematically covered Pima and Maricopa counties, Ariz, and targeted difficult-to-reach groups such as males and individuals working outside the health care system. Materials presented a message to potential participants that they could “make a difference” and “help others quit tobacco.” Inclusion criteria were (1) age 18 years or older, (2) interest in receiving training in brief interventions for tobacco cessation, (3) availability for follow-up interviews for up to 9 months, (4) access to high-speed Internet (eg, home, office, library) or (5) willingness to attend a community college to gain Internet access, (6) willingness to forego other tobacco intervention training for 9 months, (7) opportunities for interaction with others, and (8) willingness to be randomized to training options. Potential volunteers were excluded if they had received tobacco cessation training in the last 2 years or if any member of their household was already enrolled in the
study. Current tobacco use status was not an exclusion criterion. Figure 1 shows the flow of participants through the relevant portion of Project Reach.

**Data Collection**

Basic demographic data were collected in the screening process via a computer-assisted telephone interview. The remaining data were collected using a self-report questionnaire administered during orientation sessions held prior to randomization and conducted over the course of the enrollment period. The orientation instrument included items from 4 domains: behaviors, attitudes, confidence, and knowledge (BACK). The screening and BACK instruments shared some demographic items: age, profession, tobacco use history, and experience in counseling and tobacco control. Data for this analysis were taken from the more current BACK instrument when demographic information was available from both sources. The BACK instrument demonstrated good reliability and validity during a systematic development process with Cronbach alphas \( \geq 0.72 \) and content validity indices \( \geq 0.73 \).

**Data Management**

Quality assurance procedures were established to protect the integrity of the
data and ensure standard procedures for data entry and management. Data from paper-based instruments were entered into a relational database using forms that mirrored the hard copy. Data were numerically coded by the computer as they were entered. For example, a rating of “never agree” or “no” was coded as 0, “sometimes agree” or “yes” as 1, “often agree” as 2, and “always agree” as 3.

**Data Reduction**

Each of the BACK domains had multiple subscales. For subscales in the B, A, or C domains, each HI was given a score equal to the sum of his or her ratings on the items composing the subscale divided by the possible number of points that could be given if the HI rated each item with the highest rank. The resulting proportion was multiplied times 100 to define a percentage agreement score. Thus, the subscale scores could range from 100%, which would indicate that the HI responded “always agree” or “yes” to each item of the subscale, to 0%, which would indicate that the HI responded “never agree” or “no” to each item of the subscale. When an item was not answered, a score of 0 was entered before summing the ratings.

Demographic subgroups were defined for 6 variables: gender, ethnicity, age, educational level, profession, and tobacco use. HIs were divided into 2 gender groups: women (n=700) and men (n=211). Data from questions of ethnicity and race were used to divide HIs into 4 ethnicity/race groups: Hispanic (n=183), non-Hispanic white (n=617), non-Hispanic minority (n=83), and unspecified (n=28). HIs were divided into 5 age-groups: under 30 (n=210), 30-39 (n=158), 40-49 (n=210), 50-59 (n=218), and over 59 (n=117). They were divided into 2 educational groups: less than a bachelor’s degree (n=483) and bachelor’s degree or higher (n=414). The 5 occupational groups were mutually exclusive: health care (eg, health care-medical, physician, nurse, pharmacist, dentist, or dental hygienist, n=165); helping professions (eg, health care-behavioral, social services/social worker, counselor, educator, coach, massage therapist, n=258); business and services (eg business/public administration, finance/banking, physical/technical sciences, creative professionals, service professionals, n=170); student (n=134); and other (eg, retirees not specifying profession, homemakers/caregivers, unemployed/disabled, other professions, n=142). HIs were divided into 3 tobacco use groups: never used (n=474), former user (n=363), and current user (n=74).

**Statistical Tests**

Descriptive statistics (percentages, means, and standard deviations) were used to summarize data from key items and subscales of the instrument and among subgroups within the sample. Independent sample t-tests and between-group one-way analyses of variance were used to compare subgroups on confidence and knowledge subscales. Paired sample t tests and repeated measures analyses of variance were used to compare individuals’ relative performance across subscales. Post hoc comparisons were made with Tukey tests when all pairwise comparisons were needed or with Bonferroni correction to alpha when only a subset of comparisons was needed. Data were analyzed using SPSS 13.0.1.

**RESULTS**

**Demographics**

The demographic profile of HIs is summarized in Table 1. The recruiting message attracted a broad range of individuals; however, most were well-educated, white, middle-aged women with a tobacco use history typical of Arizona adults (former users, 41%). Among participants (n=910) 77% were female and 20% were Hispanic. Almost half (46%) of the HIs had a bachelor’s or higher degree. The primary work settings reported were health care, education, or social/behavioral health, employing 41.6% of participants. A substantial number of HIs (32%) were not working outside the home, including students, retired individuals, unemployed people, those with disabilities, and homemakers/caregivers. HIs who were using, or willing to use, high-speed Internet connections (at work, home, school, or community colleges) accounted for 81% of the sample. A large proportion of HIs (43%) reported acting as church or community volunteers.

**Attitudes and Motivators**

Participants typically believed that tobacco is harmful, addictive, and difficult to quit (even with assistance). For example, the average score on the 6-item subscale assessing perceived harmful-
ness of tobacco was 91.2. Percentage agreement scores indicated that work-related motivators (6-item subscale) were relatively unimportant at 31.9 (SD=17.9), whereas personal motivators (6 items) were more important at 65.7 (SD=22.1). Percentage scores for motivation to train and intervene (5 items) were 63.3 (SD=19.8), and application of training (5 items) scores were 73.6 (SD=21.5).

Analysis of specific reasons for involvement in the training showed that most HIs were motivated to learn brief interventions based on a general interest in helping tobacco users quit (90%) and a desire to help friends/family members quit (89%). A majority also wanted to improve general intervention skills (80%), help high-risk users quit (79%), and protect people from secondhand smoke (69%). Rarely were HIs motivated by job requirements (3%), education requirements (5%) or desires to “help myself quit” (8%). Responses to the open-ended query for other motivators (n=65) included gaining or augmenting intervention knowledge and skills (n=19), helping a specific person (n=13), helping people generally (n=10), or impacting their community (n=6).

### Behaviors

HI behaviors were consistent with their attitudes about tobacco and cessation. Over half of the participants reported having never used tobacco (52%). Although 40% of the HIs indicated a history of tobacco use, only 8% were currently using at the time of study enrollment. Between-groups ANOVA using post hoc Tukey tests showed that having used tobacco in the past was associated with age; HIs over 40 years of age were significantly (P<0.001) more likely to be former users.

A third of participants (35%) had at least one year of experience working in counseling or social work, but only 6% brought with them background or experience in the field of tobacco control. Reported behaviors, however, were consistent with promoting tobacco cessation. For example, 88% of HIs prohibited smoking in their homes, and 81% had no-smoking rules in their cars. Most HIs (56%) reported having attempted at least one brief intervention (a “nonconfrontational conversation intended to encourage or support a tobacco user’s desire to quit”) prior to entering the study.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Demographics of Health Influencers (N=910)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>M = 42.9 (SD 14.2) N = 906</td>
</tr>
<tr>
<td>Education</td>
<td>M = 14.9 yrs (SD 2.2) N = 896</td>
</tr>
<tr>
<td>Gender</td>
<td>Percentage</td>
</tr>
<tr>
<td>Female</td>
<td>76.8</td>
</tr>
<tr>
<td>Male</td>
<td>23.2</td>
</tr>
<tr>
<td>Ethnicity/Race (*non-Hispanic)</td>
<td></td>
</tr>
<tr>
<td>White*</td>
<td>67.7</td>
</tr>
<tr>
<td>Hispanic (all races)</td>
<td>20.1</td>
</tr>
<tr>
<td>Black*</td>
<td>5.6</td>
</tr>
<tr>
<td>Native American*</td>
<td>3.5</td>
</tr>
<tr>
<td>Other race*</td>
<td>3.1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>High school graduate</td>
<td>41.2</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>12.1</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>28.7</td>
</tr>
<tr>
<td>Post baccalaureate degree</td>
<td>17.4</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
</tr>
<tr>
<td>Helping professions</td>
<td>29.6</td>
</tr>
<tr>
<td>Business &amp; services</td>
<td>19.6</td>
</tr>
<tr>
<td>Health care</td>
<td>19.0</td>
</tr>
<tr>
<td>Other</td>
<td>16.4</td>
</tr>
<tr>
<td>Student</td>
<td>15.5</td>
</tr>
</tbody>
</table>
Who are Health Influencers?

Confidence and Knowledge
Table 2 summarizes the confidence levels of HIs in 3 key areas. Participants were most confident about their advanced motivational intervention skills (adapted from motivational interviewing techniques, eg, the ability to express optimism and empathy, acknowledge frustrations, and use a client-centered intervention) and less confident about their basic skills specific to tobacco cessation or their ability to assist a tobacco user with a quit plan. Subscale scores were compared using repeated measures ANOVA. Post hoc comparisons with Bonferroni correction indicated that HIs were significantly more confident of their motivational intervention skills than of their basic skills (P<0.001) or their ability to assist with a quit plan (P<0.001).

Total scores on the knowledge test indicated that HIs were not well-informed about issues related to tobacco cessation intervention (M=55%, SD=13%). Table 2 summarizes the performance of HIs on 2 test subscales. Subscale scores were compared using a paired sample t-test. HIs scored significantly better on core concepts about intervention skills (P<0.001) than on advanced concepts specific to treatment, such as setting a quit date, managing relapse, or advising on specific treatment options.

Gender, Ethnicity, Age, and Education
The confidence and knowledge levels of women were compared to those of men using an independent sample t-test. Dif-

<table>
<thead>
<tr>
<th>Subscale (number of items in subscale)</th>
<th>Mean Score (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td></td>
</tr>
<tr>
<td>Basic skills (7)</td>
<td>57.9 (22.2)*</td>
</tr>
<tr>
<td>Motivational Intervention (6)</td>
<td>74.0 (20.8)</td>
</tr>
<tr>
<td>Assistance With a Quit Plan (8)</td>
<td>55.3 (29.6)*</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Core concepts (12)</td>
<td>59.1 (16.6)**</td>
</tr>
<tr>
<td>Advanced concepts (9)</td>
<td>49.9 (14.7)</td>
</tr>
</tbody>
</table>

Note.  
* within subjects comparison with motivational intervention, P<0.001  
** within subjects comparison with advanced concepts, P<0.001

Table 3
Relationship of Ethnicity to Confidence and Knowledge

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Mean Score (SD)</th>
<th>Mean Score (SD)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic skills</td>
<td>60.9 (23.1)</td>
<td>57.2 (21.9)</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Motivational Intervention</td>
<td>77.5 (19.6)</td>
<td>73.1 (21.0)</td>
<td>&lt; 0.01</td>
</tr>
<tr>
<td>Assistance With a Quit Plan</td>
<td>57.0 (31.4)</td>
<td>54.9 (29.1)</td>
<td>—</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core concepts</td>
<td>53.9 (15.2)</td>
<td>60.4 (16.7)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Advanced concepts</td>
<td>48.7 (14.9)</td>
<td>50.2 (14.7)</td>
<td>—</td>
</tr>
</tbody>
</table>

Note.  
— not significant
ferences in confidence and knowledge subscale scores were minimal, with no significant differences between men and women in their level of confidence in basic or motivational intervention skills or their knowledge of core concepts in tobacco intervention. Women, however, were significantly less confident than men about their skills in developing quit plans (M=54.2, SD=30.0 and M=58.8, SD=28.0, respectively; P=0.05), but scored significantly higher in knowledge of advanced concepts (M=50.5, SD=14.4 and M=48.0, SD=15.6, respectively; P<0.05).

Two ethnicity/race groups were of sufficient size to make a valid comparison of differences in confidence and knowledge subscale scores. Subscale scores were compared using an independent sample t-test; results are summarized in Table 3. Hispanic HIs were significantly more confident about their basic (P<0.05) and motivational intervention skills (P=0.01) than were non-Hispanic white HIs, but significantly less knowledgeable about core concepts (M=50.5, SD=14.4 and M=48.0, SD=15.6, respectively; P<0.05).

Occupation
Subscale scores were compared among 5 occupational groups with between-groups ANOVA. Results are summarized in Table 5. The overall F-test was statistically significant for one of the 3 confidence subscales and for the core concepts knowledge subscale (P<0.01). Pairwise comparisons were made with Tukey tests. There were no significant differences among health care, helping professions, business and services, student or other groups in their level of confidence in their basic skills or their motivational intervention skills. The health care occupation, however, had higher levels of confi-
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dence in their quit plan assistance skills than did those who worked in helping professions (P<0.01) and business and services (P<0.001) occupations. On quit plan assistance, students also were significantly more confident than the business and services group (P<0.01). The “other” professions scored significantly lower than health care and helping professions participants on the test of core knowledge concepts (P<0.05), but there were no significant differences on the test of core concepts between health care, helping professions, business and services, or student groups. The helping professions group scored significantly higher than the business and services group on advanced knowledge concepts.

Tobacco Use

The confidence and knowledge levels of HIs who had never used tobacco, were former tobacco users, or were currently using tobacco were compared using a between groups ANOVA. The overall F-test was significant for confidence in ability to assist with a quit plan (P<0.01) and knowledge of core concepts (P<0.05). Pairwise comparisons were made with Tukey tests. HIs who had never used (M=52.8, SD=29.7) were significantly less confident (P=0.01) on the quit plan subscale than were current users (M=63.3, SD=28.2). On knowledge of core concepts, however, never users had significantly higher scores (M=59.7, SD=16.3 and M=54.7, SD=17.1). Former users’ scores fell between the other 2 groups but were not significantly different from either never or current users on confidence in quit plan assistance (M=56.9, SD=29.4) or the knowledge of core concepts (M=59.2, SD=16.8).

DISCUSSION

Accurate assessment of the interventionist role for nonmedical professionals is fundamental to targeting lay health advisors for training in brief interventions. Development of community-wide knowledge and resources about tobacco cessation may subsequently improve existing intensive cessation services, which are currently poorly utilized by tobacco users. Insight into attitudes, behaviors, confidence, knowledge, and demographics of individuals motivated to act as health influencers provides a crucial link between the extensive body of evidence-based research about efficacious cessation strategies and effective community diffusion of cessation training.

Four dominant themes emerge from the analysis. First, HIs are motivated to learn cessation skills for personal reasons. Second, the relationship between knowledge and confidence varies with low knowledge commonly associated with high confidence (and vice versa) for key demographic subgroups. Third, confidence and knowledge vary between and within demographic subgroups differently for basic versus advanced skills and concepts. Fourth, type of occupation predicts knowledge and confidence levels.

Personal Motivation

Health influencers came from a wide variety of occupational backgrounds, spanning the gamut of job titles well beyond

Table 5
Relationship of Occupation to Confidence and Knowledge

<table>
<thead>
<tr>
<th>Health care (HC) Mean Score (SD)</th>
<th>Helping Professions (HP) Mean Score (SD)</th>
<th>Business and Services (BS) Mean Score (SD)</th>
<th>Student (S) Mean Score (SD)</th>
<th>Other (O) Mean Score (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confidence</strong></td>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic skills</td>
<td>60.2 (22.1)</td>
<td>56.1 (22.2)</td>
<td>55.8 (21.8)</td>
<td>61.6 (21.6)</td>
</tr>
<tr>
<td>Motivational Intervention</td>
<td>74.8 (21.3)</td>
<td>73.5 (19.9)</td>
<td>71.1 (20.6)</td>
<td>76.5 (21.0)</td>
</tr>
<tr>
<td>Assistance With a Quit Plana</td>
<td>60.8 (28.7)</td>
<td>51.2 (29.2)</td>
<td>49.6 (28.4)</td>
<td>59.7 (30.6)</td>
</tr>
<tr>
<td>Core concepts b</td>
<td>61.6 (17.1)</td>
<td>61.3 (16.2)</td>
<td>58.5 (15.9)</td>
<td>58.2 (16.8)</td>
</tr>
<tr>
<td>Advanced concepts c</td>
<td>50.9 (14.8)</td>
<td>52.0 (14.3)</td>
<td>47.5 (14.8)</td>
<td>50.5 (15.1)</td>
</tr>
</tbody>
</table>

Note.

a HC and HP P<.01; HC and BS P<.001; BS and S P<.01
b HC and O P<.001; HP and O P<.01;
c HP and BS P<.05
conventional human services occupations to include service professionals such as waitresses, hairstylists, and massage therapists as well as substantial numbers of creative and technical job roles, such as architect, writer, or business owner. Included in this mix was a substantial subset of health care professionals. Health influencers’ motivation to be trained and intervene, however, was rarely a result of a professional, educational, or job requirements. Most HIs wanted to learn brief intervention skills in order to help a friend or family member quit smoking, establish or augment general intervention knowledge and skills, or prepare themselves to become a resource for assisting in their communities.

Although a substantial number of HIs were interested in general skills, learning the intervention role appears to be associated with an established community role or a relationship to a specific individual. Health influencers commented specifically as being influenced by factors ranging from the inconvenience of secondhand smoke to more profound events such as the tobacco-related illness or death of a friend or family member. The lack of work-related cessation motivators may be a reflection of the relatively minor penetration of tobacco cessation training in organizational settings or the recruitment methods and specific eligibility criteria employed in the trial.

**High Confidence, Low Knowledge**

Overall confidence scores were consistent with the degree to which HIs had received counseling education or training prior to their BI training, and to some degree with occupational role. Higher knowledge scores, however, often appeared in demographic subgroups who expressed significantly lower confidence. Although significantly more knowledgeable, non-Hispanic whites, those with bachelor’s degrees, 40- to 59-year-olds, and females all expressed significantly less confidence, supporting the conclusion that greater confidence and less knowledge are often associated. For example, non-Hispanic whites scored significantly higher than Hispanics on core knowledge items yet Hispanics’ scores for basic and motivational intervention confidence items were significantly higher. The high knowledge-low confidence/high confidence-low knowledge pattern emerges even more strongly for education level: better educated individuals with higher knowledge scores consistently reported lower confidence in their ability to conduct basic, motivational, and quit plan intervention activities.

**Advanced Intervention**

The most advanced knowledge and skills did not significantly differ by ethnicity or occupation, but varied significantly for gender, age, and education level. For example, significant differences emerged between non-Hispanic whites and Hispanics for all subscales except “Assistance With Quit Plan” and “Advanced Knowledge.” Higher educational level, health care occupation, older age and male gender, however, appeared to predict higher confidence levels on the quit plan subscale. Knowledge of advanced concepts (ie, items on the knowledge test specific to cessation) did not vary by ethnicity, occupation, or tobacco use history, but did vary significantly for 3 groups: females, younger individuals, and those with bachelor’s degrees or higher, all of whom scored significantly better. Higher educational level consistently predicted high confidence and high knowledge on the advanced, cessation-specific skills and concepts.

No significant differences between occupational groups emerged for motivational intervention confidence, nor did significant gender differences appear in analyses of this subscale. Motivational intervention is a more advanced skill that requires specific knowledge of client-centered interviews, and appears to be an area in which HIs feel very confident. The high level of confidence seen in the motivational intervention subscale may be a result of the terms and activities associated with it (“optimism, respect, non-judgmental”), which are familiar to many people. The only significant difference on this subscale was between Hispanic and non-Hispanic HIs (78% vs 73% mean agreement). Hispanic cultural traditions that emphasize respect and nonconfrontational communication may play a part in this result.

**Occupation**

Aside from education level, professional role was the only demographic variable where some subgroups scored high in
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both their tobacco control knowledge and their confidence. The health care occupation had significantly higher confidence in quit plan assistance and knowledge of core concepts. Business/Services had significantly lower scores for quit plan confidence and knowledge of advanced concepts. The helping professions – primarily educators and behavioral health workers – followed the trend identified earlier for education level and ethnicity: low confidence and high knowledge. Low confidence among the helping professions group was limited to the quit plan subscale although their high knowledge scores appeared on both core and advanced knowledge subscales.

No significant differences existed between any occupational groups for 2 of the 3 confidence subscales: basic skills and motivational intervention. Lack of variability in confidence may be the result of the high level of confidence and motivation among all HIs in the sample. Health care and student groups had significantly higher scores than those of helping professions and business/services for the basic skills subscale, and such results reflect the consistently high scores on confidence for both occupations. For the health care group, such confidence may stem from the health care setting, where topics such as tobacco cessation are more accessible. Students may have greater confidence because they are less experienced (the age variable showed a similar pattern, higher confidence associated with younger age).

Lack of statistically significant differences in confidence in motivational intervention skills across all occupational groups combined with analysis of HI behaviors indicates that the sample is well-versed in counseling and educational techniques that emphasize communication and insight into human behavior, but is less knowledgeable and confident about specific tobacco cessation strategies and techniques.

Strengths and Limitations

The strength of this paper is primarily related to the quality of data collection, measurement and analyses. Characteristics of the sample, such as its size and homogeneity, also support the credibility of the findings. The analytic data set is the culmination of rigorous recruitment and data management processes. Multiple stages of enrollment and highly structured administration of the baseline and screening instruments ensured that participants met inclusion and exclusion criteria parameters. Data analyses have proceeded with minor data cleaning due to the implementation of standard operating procedures throughout the data collection period, including weekly committee reviews of the database. The large sample size and homogeneous demographic attributes allow for extensive group comparisons and cross-tabulations.

This paper also has its limitations, primarily the scarcity of items directly assessing training interests, motivation, and specific experience with counseling. The lack of established knowledge about the population necessitated instrumentation that erred on the side of breadth at the expense of depth in each of the 4 major research domains (attitudes, behavior, confidence, and knowledge).

Appropriate statistical tests that compare cross-sectional data were used; however, data analyses were limited to descriptors. Multivariate analyses were not conducted because this paper is descriptive by design. Future publications that discuss outcomes and predictors will examine change as a result of the training intervention and factors related to the HI self-selection process.

Implications for Cessation Training

Health influencers interested in tobacco control who bring with them a combination of high motivation to intervene but little knowledge of cessation practices are the primary target audience for community-based BI training. Understanding HI characteristics and motivations is central to designing and planning acceptable and accessible community-based BI trainings. Knowledge about health influencers from this sample can be applied in numerous ways. HIs’ high level of motivation suggests that boosting confidence is less critical than teaching core knowledge concepts about tobacco interventions. Factors such as occupational role, education level, and age should be considered in designing appropriate trainings.

The lay health advisor or health influencer model has been successful in a variety of populations and for multiple types of lifestyle and behavioral health interventions. Health influencers in the
baseline sample were predominantly female and very active in their communities. Nearly a third of participants were ethnic or racial minorities. Regardless of occupation, HIs were overwhelmingly motivated to learn cessation strategies for personal reasons, including helping others and improving intervention abilities. Communities that currently utilize lay health advisors often recruit a similar demographic, making HI cessation training a good fit for Promotoras de Salud and other community-based health intervention programs. A low-cost, population-based HI training for tobacco cessation is a promising approach to address the needs of underserved populations who continue to suffer disproportionately from tobacco-related morbidity and mortality.

Using HIs to perform brief interventions has not been well studied. Further research is necessary to assess their potential effectiveness as community-based tobacco cessation interveners. Specifically, it would be important to examine components of the intervention process such as length of interventions, stages of BI interactions, context, and setting in order to develop greater knowledge about this highly motivated group of potential cessation interventionists. Because of the vast potential of HIs to impact health behaviors, knowledge about the interventionist role (particularly quantity and quality of BIs performed) is a critical next step to assess the efficacy of this population as health influencers.

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**REFERENCES**


Who are Health Influencers?