Encouraging survey participation among individuals seeking HIV prevention services: does a community identity match help or hurt?

ENCOURAGING SURVEY PARTICIPATION AMONG INDIVIDUALS SEEKING HIV PREVENTION SERVICES: DOES A COMMUNITY IDENTITY MATCH HELP OR HURT?

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Abstract: Understanding the behaviors and attitudes of at-risk populations is fundamental to controlling the spread of HIV, the virus which causes AIDS. The problem of nonresponse among these populations, however, plagues survey research designed to address these issues. Previous work undertaken to map out the dynamics of nonresponse--both non-contacts and refusals--have primarily focused on exploring the effectiveness of a single method of outreach. This analysis improves upon this prior research by comparing the effectiveness of two types of outreach strategies in a follow-up face-to-face survey of individuals seeking HIV prevention services in New Jersey during the period 1999-2001. Caseworkers from community-based organizations (CBOs) attempted to contact one set of respondents, while "outsider" researchers attempted to contact the second set. In brief, we find that in contrast to a CBO research affiliation, an outsider researcher status is associated with higher survey response rates.

Keywords: Survey nonresponse, AIDS, community-based organizations

The Centers for Disease Control and Prevention (CDC) has recognized Acquired Immunodeficiency Syndrome (AIDS), caused by the human immunodeficiency virus (HIV), as a major public health problem having a severe impact on millions of individuals in the United States. As of December 2001, a total of 816,149 Americans have been documented with AIDS and approximately 467,000 have died (CDC, 2001). To control the spread of AIDS, the CDC has provided funds to non-governmental community-based organizations (CBOs), among others, for programs aimed at reducing sexual and drug-using risk behavior. In disbursing these resources, the CDC has also recognized the need to determine whether or not the CBOs they have funded are, indeed, successful in reducing HIV transmission among the populations they serve and also whether the use of CDC resources for prevention is efficiently maximized. As such, rigorous evaluation of the prevention programs situated within these funded organizations is an important CDC initiative.

One of the foremost problems facing health educators is reaching populations that are likely to engage in behaviors that put them at risk for HIV and other diseases. Collecting behavioral data on these populations is key to preventing the spread of HIV, yet investigators need to know much more about the best ways to go about conducting this research. A leading problem for researchers is survey nonresponse (Groves, Dillman, Eltinge, & Little, 2002). Nonresponse encompasses all conditions that lead sampled units to not respond to the request to be surveyed (unit nonresponse) or to specific survey questions (item nonresponse) and is a phenomenon that occurs in mail, telephone, web, and face-to-face questionnaires. Unit nonresponse is composed of two types of issues: refusals and non-contacts. This analysis sheds additional light onto this issue by exploring both types of unit nonresponse in a follow-up set of

face-to-face interviews that involve asking sexual and drug related behavioral questions of individuals receiving HIV prevention services in New Jersey during the period 1999-2001.

Traditional explanations for nonresponse in the general population have taken many factors into account. For respondents, variables of consideration in face-to-face survey research include income, race, spoken language, sex, age, educational level, employment status, housing conditions, and incarceration status (Pickery, Loosvelt, & Carton, 2001; Smith, 1983; Goyder, 1987; Brehm, 1983). Interviewer characteristics can also play an important role in affecting survey participation (Pickery, Loosvelt, & Carton, 2001). For example, an interviewer's experience level, race, spoken language, and sex can all influence whether or not a respondent will complete a face-to-face survey.

Socio-environmental characteristics can also create patterns of nonresponse. In personal interviews, residents of urban centers often produce the most steadfast refusals (Fitzgerald & Fuller, 1982; Steeh, 1981; Brehm, 1993). This "urbanicity effect" has shown cooperation rates in large cities to be lower than those in small towns, and even lower than in rural areas (Couper & Groves, 1996). Urbanicity effects can also heighten non-contacts as city dwellers tend to be more transient and mobile than those living in rural areas. Population density also impacts nonresponse for some of the same reasons. A final important socio-environmental factor is the presence of crime. House and Wolf (1978) have argued that the perception of crime leads to the fear of victimization regardless of whether or not, statistically speaking, this fear is warranted. Crime might also increase non-contacts as potential respondents are literally afraid to open their doors to outsiders.

Survey design also clearly matters. People can be encouraged to respond to surveys through a wide variety of techniques, such as advance letters and rapid turnaround from a

baseline interview to a subsequent interview (Dillman, 2000). Of course, the effectiveness of the survey design in promoting participation might vary based upon the characteristics of the population being interviewed (Groves & Couper, 1998; Groves, Singer, & Corning, 2000).

For individuals seeking HIV prevention services, another key factor might also be at work. This is the *relationship* that the potential respondent has with the interviewer, which has been documented as significant in general social science research as well as in other areas of health prevention (Weinberg, 1971; Elliott, Watson, & Harries, 2002; Bloom & Padilla, 1979; Riessman, 1979; Davies & Baker, 1987; Boys & Marsden, 2003; Boys, Marsden, Griffiths, and Strang, 2000). Much of the literature on this topic in the context of AIDS research has noted that "indigenous" outreach workers--or those individuals still involved in the same neighborhood culture--can be very effective in securing access to the target population (Birkel, Golaszewski, Koman, Singh, Catan, & Souply, 1993; Watters, Downing, Case, Lorvick, Cheng, & Fergusson, 2000; Eicher, Crofts, Benjamin, Deutschmann, & Rodger, 2000). Often times these individuals, also known as community health outreach workers (CHOWs), are recovering addicts who have street credentials with the at-risk groups of interest. Peer-driven interventions, or those that employ actively-using intravenous drug users (IDUs) to recruit "their peers" in AIDS research, have also shown promise (Broadhead, Heckathorn, Weakliem, Anthony, Madray, Mills, & Hughes, 1998; Larson, Shannon, & Eldridge, 1999).

There are, however, significant problems with both of these approaches. First, from a research perspective, these studies attempt to demonstrate the success of CHOWs *or* peer workers *in isolation* without comparing their effectiveness to other modes of survey outreach (for an exception, see Broadhead, Heckathorn, Weakliem, Anthony, Madray, Mills, & Hughes, 1998). That is, we might know that a certain group is effective in securing cooperation from

prospective respondents, but more effective *than whom*? More practically speaking, there is second problem with these approaches. CHOWs can easily fall prey to past behaviors instead of completing their assigned research tasks. In other words, the lure of the street life can reduce their dependability in conducting and following through in the course of producing rigorous evaluations. Peer-driven interventions can suffer from these same difficulties. Fearing these problems, funders might look to other ways of reaching these target populations with their limited resources.

This project addresses both of these deficiencies by engaging in a direct comparison of two other highly distinct, yet understudied, modes of survey delivery: utilizing CBO caseworkers versus "outsider" researchers. CBO caseworkers provide an array of services--not limited to HIV prevention outreach--to the community in which they are active, but do not engage in behaviors that place themselves within the same social circles as the at-risk population (thus distinguishing themselves from CHOWs and peer networks). They can be hypothesized as being effective in reaching the at-risk population in that they possess high levels of knowledge concerning the communities and neighborhoods that they are already serving. Potential respondents might therefore have built up strong bonds of trust with these workers if they have used CBO services. These linkages enable CBO interviewers to secure higher degrees of cooperation when it comes to administering a survey. In other words, there is a strong component of "community identity" that bonds interviewers to potential respondents.

On the other hand, if potential respondents depend on these agencies for all types of goods and services, then having a CBO caseworker conduct these interviews might have a negative impact on response rates. On one level, potential respondents might fear participating in such a survey if they believe that the other services that they are receiving from these agencies

might be revoked based on their responses. Second, they also might wish to preserve a certain image in front of the caseworker whom they have come to know and trust. Third, a potential respondent might be concerned with his/her image *vis a vis* friends and family. Potential participants may wish to shield their risky behavior from those around them and thus elect not to participate with a CBO employee who has grassroots links within the community. Speaking to an "outsider researcher" therefore might be more appealing. Outsider researchers are those trained individuals that are brought on to a research project with the highly specified task of collecting data. They tend to have few, if any, links to the community in which they are hired to conduct a series of surveys. This study directly explores their relative effectiveness versus CBO caseworkers in obtaining survey responses.

METHOD

The Eagleton Institute of Politics, a research organization at Rutgers, The State University of New Jersey, and the New Jersey Department of Health and Senior Services/Division of AIDS Prevention and Control, recently collaborated on an evaluation of HIV prevention programs located throughout the state of New Jersey. New Jersey, with the 5th highest cumulative AIDS case diagnoses across the country as of December 2001, is a fitting place for the CDC to analyze how its resources are being utilized (CDC, 2001). As of December 31, 2002, approximately 59,000 HIV/AIDS diagnoses were reported in New Jersey with approximately 29,000 having died (New Jersey Department of Health and Senior Services, 2002).

A total of ten CBOs incorporating eleven programs were included in the HIV evaluation project. Agencies and programs were purposely sampled based on the types of prevention services offered, target population characteristics, location within high HIV prevalence areas,

and ability to support an extensive data collection effort. The evaluated programs offer various services including prevention case management, health education/risk reduction sessions, and methadone drug detoxification. The clientele of the agencies is comprised of injection drug users, sex partners of injection drug users, and at-risk men, women, and youth. Program recruitment practices included street and community outreach, collaboration with community detention and correctional facilities, and incorporation of clientele already receiving other internal CBO services.

In this study, and after baseline data were collected, follow-up interviews of individuals seeking HIV prevention services designed to measure knowledge of and participation in risky behaviors could be conducted by CBO caseworkers or by outsider investigators hired only to conduct this research. As Table 1 indicates, the organizations involved in administering some of the follow-up interviews had established a strong sense of community identity for several decades prior to the research activity. For example, all but one of the organizations participating in the interviews had established roots in the community for at least ten years. Each CBO also provides a host of services to persons within the community, such as individual and group counseling for health-related issues, of which HIV treatment is only a part. In most cases, then, these agencies and their representatives have communicated a strong sense of community identity to their prospective clientele. In contrast, non-agency personnel, or outsider researchers hired exclusively to complete interviews with the targeted population, will not have established any institutionalized links to the community.

[Table 1 about here]

How might a respondent's knowledge of the interviewer impact both types of nonresponse, refusals and non-contacts? First, for the case of refusals, the answer is relatively

straightforward. For a respondent to refuse, he/she must actively come into contact with either the CBO caseworker or the outsider researcher; *who* the interviewer is can therefore directly impact response rates. Second, whether a CBO caseworker or an outsider makes the survey request can impact non-contacts as well. "Non-contact" does not necessarily mean that the interviewer had *no* contact with the respondent, or that *no* information was conveyed to the respondent about the upcoming interview. Information from the interviewer can be transmitted to the potential respondent via friends, family members, and co-workers. In fact, in numerous instances in this study, the interviewer recorded the nature of the communication that was relayed to the respondent, much of which demonstrates that the respondent knew whether an interviewer from the community was seeking him/her out versus an outsider:

Case (1)

09/30/00: (I phoned the) client's mother and found out (the) client doesn't live here. (I) left (a) message with (the) client's mother.
10/02/00: (I) phoned (the) client's mother, (but there was) no answer.
10/09/00: (I) spoke to (the) client's mother who said she gave (the) client the message to call.
10/14/00: (The) client's mother hasn't seen (the) client since she gave her the message and doesn't know where she is.
10/17/00: (I) called the client's sister ... and left (a) message for (the) client.
11/03/00: (I) called (the) client's sister again and left another message for (the) client to call.

Case (2)

05/04/01: (The) advance letter (was) forwarded from (the) agency.
05/14/01: (The) brother stated (that) he does not know where (the) sister is, and will give (the field) letter (to her) if she comes by.
05/20/01: (The) brother stated (that he) gave (the) sister (the field) letter.
05/21/01: (The) brother stated (that) he gave (the field) letter and message to (the) sister, (but there was) no response, no other contacts.
07/23/01: (I) went to (the) brother's house and there is still no response from (the) client. (The) brother stated (that) he has not seen her and does not know when he will ever see her.

As these cases demonstrate, information about the interviewer was likely relayed to the respondent even though the case might have been ultimately coded as a non-contact. The

differential impact of exactly who attempts to make these contacts is the question under investigation here.

Procedure

All new program enrollees participated in a face-to-face baseline survey in which the interviewer asked questions from the Individual Client Summary (ICS), a questionnaire detailing client demographics, risk behavior education level, drug use, sexual activity, and life circumstances. Baseline interviews took place between August 1998-December 2000, and follow-up interviews took place between January 1999-August 2001. In between the baseline and the follow-up survey, all clients were offered prevention and risk-reduction counseling sessions. Follow-ups were attempted regardless of the client's attendance to the program, and a $25.00 certificate was given to all participants after each interview.

Our study sample included all cases where at least one follow-up contact (advance letter, telephone call, or field visit) was known to be attempted and where there was the potential for information regarding the identity of the individual/organization making the request to be passed on to the directed respondent or reliable source contacts. For instance, cases where advance letters were forwarded or answering machine messages were left would be included in this analysis. Observations were not included in this analysis primarily because of missing contact information, insufficient interviewer staffing, or sponsor-decision discontinuation of specific follow-ups. The dependent variable in this analysis is simply a dichotomous variable measuring whether there was a follow-up completion or not.

Baseline interviews were normally conducted at the agency by trained CBO caseworkers or by outsider interviewers. Follow-ups were conducted at the agency or in the field; CBO caseworkers as well as trained outsider staff administered these surveys as well. A total of 68

interviewers conducted these follow-up surveys, 7 of whom were considered experienced (see Measures, below, for a further discussion on this point). Approximately 74% were female, 57% were Black, and 25% were Spanish-speaking. In addition, of these 68 interviewers, 50% were "outsiders", 35% were CBO interviewers, and 15% held both roles at different points in the study. The proportion of CBO to outsider interviewers varied across the agencies, but at least one outsider interviewer was assigned cases at each agency. It is this variation in interview personnel that enables us to answer the question as to whether the existence of a *community identity match*--defined here as whether a CBO caseworker, rather than an outsider, attempted or completed the interview--matters in securing survey participation.

Once provided with their assignments, interviewers engaged in investigation practices that included standard telephone and field contacts. During these contacts, investigators were instructed to provide their names and the purpose of the contact (to conduct a health survey) and also to suggest delivery of a $25 certificate upon survey completion. This information would be left on mechanical answering devices or on field letters left at presumed participant doorsteps if participants were not directly contacted. The investigator field letter did not identify the sponsor, data collection organization, or the name of the CBO with which the client participated in a baseline survey. A toll free number that would direct callers to an anonymous remote access mailbox was offered on these letters so that callers could provide their interview availability but maintain confidentiality.

Measures

We coded the critical concept of a community identity match to equal 1 if the client was interviewed or was scheduled to be interviewed in the follow-up by a caseworker in the client's baseline CBO (and 0 if scheduled to be contacted by an outsider). All other independent

variables were coded as follows. For the client characteristics, income was coded with a value of 1 if the client earned less than $10,000 per year, and 0 otherwise. The race and Spanish-speaking variables were coded 1 if the respondent was Black and spoke Spanish, respectively, and 0 otherwise. For sex, females were coded 1, with males coded 0. Both age and education were continuous variables measured in years. Employment status was coded 1 if employed, 0 if unemployed. Stable housing included whether the respondent lived in a house, apartment, hotel, rooming/boarding house, or halfway house. Stable housing was coded with a value of 1, whereas any other living arrangement, such as shelters or the streets, was coded 0 for unstable housing. Finally, if the client was incarcerated at the time of the survey, this variable was coded as 1 (0 otherwise).

In addition, interviewers were coded with a 1 (0 otherwise) for having a greater than average combined level of experience in field investigation and data collection, knowledge of HIV/AIDS, and knowledge of the study risk populations than the general pool of field interviewers. Because of these factors, experienced interviewers also earned more per hour than non-experienced interviewers. Race, Spanish-speaking, and sex were coded the same way as for the clients. All client variables were collected at the baseline interview, while interviewer characteristics were collected at the follow-up survey.

Socio-environmental impacts included urbanicity, population density, and crime rates, all measured in 1999 with respect to the client's baseline residence. There were two urbanicity variables included in our models: (1) Major urban center: population 50,000 or more, and (2) Other urban center: population between 25,000-49,999. The reference category was suburban/rural (24,999 people or less). Population density was a continuous variable measured by the number of people living in a square mile area (Workforce New Jersey Public Information

Network, n.d.). Crime rates were measured at the county level as the number of indexed offenses per 1,000 residents (New Jersey State Police, New Jersey Municipal-County Offense and Demographic Data, n.d.).

Finally, there was also variation in two important survey design features: advance letters and projected time between surveys. In addition to field letters, some participants received advance letters. The decision to forward an advance letter varied by CBO and by project timing. CBO advance letters were written on CBO letterhead and were signed by CBO administrative staff including program and case managers. Outsider letters were written on Eagleton Institute of Politics letterhead, signed by Eagleton administration staff and did not include any information concerning which CBO was involved in the baseline survey. If the client received an advance letter reminding him/her of the follow-up interview, that variable was coded as 1 (0 otherwise). Second, if the subject were projected to experience a minimal amount of time between the baseline and follow-up interview (100 days), that variable was coded as 1 (0 if longer).

Data Analysis

There were three major components to the data analysis. First, we ran descriptive statistics on our study population to better understand their demographic characteristics. Second, we broke down the various types of follow-up survey dispositions in order to highlight the various types of respondent contacts and non-contacts that emerged from this study. Third, we estimated the impact of a community identity match on response rates through logistic regression models. These logistic models were run using STATA's cluster option for the interviewers in this study. This technique permitted us to take into account the fact that many respondents were "clustered" into groups by their associated interviewer; without such an adjustment, the

regression analysis would likely produce both unreliable standard errors and significance tests (Groves, 1989). In sum, we estimated the following general logit equation:

$$\Pr(\text{survey response}=1) = F\{B_0 + \textit{Community Identity Match}\,[B_1(\text{CBO caseworker as interviewer})] + \textit{Respondent}\,[B_2(\text{income}) + B_3(\text{race}) + B_4(\text{Spanish-speaking}) + B_5(\text{sex}) + B_6(\text{age}) + B_7(\text{educational level}) + B_8(\text{currently employed}) + B_9(\text{stable housing}) + B_{10}(\text{presently incarcerated})] + \textit{Interviewer}\,[B_{11}(\text{experience}) + B_{12}(\text{race}) + B_{13}(\text{Spanish-speaking}) + B_{14}(\text{sex})] + \textit{Socio-environmental Factors}\,[B_{15}(\text{major urban city}) + B_{16}(\text{other urban center}) + B_{17}(\text{population density}) + B_{18}(\text{crime rates})] + \textit{Survey Characteristics}\,[B_{19}(\text{advance letter}) + B_{20}(\text{short time between interviews})]\}$$

where $F(z) = e^z/(1+e^z)$ is the cumulative logistic distribution.

RESULTS

Table 2 summarizes the major socio-demographic characteristics of our respondent population. The data analysis was run on 1516 cases overall (only 2% of the original cases had to be dropped due to missing data issues). The respondent population was a diverse yet extremely disadvantaged group. The overwhelming majority lived under the poverty line, with approximately 85% earning $10,000 per year or less. Approximately 62% were Black and 17% were Spanish-speaking. Women comprised 62% of the sample. The average age of the sample was about 34, exactly half (50%) had eleven years of education or less, and 84% were unemployed. Finally, about 8% lived in unstable housing, including shelters, cars, or the streets, and about 4% were incarcerated at the time of this study.

[Table 2 about here]

Table 3 shows the overall and community identity-specific distributions of the follow-up attempt final dispositions. As the table depicts, most assignment attempts resulted in a completed interview. Overall follow-up assignments yielded a response rate of 79%. Follow-up success was greater when no community identity match occurred (85%) than when it did exist (70%). Non-completes were categorized by participant contact success across eight dispositions. *Participant refusals* constituted a small percentage of non-completes overall as well as by community identity. In the aggregate, less than 2% refused to participate once contacted. *Mental incompetence* and *language problem* situations seldomly occurred.

Reliable source contacts such as other family members, friends, neighbors, apartment supervisors, and shelter representatives had varying involvement in assisting in the location of participants. For instance, parents of youth participants on a few occasions refused to allow any survey involvement with their child (*household-level refusal*). Alternatively, other sources acknowledged participant residence and actually facilitated continued contact although, despite this assistance, participants still were difficult to meet in person (*not home, moved, unable to locate, listed address problem*). Overall, a considerable proportion of contacted reliable sources perpetuated potential participant contact by accepting field interviewer letters, recording investigator names and telephone numbers, and promising to "spread the word" should they come into contact with the participant in the near future.

[Table 3 about here]

We ran two logistic regression models to estimate the impact of various independent variables on follow-up response rates (see Table 4). The first model (Model 1) was a baseline estimation and included all independent variables except for the community identity match measure. Model 2 incorporated the community identity match variable. In each case, the

logistic regression coefficients are reported, along with their standard errors in parentheses. Both models were statistically significant as a whole, as indicated by the chi-squared statistics.

[Table 4 about here]

Most importantly for this analysis, having a CBO caseworker attempt to conduct the follow-up interview failed to be associated with higher response rates. In fact, as demonstrated in Model 2, CBO-requested interviews actually were associated with a *lower* likelihood that a survey would be completed. In other words, outsider researchers brought in solely to pursue these follow-ups were associated with securing higher response rates.

The impact of the other independent variables was generally consistent across both models. In terms of respondent characteristics, race played a significant factor affecting response rates, with Black respondents more likely to complete a follow-up survey than non-Black respondents. Spanish-speakers were also associated with higher response rates. Most of the other sample member relationships made sense: older respondents and those with more stable housing were more likely to complete a follow-up survey than younger respondents and those living in more transient housing. Interestingly, income, sex, level of education, current employment status, and incarceration status did not seem to make a difference in terms of survey completion.

With respect to interviewer characteristics that mattered, higher levels of experience were associated with lower response rates. Interestingly, this somewhat counter-intuitive finding has previously been reported in the literature (Pickery, Loosvelt, & Carton, 2001). One possible explanation for this outcome is that during the course of the project, more "difficult" cases might have been steered in the direction of more experienced interviewers. The extent to which this occurred, however, is unclear. In addition, Spanish-speaking interviewers (in Model 2) secured

higher response rates than their non-Spanish-speaking counterparts. The interviewer race and sex variables had no statistically significant impact on response rates.

In terms of socio-environmental variables, levels of urbanicity and population density were not statistically significant; however, the presence of crime did lower response rates in Model 2. It seems likely that potential respondents were not willing to risk their well-being to complete a health-related survey. Finally, out of the two included survey design features, only the advance letter had a statistically significant impact--in a negative direction. Advance letters seemed to scare off potential respondents, perhaps by highlighting their behavioral risks to them personally and thereby reducing their accessibility. Interestingly, a projected short time frame between the baseline and the follow-up interview did not affect response rates in either direction.

DISCUSSION

This research project attempted to understand survey behavior among individuals seeking HIV prevention services located throughout the state of New Jersey. As the descriptive statistics demonstrate, this population already suffers from multiple burdens such as poverty, low levels of education, unemployment, and even homelessness. The potential spread of HIV within their own communities only creates additional strife. Policymakers and health education workers have rightly targeted these communities for research interventions.

Yet, for all of these disadvantages, the response rate for both types of survey outreach at the time of the follow-up was surprisingly high. Both CBO caseworkers as well as outsiders were able to secure participation at the extraordinary high levels of between 70%—85%. Moreover, refusals were almost non-existent, an extremely notable finding given that most other research has focused on usually the greater impact of refusals on overall non-response (DeMaio, 1980; Steeh, 1981). In fact, in numerous studies, refusals have been shown to be an enormous problem in panel research and in particular when face-to-face interviews are attempted among

hard-to-reach populations in urban settings (Pickery, Loosvelt, & Carton, 2001; Couper & Groves, 1996; House & Wolf, 1978). Future research should examine exactly how these particular researchers were able to secure such high degrees of cooperation. More specifically, in-depth interviews of both CBO caseworkers and outsider researchers should be conducted to understand what types of extraordinary measures, if any, were undertaken to reach these targeted groups.

In absolute terms, then, both sets of interviewers secured high response rates. However, in a relative sense, the most significant finding was that using CBO caseworkers to conduct these follow-up interviews was actually associated with a negative impact on response rates in comparison to outsiders. Stated in a different way, this means that outsiders were positively associated with securing follow-up completions. This is an important finding that deserves attention in other studies of a similar nature.

Nevertheless, as with any study, there are important limitations to this project that need to be addressed. First, ideally, survey respondents would have been randomly assigned to be interviewed for the follow-up by either a CBO caseworker or an outsider in a pure experimental design. The ongoing demands of the project participants, as well as the need to complete the project in a timely fashion, however, prevented this assignment from taking place. The lack of random assignment suggests that there might be selection processes at work that threaten the inferences that can be made from this study. Indeed, we conducted exploratory work in this area by using the existence of a community identity match as our dependent variable. In this logistic regression analysis, we found that respondent age, interviewer experience, race (Black), Spanish-speaking (yes), and sex (female), the presence of an advance letter, and certain agencies (VNA, Checkmate, and St. Columba) were positively related to a community identity match, while

respondents in higher crime areas, those experiencing shorter time frames between the baseline and follow-up interview, and those seeking services from PROCEED and Beth Israel, were less likely to be associated with a community identity match. As these results are only suggestive, to the extent that it is possible, future studies should aim for experimental designs with random assignment or at least quasi-experimental designs in order to produce the most rigorous results possible.

Second, the most important distinction this study was interested in exploring was the use of CBO caseworkers versus outsider researchers in completing follow-up surveys. For the most part, CBO caseworkers lived or worked in the community in which they were serving. However, it is impossible to rule out whether any of them also held simultaneous roles, such as those possessed by traditional CHOWS or even peer relationships, with their target population. That is, because extensive background checks were not completed on each CBO caseworker, these employees could have had more extensive ties to the targeted community than the definition utilized in this study allowed. Ultimately, research should focus on comparing the effectiveness of *all* types of survey outreach in the purest forms possible: CBO caseworkers vs. outsiders vs. CHOWs vs. peers.

IMPLICATIONS FOR PRACTICE

This research provides some support for the outsider advantage in conducting follow-up interviews. However, it is only a step in this direction, and thus should be broached with caution. Even so, a new appropriate division of labor as suggested in similar work by Broadhead et al. might be called for between CBO caseworkers and outsider researchers (Broadhead, Heckathorn, Weakliem, Anthony, Madray, Mills, & Hughes, 1998). Such a division of labor would carve out a niche of authority most specific and suitable to each type of worker in the

field. More specifically, such a division would clearly delineate the line between traditional street outreach efforts and research efforts.

CBO caseworkers already have multiple tasks related to the provision of services within their communities, of which AIDS education is a fundamental part. Public and street-outreach efforts are particularly useful educational strategies to address disadvantaged populations, who might not otherwise be reached due to bureaucratic hurdles, institutional barriers, and cultural differences (Mays & Jackson, 1991; Valentine & Wright-De Aguero, 1996). CBOs are particularly adept at navigating these difficulties for their diverse clientele constituencies. They should thus continue working in these areas, and should articulate a clearly-specified set of AIDS-related activities where they have a comparative advantage:

- Self-immersion in the communities in which they work;
- Ongoing needs assessment of the targeted population;
- Consistent definition of a core group of services to be provided to those at-risk for the disease as well as those already infected;
- Street education as to the behaviors associated with HIV/AIDS;
- Regularly scheduled community/town hall meetings to address problems associated with the spread of HIV and AIDS

Outsider researchers, on the other hand, do not have these types of multiple, competing demands placed on them as they work in particular communities. They therefore should focus on their strengths in the area of data collection, paying particular attention to the following tasks:

- Participation in vigorous training sessions of the highest quality to insure adequate knowledge of the project;
- Education in the rudimentaries of survey design and increasing response rates;
- Promotion of strict confidentiality as a non-negotiable requirement of their tasks:
- Education regarding the at-risk population, in particular behaviors associated with addicted populations;
- Cultural sensitivity concerning the communities they are studying, especially with respect to the discussion of risky sexual practices

Potential outsider interviewers include social science research students, students earning a degree in drug/alcohol counseling and nursing (with interview hours potentially fulfilling requirements for a degree), and other types of student social workers.

Funders of research in this area should ensure that both types of teams are in place for ongoing evaluation and that productive partnerships develop over time between these groups. In addition, funders should do their best to report their ongoing progress in monitoring this dual approach for reaching a target population. This could be accomplished both through interim and final research reports, as well as contributions to the appropriate scholarly literature on HIV and AIDS interventions.

CONCLUSIONS

Survey nonresponse is a powerful nemesis to those who wish to produce unbiased, accurate estimates of individual behavior. This is especially true in longitudinal, in-person studies, as is the case here, which focused on surveying the knowledge and behavior of individuals seeking HIV prevention services in New Jersey. There are barriers to not only making contact with a transient population, but also of securing a positive response to the survey request.

The findings presented here are significant in that advocates working on behalf of disadvantaged groups often make the argument that those citizens closest to the community problems of interest should have an important hand in solving them. Extending this logic to survey design and the specific project outlined here, it follows that CBO caseworkers would be able to secure higher response rates than outsiders brought in for the sole purpose of conducting the interviews. This research suggests that this is not necessarily the case. Outsiders might have an advantage, especially in surveys requesting intensely personal information. Future research

should be undertaken to determine whether this is an effect that only obtains in sensitive surveys, or more broadly emerges in surveys covering a wide range of other socially relevant issues as well.

TABLE 1. PARTICIPATING COMMUNITY-BASED AGENCIES AND HIV PREVENTION PROGRAMS

CBO AND PROGRAM	YEAR CBO EST.	LOCATION	PROGRAM TARGET CLIENTELE
Institute for Human Development (IHD) Patient Incentive Program (PIP)	1969	Atlantic City, NJ	Injection drug (heroin) users
Essex County Substance Abuse Treatment Clinic (ECSATC) Patient Incentive Program (PIP)	1984	Newark, NJ Elizabeth, NJ	Injection drug (heroin) users
The Family Treatment Center at Newark Beth Israel Medical Center Health Incentive Program for Women (HIP4Women)	1989	Newark, NJ	Female sex partners of injection drug users or suspected injection drug users
The Visiting Nurses' Association of Central New Jersey (VNA) Prevention Resource Network (PRN)*	1912	Asbury Park, NJ	HIV at-risk women and men**
Checkmate, Inc. Prevention Resource Network (PRN)*	1978	Asbury Park, NJ	HIV at-risk adolescents/youth
The Puerto Rican Organization for Community Education and Economic Development (P.R.O.C.E.E.D., Inc.) Community Organized to Prevent AIDS (COPA)	1970	Elizabeth, NJ	HIV at-risk women, men** and adolescents/youth
St. Columba Neighborhood Club Entrée Amigas, Project Fire II and Project RAP	1975	Newark, NJ	HIV at-risk women, men** and adolescents/youth
Horizon Health Center Empowered for Change	1963	Jersey City, NJ	HIV at-risk women*** and male adolescents/youth
Integrity House Community at Risk Reduction (CARR)	1968	Newark, NJ	HIV at-risk women and men
Liberation in Truth: Unity Fellowship Church Loving in Truth	1995	Newark, NJ	HIV at-risk women and men

Notes: Some CBOs changed names over the years.
*VNA and Checkmate run the PRN Program collaboratively.
**Male component of program primarily but not exclusively services men who have sex with men (MSM)
***Female component of program primarily but not exclusively services incarcerated women

TABLE 2. SOCIO-DEMOGRAPHIC CHARACTERISTICS OF TARGET POPULATION

CHARACTERISTICS	Target Population (n=1516) Frequency (Percent)
Income	
<10,000	1,295 (85%)
Other	221 (15%)
Race	
Black	946 (62%)
Other	570 (38%)
Language	
Speaks Spanish	263 (17%)
Does not speak Spanish	1,253 (83%)
Sex	
Female	940 (62%)
Male	576 (38%)
Age (mean)	33.61 years
Education (mean)	10.88 years
Employment status	
Employed	242 (16%)
Not employed	1274 (84%)
Housing status	
Stable	1392 (92%)
Not stable	124 (8%)
Incarceration status	
Incarcerated	54 (4%)
Not incarcerated	1462 (96%)

TABLE 3. FOLLOW-UP SURVEY FINAL DISPOSITIONS AND RESPONSE RATE CALCULATIONS

FINAL DISPOSITION CATEGORY	Total	Community Identity Match	No Community Identity Match
Total follow-up assignment contacts attempted	**1516**	**590**	**926**
PARTICIPANT CONTACTS (FACE-TO-FACE)	**1225**	**427**	**798**
Completed	1200	414	786
Participant refusals	23	12	11
Mental incompetence[1]	1	0	1
Language problem	1	1	0
PARTICIPANT NON-CONTACTS[2]	**291**	**163**	**128**
Household-level refusals	3	1	2
Not home	27	7	20
Moved	60	23	37
Unable to locate	182	129	53
Listed address problem	19	3	16
Response rate[3]	1200/1516 = 79.2%	414/590 = 70.2%	786/926 = 84.9%
Refusal rate	26/1516 = 1.7%	13/590 = 2.2%	13/926 = 1.6%
Contact rate	1228/1516 =81.0%	428/590 = 72.5%	800/926 = 86.4%

[1] Investigator judged respondent cognitive-level not sufficient for interview conduction.

[2] "Household-level refusals" occurred among parents of youth respondents; "Not home" means that a reliable source indicated the respondent lives at the listed address; however, the investigator was unable to meet the respondent during the field period; Follow-up investigations are coded "moved" if a reliable source indicated that the respondent used to live at the listed address but had no alternative contact information; A follow-up attempt is coded "unable to locate" when the investigator was unable to determine if the client ever lived/currently lives at listed baseline address during the field period. During these investigations, reliable sources received advance letters, field letters and/or other investigator contact information to pass to respondents should they make contact. "Listed address problem" is the same as "unable to locate" except that the listed respondent address is missing or incomplete on the baseline contact form, could not be located, or was determined by the investigator to be vacant/abandoned during the field visit(s). Attempts, again, were made to fully engage reliable sources in the investigation process.

[3] American Association for Public Opinion Research (AAPOR) standard definitions were used to calculate response, refusal, and contact rates. The specific rates employed for all listed total and community identity-status rates were as follows: RR1, REF1, and CON1. See American Association for Public Opinion Research. (2004). *Standard definitions: Final dispositions of case codes and outcome rates for surveys*, 3rd Edition. Lanexa, Kansas: AAPOR.

TABLE 4. THE IMPACT OF COMMUNITY IDENTITY ON FOLLOW-UP SURVEY RESPONSE RATES: LOGISTIC REGRESSION RESULTS

VARIABLES	MODEL 1	MODEL 2
COMMUNITY IDENTITY MATCH		
Presence of CBO Interviewer (1=yes, 0=no)		-1.10*
		(.514)
RESPONDENT CHARACTERISTICS		
Income (1 if <$10,000 per year, 0=otherwise)	-.075	-.079
	(.149)	(.163)
Race (1=Black, 0=otherwise)	.568**	.542**
	(.170)	(.186)
Spanish-speaking (1=Spanish-speaking, 0=otherwise)	.563**	.587**
	(.237)	(.251)
Sex (1=female, 0=male)	.356	.121
	(.263)	(.261)
Age (years)	.033**	.035**
	(.011)	(.011)
Education Level (years)	-.054	-.063
	(.036)	(.034)
Currently Employed (1=employed, 0=otherwise)	.064	.148
	(.230)	(.214)
Stable Housing Conditions (1=stable, 0=otherwise)	1.19**	1.27**
	(.486)	(.482)
Presently Incarcerated (1=incarcerated, 0=otherwise)	-.571	-.157
	(.805)	(.814)
INTERVIEWER CHARACTERISTICS		
Experience (1=yes, 0=no)	-1.66*	-1.65**
	(.733)	(.587)
Race (1=Black, 0=otherwise)	.625	.693
	(.541)	(.465)
Spanish-speaking (1=Spanish-speaking, 0=otherwise)	1.29	1.44*
	(.796)	(.727)
Sex (1=female, 0=male)	-.151	.106
	(.484)	(.400)
SOCIO- ENVIRONMENTAL FACTORS		
Major Urban City (pop. 50,000 or more: 1=yes, 0=no)	.441	.053
	(.540)	(.532)
Other Urban Center (pop. 25,000-49,999: 1=yes, 0=no)	-.039	-.273
	(.445)	(.405)
Population Density (pop. per sq. mile)	-2.73e-05	-4.58e-06
	(2.57e-05)	(3.12e-05)
County Crime Rate (offenses per 1,000 people)	-1.16e-04	-1.26e-04*
	(6.73e-05)	(6.66e-05)
SURVEY DESIGN		
Advance Letters (1=yes, 0=no)	-.908*	-.873*
	(.466)	(.421)
Short Time: Baseline Interview & Follow-up (1=yes, 0=no)	1.12	.580
	(.874)	(.706)
N	1516	1516
Model Chi-squared	173.74**	139.07**

Notes: * Sig. at .05 level; ** Sig. at the .01 level. Robust standard errors in parentheses. STATA's cluster option was utilized to account for respondent grouping by interviewer.

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