Identifying Opinion Leaders to Promote Behavior Change

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This article reviews 10 techniques used to identify opinion leaders to promote behavior change. Opinion leaders can act as gatekeepers for interventions, help change social norms, and accelerate behavior change. Few studies document the manner in which opinion leaders are identified, recruited, and trained to promote health. The authors categorize close to 200 studies that have studied or used opinion leaders to promote behavior change into 10 different methods. They present the advantages and disadvantages of the 10 opinion leader identification methods and provide sample instruments for each. Factors that might influence programs to select one or another method are then discussed, and the article closes with a discussion of combining and comparing methods.

Keywords: *opinion leaders; lay health advisors; health advocates; health champions; community leaders; behavior change; health promotion; peer leaders*

Opinion leaders are people who influence the opinions, attitudes, beliefs, motivations, and behaviors of others. This simple definition, however, masks a rather extensive literature on defining leaders and leadership. The roles and activities of leaders and leadership span numerous political, social, economic, and public health issues. Opinion leaders have been used in public health to gain support for and implement community health programs. The use of opinion leaders, and discussion of techniques used to identify them, is likely to increase as health promotion programs become more community oriented.

Opinion leaders have several functions and responsibilities critical for the implementation of successful community-based health promotion efforts. First, they provide entrée and legitimation to external change agents. Second, they provide communication from their communities back to agencies that implement programs. Third, they can act as role models for behavior change within the community. Fourth, they can be the conveyors of health messages. Finally, they may act as the "capital" left after the agency has withdrawn from the community, thus institutionalizing program goals. Although many theoretical frameworks support the use of opinion leaders for health promotion,

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Thanks to Kellie Hawkins, Darleen Schuster, Louise Anne Rohrbach, and Janet Okamoto for comments on earlier drafts. Support for this project was provided by NIDA grant DA-16094.

Health Education & Behavior, Vol. 34 (6): 881-896 (December 2007)
DOI: 10.1177/1090198106297855

few studies suggest how they should be identified and how their selection influences the functions they can perform. This article reviews 10 techniques for identifying opinion leaders in schools, communities, organizations, and other settings. Initial cursory review of the literature resulted in the categorization of these 10 techniques, then a systematic search of the literature was conducted to determine if this list was exhaustive and the extent to which each method was used. We describe the methods used in the literature search and the results of those searches. The article closes with a discussion of the advantages and disadvantages of each method, instruments used for each method, and factors that might influence the selection of a method.

BACKGROUND

Using opinion leaders to promote behavior change is a concept found in a number of health promotion models, theories, and frameworks. Opinion leadership is most often identified with the diffusion of innovations model, which attempts to explain how new ideas and practices spread within and between communities (Rogers, 2003). Opinion leaders are not necessarily the earliest adopters of innovations, although by definition they often embrace an idea before the majority does. Opinion leaders tend not to be the earliest proponents of new ideas as this might be risky and jeopardize their opinion leadership position. Instead, opinion leaders tend to monitor the climate of opinion and exercise their influence when the advantages of the new ideas are apparent or when it is clear that norms will change. Rather than waiting for opinion leaders to embrace public health practices, efforts have now been directed at identifying opinion leaders and using them as change agents (Kelly et al., 1991; Lomas et al., 1991; Perry, Klepp, Halper, Hawkins, & Murray, 1986; Soumerai et al., 1998; Valente, Hoffman, Ritt-Olson, Lichtman, & Johnson, 2003). Opinion leaders can remove barriers to change and increase the rate of the diffusion of innovations (Valente & Davis, 1999).

There is considerable variation in how opinion leaders are defined, selected, and trained, and this variation may affect the success of community-based health promotion programs. Programs that have used opinion leaders include community-based promotion of mammography screening (Earp et al., 2002), tobacco prevention in schools (Perry et al., 2003; Valente et al., 2003), physician practices (Lomas et al., 1991), HIV/STD risk reduction (Kelly et al., 1991; Latkin, 1998; Sikkema et al., 2000), and many others (e.g., Yancy, Siegel, & McDaniel, 2002). In general, programs that use peer opinion leaders have been shown to be more effective than those that do not. By describing opinion leader identification techniques and their uses, we hope to aid future programs attempting to use opinion leaders. It should be noted that opinion leaders are also sometimes referred to as champions, lay health advisors, health advocates, community leaders, and perhaps other terms.

IDENTIFICATION METHODS

Ten techniques for identifying opinion leaders are reviewed as well as the advantages and disadvantages of each method (see Table 1). Selection of the most appropriate method will depend on the setting, availability of appropriate opinion leaders, and available resources. It is also possible that the identification techniques used may depend on the role expected of the opinion leader, that is, the way they are expected to influence others in their promotion of health behavior change.

Table 1. Methods, Techniques, Advantages, Disadvantages, and Instruments Used for Identifying Opinion Leaders

Method	Technique	Advantages	Disadvantages	Instruments
1. Celebrities	Recruit well-known people who are national, regional, or local celebrities	Easy to implement Preexisting opinion leaders High visibility	Contradictory personal behavior Difficult to recruit	Media or individuals identify
2. Self-selection	Volunteers are recruited through solicitation	Easy to implement Low cost	Selection bias Uncertain ability	Individuals volunteer for leadership roles
3. Self-identification	Surveys use a leadership scale and those scoring above some threshold are considered leaders	Easy to implement Preexisting opinion leaders	Selection bias Validity of self-reporting	When you interact with colleagues, do you give or receive advice?
4. Staff selected	Leaders selected based on community observation	Easy to implement	Staff misperceptions Leaders may lack motivation	Staff determines which persons appear to be opinion leaders
5. Positional approach	Persons who occupy leadership positions such as clergy, elected officials, media, and business elites	Easy to implement Preexisting opinion leaders	May not be leaders for the community Lack of motivation Lack of relevance	1. Do you hold an elected office or position of leadership? 2. Are you a member of any community organizations? Which ones?
6. Judge's ratings	Knowledgeable community members identify leaders	Easy to implement Trusted by community	Dependent on the selection of raters and their ability to rate	Persons who are knowledgeable identify leaders to be selected and rate all community members on leadership ability

(continued)

Table 1. (continued)

Method	Technique	Advantages	Disadvantages	Instruments
7. Expert identification	Trained ethnographers study communities to identify leaders	Implementation can be done in many settings	Dependent on experts' ability	Participant observers watch interaction within the community and determine who people go to for advice
8. Snowball method	Index cases provide nominations of leaders who are in turn interviewed until no new leaders are identified	Implementation can be done in many settings Provides some measure of the social network	Validity may depend on index case selection It can take considerable time to trace individuals who are nominated	Randomly or conveniently selected index cases are asked who they go to for advice Those nominated or a random selection of those nominated are also asked this question
9. Sample sociometric	Randomly selected respondents nominate leaders and those receiving frequent nominations are selected	Implementation can be done in many settings Provides some measure of the network	Results are dependent on the representativeness of the sample May be restricted to communities with less than 5,000 members	Randomly selected sample or cases are asked who they go to for advice
10. Sociometric	All (or most) respondents are interviewed and those receiving frequent nominations are selected	Entire community network can be mapped May have high validity and reliability	Time-consuming and expensive to interview everyone May be limited to small communities (i.e., less than 1,000 members)	All respondents are asked who they go to for advice

Technique #1: Celebrities. Celebrities are often used by advertising and marketing firms to sell products, such as clothing and cell phones (O'Mahony & Meenaghan, 1997). Celebrities can also be effective at "selling" health messages, either intentionally or unintentionally. Kalichman and Hunter (1992) found that men in Chicago increased their awareness and interpersonal communication about AIDS as a result of Magic Johnson's disclosure that he was HIV positive. One important element that affects the success of a celebrity's ability to influence audiences is how well the community or target audience identifies with him or her. Thus, when selecting celebrities for health promotion, it is important to select a celebrity that the community identifies with and values.

Using celebrities to promote behavior change has many advantages. They are highly visible and already act as opinion leaders within society. Celebrities are also accustomed to being in the spotlight and thus do not have to be trained to speak in public or how to cope with added attention. Celebrities often enjoy taking on causes that are important to them to enhance their image and further solidify their celebrity status.

There are certain disadvantages, however. A celebrity can also solicit intense public scrutiny, and if the personal behavior of a celebrity contradicts the health message he or she is endorsing, the effectiveness of that message decreases (Erdogan, Baker, & Tagg, 2001). Thus, celebrities often need to be educated about their responsibilities as a health opinion leader. They also need to be educated about the health behavior or message they are supporting. Because they are going to be spokespersons, they need to be able to discuss the topic intelligently. Also, if they are being compensated or in any way identified with a sponsoring agency, there may be contractual agreements on the limitations put on contradictory personal behavior. Because of these restrictions, it may be difficult as well as costly to recruit celebrities as health opinion leaders.

Technique #2: Self-Selection. This technique requires the solicitation or recruitment of individuals to volunteer to be an opinion leader. Potential leaders are selected via word-of-mouth, printed material, or other forms of media solicitation. Individuals identified by this technique are not necessarily leaders in their community but are motivated to volunteer by personal reasons such as a strong desire to serve their community (Burn, 1991), gaining personal health education, or preparing for future employment in the health field (Klein, Sondag, & Drolet, 1994).

Self-selected opinion leaders are often referred to as peer educators, mentors, or natural helpers and are often used in school-based health promotion programs. For example, in the Penn State Nutrition Peer Education Program, student volunteers acted as peer educators to disseminate information on substance abuse, contraception, self-care, and nutrition (Gates & Kennedy, 1989). There are numerous advantages to identifying opinion leaders through self-selection. First, it is cost-effective because it is not expensive to advertise and allow people to volunteer. Second, because these leaders are usually similar to the target audience, they have prima facie credibility and will undoubtedly be near-peers to some people in the target audience. Third, volunteers are interested in the topic of promotion or in being promoters and therefore are motivated to be effective opinion leaders. Fourth, self-selected opinion leaders often experience positive health behavior changes themselves as a result of their volunteer work. Finally, because they are peers, they may deliver health messages using appropriate language and expressions, thus making the message more effective than if it had come from nonpeers.

The main disadvantage is that volunteers may not be perceived as opinion leaders by the people whose behavior is being changed. The type of person who volunteers to be

a mentor may be the type of person not emulated by members of the target audience. A second disadvantage is that self-selected peer leaders may be motivated to volunteer for reasons other than altruism. They may volunteer for money or other compensation or to gain power and visibility for other ends, which may minimize their dedication to the program.

Technique #3: Self-Identification. The self-identification method requires individuals to fill out a survey measuring their perceptions of their own opinion leadership within a community (Childers, 1986; Rogers & Cartano, 1962; Weimann, 1991). Those who respond affirmatively or score the highest on the scale are selected as leaders (Hamilton, 1971). Questions used for this technique may vary and can be tailored to specific interventions. For example, in a study on the influence of opinion leaders on the medical decisions of older adults, leaders were identified using one question: "Have you ever talked with someone 45 or older who was thinking about seeing a new doctor or using a medical service for the first time" (Booth & Babchuk, 1972).

A possible advantage to using the self-identification technique over self-selection is the identification of individuals with more preexisting opinion leadership within a community. Self-identification also provides the opportunity to stratify the degree of opinion leadership based on tabulations of reported opinion leadership interactions. For example, Booth and Babchuk (1972) classified opinion leaders as "occasional" and "active." Such scaling can be used in evaluation analysis as a fidelity measure. A final advantage is that self-identification scales can be compared across studies and cultures by administering the same questionnaire items to different populations (Childers, 1986).

The main disadvantage to self-identification is that respondents may bias their responses either intentionally or unintentionally. The identification of the leaders is based on individual self-report and not on externally objective criteria.

Technique #4: Staff Selection. Staff selection requires project staff to select opinion leaders based on information derived from their community observations. For example, Earp and others (2002) recruited and trained 170 lay health advisors to promote awareness and use of breast cancer screening among African American women in their communities. These opinion leaders then distributed intervention materials but, more important, were able to talk with women they knew and in venues they were familiar with.

Technique #5: Positional Approach. The positional approach allows staff to select opinion leaders based on their occupational or organizational roles in the community such as elected officials, church leaders, community organizers, and so on. Both of these techniques (#4 and #5) are easy to implement in communities of varying sizes and demographic composition. The positional approach may be more reliable than staff selection because leadership is often defined as people who occupy specific roles and is a generally agreed-on societal value. Opinion leaders identified through the positional approach also typically have more power with regard to legislation or policy changes supporting health behavior change (Howard et al., 2000). Furthermore, it is a technique that can be documented and replicated in many settings.

A disadvantage for both techniques #4 and #5 is that staff may misperceive an individual's opinion leadership; the positional approach holds a further limitation in this regard in that "formal" leaders may not be perceived as leaders within the "informal" community. Another disadvantage to both techniques is the possible lack of motivation by selected opinion leaders to participate in the project, which may indicate an advantage

of using the self-selection or self-identification techniques over staff selection. Participation may be a function of the perceived relevance of an opinion leader's occupational position to the health issue of interest (Howard et al., 2000). For example, a study identifying opinion leaders through the positional approach found opinion leaders in health-related positions more involved in tobacco control issues than those in education, law enforcement, media, government, business, youth, or ethnic organizations (Howard et al., 2000).

Technique #6: Judges' Ratings and Technique #7: Expert Identification. These two techniques rely on knowledgeable individuals within a community to identify leaders rather than project staff. The judges' rating technique uses key informants to identify potential opinion leaders. The expert identification method uses trained scientists who act as participant observers to determine potential opinion leaders.

Similar to staff-selected methods, techniques #6 and #7 are easily implemented in communities of varying sizes and demographic composition. The validity of one technique over the other is dependent on the abilities and talents of the individuals involved in the selection process. Because the judges' rating method uses members of the community to select opinion leaders, it may have more face validity. For example, in a community AIDS/HIV risk reduction program conducted in three southern cities, judges' ratings were used to identify opinion leaders in the gay community to serve as peer leaders for behavior change in sexual practices (Kelly et al., 1991, 1992). The judges were bartenders who used their knowledge of the community to identify trendsetters in these particular bars. The intervention showed effects even at a 3-year follow-up (St. Lawrence et al., 1994). Technique #6 is also used in organization settings when managers select someone to be an opinion leader for practice change.

Technique #7, expert identification, uses trained scientists or ethnographers to study a community and then identify potential opinion leaders. Expert identification is also easy to implement and has considerable face validity. The disadvantage to expert identification is that it depends on the abilities of the expert and may have limited generalizability given the idiosyncrasies of observations and settings.

Technique #8: Snowball Method, Technique #9: Sample Sociometric, and Technique #10: Sociometric. These three methods use social network analysis methods to identify opinion leaders within a community. The snowball method starts with a randomly selected sample (known as "index cases") who are interviewed and asked to nominate others in the community who are considered opinion leaders. Everyone nominated in the first round, or a sample of them, can be interviewed in the second round, and the process is repeated until a sufficient number of opinion leaders are identified. Opinion leaders are identified as those who receive an agreed-on threshold of nominations. This technique provides a valid method for determining the opinion flow structure in the community and a method replicable across many settings. For example, Latkin (1998) asked injection drug users to nominate peer opinion leaders from the community who were used to convey behavior change messages to others.

Technique #8 has three disadvantages. First, the results are somewhat dependent on the representativeness of the index cases. Second, it can take considerable time to locate individuals who are nominated. Third, it may take additional time to interview index cases, enter their data, and then repeat the interviewing process based on the data collected. The advantages to technique #8 are that the data can be representative and hence generalizable. A second advantage is that the data collection process can be modified

during the study, stopping once sufficient opinion leaders have been identified, or increasing the number of names requested and persons interviewed if there are too few.

Technique #9, sample sociometric, also uses social network analysis but starts with a representative sample and solicits names of opinion leaders. The data are then analyzed to determine who in the community receives nominations above some threshold level to be considered leaders. The difference between #9 and #8 is that the sample for #9 is much larger than the index cases selected in #8. In addition, technique #9 assumes that the boundary for the community is fairly well defined. Typically, a sample sociometric study would select a sample of about 50% and have clearly defined borders for the community of interest. Simulations on empirical data have shown that a sample of 50% is 80% reliable at identifying opinion leaders (Costenbader & Valente, 2003). The advantage of the sample sociometric technique is that the research team collects data one time. The limitation, again, is that the results are dependent on the representativeness of the sample. A second limitation is that this technique will be useful in situations where borders are clearly defined (e.g., schools, organizations, neighborhoods).

Technique #10 may provide the most valid and reliable means for identifying opinion leaders but may also be the most costly and restrictive. All (or almost all) community members are interviewed and a social network or matrix is constructed from the nominations. Persons who receive an agreed-on threshold of nominations received, such as the top 10% or 15%, are identified as opinion leaders. Other measures of network position developed in the social network analysis field can be used to identify those who are most central (Freeman, 1979).

For example, Buller and others (2000) used opinion leaders to increase fruit and vegetable consumption in a work-site health promotion program. These opinion leaders were "selected as being 'central' in their social groups at work (defined by coworkers' reports of regular contact, close relationships, and respect for their opinions)" (Buller et al., 2000, p. 233). Sikkema and others (2000) used opinion leaders for HIV prevention among women living in low-income housing developments. Leaders were responsible for leading women's groups created to promote HIV risk reduction behavior (Sikkema et al., 2000). Another intervention used neurologists identified by their colleagues as opinion leaders to encourage the "adoption of practice recommendations" related to care of dementia patients (Gifford et al., 1999).

One advantage of this technique is that the entire communication structure of the community can be mapped and other centrality techniques used to locate opinion leaders (Freeman, 1979). A second advantage is that optimal matching strategies pairing leaders with followers closest to them can be implemented (Valente & Davis, 1999; Valente et al., 2003). The disadvantage is that interviewing all members of a community can be time-consuming and expensive, and in large communities of 1,000 or more, this technique may not be practical unless electronic means of data collection are used.

LITERATURE REVIEW

A comprehensive review of the literature determined that the 10 opinion leader selection methods were exhaustive. We followed standard procedures for conducting meta-analysis, including searching under various but equivalent keywords in different search engines and personal contacts with other researchers, including large numbers of articles and later omitting the ones that do not match our inclusion criteria, and reporting the specific keywords, time periods, and locations in which these articles were

obtained (Durlak & Lipsey, 1991; Lipsey & Wilson, 2001). Because various terms can be used interchangeably with the term *opinion leader(s)*, a search was performed using the following search terms: opinion leaders, health advocates, lay health advisors, health champions, promotoras, behavior change agents, celebrities, community leaders, and peer leaders. The first four terms were searched in five health-related search engines (i.e., Medline, PubMed, ERIC, PsycINFO, and CINAHL) during February, March, and April 2004. A second search was conducted with the later five terms in August 2004 and January 2005 to expand the scope of the search even further and increase the validity of our list. These nine terms were used because they represent the terms used in the health field to identify persons whose ideas are considered important and followed by others. The five databases were selected because they are frequently used in the public health and health education fields.

A total of 14,705 articles was originally obtained with the search terms. References were stored using the reference filing program End-Note Version 7. Phase 1 of the literature search included discarding articles that did not use the definition of opinion leaders as people who can influence the opinions, thoughts, and behaviors of others. We also discarded articles that had the terms *opinion* and *leader* but in a context unrelated to this review.

Phase 2 included eliminating those articles that reported on an earlier study and, thus, its method of opinion leader selection was already documented. We also eliminated articles that did not use opinion leaders in their implementation or evaluation, were duplicates, and were articles not related to health or health care administration. We kept articles that used opinion leaders as behavior change agents and evaluated their effectiveness or articles that studied opinion leader performance. We also retained articles on nonexperimental studies that used opinion leaders in their formative evaluation phase as resources or surveyed opinion leaders for their expertise or ideas on various health topics. Although these later articles did not use opinion leaders in their intervention, they involved opinion leaders as part of their protocol and, thus, it is important to document how these opinion leaders were selected.

After phase 2 of the literature search, 180 articles remained. To these, we supplemented 31 articles from manual literature reviews, from the authors' databases, and from professional correspondence among colleagues that were not identified by any of the searches reported above. This resulted in a total of 211 articles that could then be categorized according to their opinion leader identification methods (see Table 2). After several attempts, we were not able to locate 20 articles, which left a database of 191 articles to categorize.

Approximately 19% of the articles used the sociometric method. This large proportion was not expected because, as discussed earlier, the sociometric method is time-consuming and may be difficult to implement in large communities. The self-selection method (13.0%) was the second most used method, which is not surprising because it is easy to have opinion leaders volunteer themselves into the study. The positional approach and the judges' ratings methods (12.0% and 11.5%, respectively) were the third and fourth most used methods. The popularity of these methods makes sense because it is easy to select opinion leaders based on their positions in the social structure or based on knowledgeable individuals within the group or community selecting opinion leaders. In 48 (25.1%) of the articles, we could not determine the type of opinion leader selection method employed because not enough information was supplied.

Although most articles employed only one type of opinion leader selection method, three studies used two opinion leader selection methods—self-selection and judges' ratings

Table 2. Number of Articles by Opinion Leader Selection Method

Method	# of Articles (n = 191)	Percentage
1. Celebrities	5	2.6
2. Self-selection	25 [3]	13.1
3. Self-identification	3	1.6
4. Staff selection	17	8.9
5. Positional approach	23	12.0
6. Judges' ratings	22 [3]	11.5
7. Expert identification	5	2.6
8. Snowball method	3	1.6
9. Sample sociometric	4	2.1
10. Sociometric	36	18.8
11. Not reported	48	25.1
12. Random	3	1.6
Total	191[a]	100

NOTE: Three articles used two different types of opinion leader selection methods—self-selection and staff selection.
a. Of the 211 total abstracts identified, full articles were obtained for 191.

(Botvin, Baker, Renick, Filazzola, & Botvin, 1984; Elliott et al., 1997; Perry et al., 1989). Botvin et al. (1984) tested the effectiveness of a cognitive-behavioral approach to substance abuse prevention programs on seventh-grade students in New York. Peer opinion leaders either were students who volunteered to serve as leaders (i.e., self-selection) or were chosen by their teachers to act as peer leaders (i.e., judges' ratings).

Three of the articles that were located did not employ any method of opinion leader selection but randomly selected opinion leaders from the group of participants (Bos, 1998; Howard et al., 2000; Larkey et al., 2002). For example, Bos (1998) had junior baccalaureate nursing students randomly rotate through being peer leaders for 1 day/week of their 6-week rotation. For groups with 6 or more nursing students, names were drawn to select peer leaders for the day/week. Larkey et al. (2002) randomly assigned eligible Hispanic women to either the training group or the control group. The training group would be trained as Embajadoras, or Hispanic lay health advocates or ambassadors, who would later recruit women to join a national prevention study.

It is also important to mention that in our categorization of opinion leader selection methods, we have also categorized the articles according to their usage of opinion leaders (i.e., use of opinion leaders as change agents in an intervention versus using opinion leaders as formative resources or survey participants). More than half of the articles documented using opinion leaders as part of their intervention—serving as change agents for a health-related behavior change. This large proportion is indicative of the importance of using opinion leaders in community-based interventions.

CODING RELIABILITY

One of the authors (PP) was responsible for categorizing the articles into the opinion leader selection methods. To estimate the reliability of the categorization, we recruited a doctoral student to code a random selection of 10% of the articles by pulling out every 10th article from an alphabetized list of the 191 articles. Once the categorizing

was completed, Cohen's kappa was calculated for intercoder reliability (Cohen, 1960). A Cohen's kappa value of 0.87 was obtained, indicating a relatively strong reliability between the two coders and thus confidence in the categorization of opinion leader selection methods.

SELECTING AN OPINION LEADER IDENTIFICATION METHOD

Opinion leadership is a function of at least three qualities (Katz, 1957): (a) the leader's values and traits, (b) his or her competence or expertise, and (c) his or her social position (who they know, who knows them, and how accessible they are). The 10 opinion leader identification techniques differ on their ability to capitalize on each of these qualities. For example, self-identification may provide a good measure of the leader's values and traits, whereas sociometric methods may provide a better measure of social position. Thus, one factor that influences the selection of method is the importance to the specific project of each of these three dimensions. Promoting a behavior requiring advanced technical expertise may require an expert and credible opinion leader and, hence, a technique that uses an expert scale or judge. Conversely, a behavior requiring conversion of personal values or beliefs, such as switching political parties, may require a leader who is a strong convert to the behavior.

A second factor that might influence opinion leader selection method is the behavior change process being activated or the theory guiding the program. Opinion leaders influence behavior in their communities through at least four pathways. They (a) raise awareness, (b) persuade others, (c) establish or reinforce norms, and (d) leverage resources. Awareness refers to the opinion leaders' greater visibility making their actions more visible to others. This greater awareness increases the likelihood that others will adopt the behavior, because awareness is often the first step to behavior change. Persuasion refers to opinion leaders' overt attempts to convince others to engage in a behavior. The persuasiveness of opinion leaders and the susceptibility of opinion followers are dependent on many characteristics (Dillard & Pfau, 2002). Establishing or reinforcing norms refers to opinion leaders' behavior sending a message to others in the community that the behavior is or will be popular. Leverage refers to opinion leaders' adoption as increasing the costs associated with nonadoption. Once a leader adopts a behavior, others in the community now realize a cost associated with not engaging in the behavior and so are more likely to adopt it.

Different health promotion programs might vary the emphasis placed on different behavior change stages or processes. A program seeking to leverage resources to gain access to schools or community health centers needs to identify leaders who can provide such leverage. These leaders will most likely be those in positions of authority or generally recognized positions of leadership so the positional approach is the most appropriate method. On the other hand, a program that attempts to change norms concerning substance use in schools may have to rely on sociometric methods because these methods identify peer leaders and groups more explicitly.

A third factor influencing choice of method is the degree to which different methods can be combined. Ideally, a health promotion project will use multiple methods of opinion leadership identification and select leaders who meet multiple criteria. Practical considerations, however, may limit this possibility, but to the degree that possible programmers should use multiple and complementary methods.

Finally, there are factors such as (a) cost, (b) the project's sampling design, and (c) the sensitivity of the population that also influences method selection. Quantitative

data collection is often more expensive than qualitative data, and so selection methods that use expert judges and participatory observation (#6 and #7) may be less expensive than those requiring the collection, management, and analysis of data (#3, #8, #9, and #10). Studies and programs targeted at communities, schools, and organizations for which a boundary can be delineated and all persons interviewed are ideal for sociometric network methods, and so those techniques should be considered (i.e., #9 and #10). Programs aimed at groups that might distrust interviewers or divulging names (illegal residents, for example) may be restricted to techniques that are considered less invasive (#4 and #5).

RECRUITMENT AND TRAINING

Once leaders are identified, they need to be recruited and trained to perform health education and promotion activities. Recruitment and training methodologies differed according to various factors such as the type of study, type of peer leaders needed (i.e., older women versus young students), and what type(s) of health behavior were being targeted.

Larkey and colleagues (2002) recruited Hispanic women to serve as lay health advocates into the Women's Health Initiative in Arizona via overrecruiting eligible minority women age 50 or older who had (a) a positive attitude toward the study as measured with a set of questionnaires and (b) a minimum number of social contacts in the community (Larkey et al., 2002). Eligible women were then randomized into the training group and were contacted by study staff to review the purpose of the study and ask for consent. The training was made up of 6 hours of training in informal sessions that emphasized the roles of the lay health advocates and presented communication strategies and the purpose and important details of the Women's Health Initiative in targeting cardiovascular disease, cancer, and osteoporosis among postmenopausal women. Advocates were given brochures and interest cards that they could provide to potential study participants in case participants needed further details. Five quarterly meetings over 18 months were held with leaders to provide updates on the study and provide the opportunity for leaders to interact and learn from each other's experiences.

Wolff and others (2004) recruited community members to serve as community health advocates (CHAs) to assist and advocate for other members of the public housing community with regard to health and other issues (Wolff et al., 2004). CHAs were recruited to join the study with selection criterion such as (a) a minimum of 6 months' residency in the building, (b) commitment to positive change, (c) respect from other residents, (d) trustworthiness, and (e) enjoyment working with other people. Recruitment flyers and word-of-mouth were used to advertise the positions. Training curriculum included seven 1- to 1.5-hour sessions over 7 weeks. The sessions, conducted by staff of the Center for Healthy Communities or its partners, included (a) overview of community advocacy and health advocacy, (b) conflict resolutions, (c) team building, (d) health and health care, (e) overview of cancer, (f) drug and alcohol abuse, and (g) community resources. At the conclusion of the training, a graduation ceremony for CHAs took place in addition to an introduction of each CHA to the community.

Seventh-grade students from schools in the Minneapolis/St. Paul, Minnesota, region were recruited and trained as peer leaders in a school-based nutrition education intervention (Story, Lytle, Birnbaum, & Perry, 2002). After sociometric methods determined the peer leaders, training sessions for these leaders were conducted by experienced study staff. Peer leaders from the same schools were trained together in a full-day intensive

training session. Leaders were introduced to the program and their roles as leaders, each session and activity was reviewed and rehearsed, and manuals describing specific activities and their roles were also given. A total of 16 peer leader training sessions was conducted at eight intervention schools with a total of 272 students.

No studies mentioned whether any of the identified leaders refused to participate, and anecdotal evidence suggests that leaders are willing to be recruited for leadership functions.

COMBINING AND COMPARING METHODS

Several studies have compared opinion leader identification methods (Rogers & Cartano, 1962; Weimann, 1991). In general, these studies find strong but not universal agreement between methods. Individuals identified as opinion leaders in one method are also likely to be identified as opinion leaders in others (correlations in the range of 0.50 to 0.70). These past studies compared leadership emergence—whether the respondent would be considered a leader. None of them, however, studied the effectiveness of these identified leaders. Further studies are needed to compare methods within a health promotion framework so that opinion leader emergence and effectiveness can be compared.

Combining identification techniques may also prove useful. For example, many programs use the positional approach to identify community leaders. But this can be extended by using these leaders as index cases for a snowball method that asks these leaders to identify other leaders who can assist with program implementation. The initial pool of leaders would then serve as a sociometric sample that provides snowball information to locate other leaders.

SUMMARY

This article has attempted to clarify methods used to identify and recruit opinion leaders in behavior change programs. Ten methods were identified along with some notable examples of their use. A comprehensive literature review was performed to determine the validity of the 10 methods, and results of the search indicated that this categorization is exhaustive. Limitations to this search, however, should be noted. First, we used nine key search terms (i.e., opinion leader, lay health advisors, health advocates, health champions, promotoras, behavior change agents, celebrities, community leaders, and peer leaders) that are commonly used in the health field, but there may be equivalent terms that were omitted. Second, although large and popular, the five databases may not have provided an exhaustive list of research articles. Third, it should also be noted that several articles indicated what method they used without explaining the method further. Thus, we cannot assess their opinion leader selection method beyond what is indicated in their article. Fourth, only one coder was used to categorize the articles into types of opinion leader selection method and types of articles. Coder bias may have existed, but we believe it is minimal given the high reliability reported in the article and due to the objective nature of categorizing an intervention method. These limitations aside, we have attempted to provide a comprehensive and systematic review of opinion leader identification and selection techniques.

We have also attempted to outline the advantages and disadvantages of each of these methods, noting that program parameters and constraints will often dictate choice of method. We hope that the list and delineation of these methods will enable behavior

change programs to consider a wider array of available methods. An obvious program and research question, then, is whether some identification methods locate more effective leaders than others. To date, no research has addressed this topic.

Whether one or some methods identify more effective leaders depends, of course, on the type of behavior change program and theory driving its implementation. We hope that this article will prompt planners to select an identification method that matches the theoretical aims of the program. For example, credible leaders may be more easily identified with a self-identification technique, whereas trusted ones through staff or community selection. Thus, a second aim of this article has been to prompt planners to consider the role opinion leaders are expected to play in a program and use an identification method appropriate to that role.

It is also hoped that programs will use multiple methods to identify and recruit opinion leaders when feasible. The use of multiple methods may result in identifying more effective opinion leaders, thus improving program effectiveness. For example, a person identified as an opinion leader through expert identification (#7) and peer nominations (#8-#10) is most likely a highly regarded opinion leader and may be well suited to leading a behavior change program. Using multiple methods may also facilitate identification of both formal and informal community leaders who are important for motivating and sustaining behavior change.

Using multiple methods also affords the opportunity to compare different types of leaders. Some methods may identify leaders with more inherent leadership ability. Techniques #3 (self-identification) and #8 through #10 (peer nominations) are more likely to identify leaders to whom others look for advice. These leaders may require less training compared with leaders identified for their role (#5) whose leadership abilities in the program's domain may need to be developed. At the same time, using these preexisting leaders may reinforce established patterns of behavior that inhibit change.

Regardless of identification method, most behavior change programs that use opinion leaders dedicate time and resources to their training. It is clear that the manner in which opinion leaders are identified has implications for their training. Self-selected opinion leaders may be more motivated than those identified by judges, experts, or nominations by their peers. There may, however, be some advantage to having opinion leaders identified by different means participate in the same activities. The sources of motivation for some may be spread to others during the training.

Behavior change programs often need to be sustainable to have long-lasting effects on community members. Often, however, when program funding ends, so does the program. Opinion leader development and training is often one tangible benefit left by the program. These leaders can continue to influence community members long after a specific program is dismantled. Knowing specifically how these leaders were identified and recruited will greatly benefit planning for the long-term benefits that opinion leaders can provide to behavior change programs.

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