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Telephone Recruitment of a Random Stratified Youth Sample for a Physical Activity Study

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Abstract

It is important that studies on youth health behavior obtain sufficiently large representative samples so that power is adequate and results are generalizable. Few researchers, however, have documented procedures and methods for recruitment of a random stratified youth sample for studies on health-related behavior, specifically physical activity. This study describes the recruitment methods used to attain a stratified sample of 360 target youth (male and female from 10-, 12-, and 14-year old cohorts), and a parent of each child, representing families in 58 different neighborhoods. A peer of each target youth was also invited to participate. Recruitment was conducted primarily by telephone, using computer-assisted telephone interviewing (CATI) software. Approximately 38% of calls resulted in person contact, of which about 98% of families did not qualify. Of those qualified, about 68% agreed to participate. The telephone recruitment was supplemented by door-to-door recruitment in selected neighborhoods. The average cost of telephone recruitment was approximately $99 per family. Advantages and limitations of the recruitment method are discussed.

Keywords

Exercise; Children; Design; Enlistment; Participants

Introduction

Research on youth health behavior requires the recruitment of samples that are both large enough to ensure adequate statistical power and representative of the larger population from which they are drawn. Attaining such samples is not easy. Many large-scale research studies of youth health-related behavior have used convenience, rather than random, samples. Sample self-selection or convenience samples are a concern in a diverse variety of research settings involving children and adolescents (Drotar & Riekert, 2000). Convenience samples often are comprised of self-selected participants who may be very different from the general population: generally higher income, less ethnically diverse, and more motivated than would be expected via random selection (Stein, Bauman, & Ireys, 1991). Even though it is possible to draw a somewhat representative convenience sample, the recruitment procedure remains biased. Most researchers prefer randomly recruited samples, and resort to convenience samples only when cost, time, or other constraints preclude random recruitment.

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Recruitment challenges

All studies face recruitment challenges. In dealing with selective bias and attrition, Drotar and Riekert (2000) suggest that investigators use a range of methods to enhance consent rates and reduce dropout rates, especially when working with youth participants who are difficult to recruit and retain in research studies. When selecting recruitment methods, many issues must be considered, including cost, characteristics of the desired sample, the topic of study, the length of the study, and participant burden. The recruitment of youth samples has its own complexities. Children are considered vulnerable in the categories of risk and benefit, according to 1977 guidelines established by the National Commission for the Protection of Human Subjects of Behavioral and Biomedical research. The guidelines require informed consent of a parent and assent of the child or adolescent for participation, which can present problems for researchers (Riesch, Tosi, & Thurston, 1999). Since the recruitment process must include the parent or guardian of the child, regardless of how the child is selected for participation, the challenge to investigators is to devise strategies that are attractive both to parents and youth (Riesch, et al., 1999). Young people may be less likely than adults to appreciate the importance of research, and may choose to participate based on more proximal influences, such as time demands, incentives, or the encouragement of significant others, including classmates, friends, or other family members. The sample requirement thus may involve more than simply the target youth. Adding complexity to recruitment decisions are issues related to stratification (e.g., the age, gender, and ethnicity of the target youth sample) and to multiple levels of recruitment (i.e., the individual target child within a family, peer group, classroom, school, and/or neighborhood).

The nature of the study affects recruitment and participation. Individuals are more likely to join a study if the subject is of personal interest. Studies about health interest most people because the topic affects everyone. Compared to more invasive research on disease or substance use, studies on physical activity tend to be perceived as relatively nonthreatening, which can benefit recruitment. The length of the study also may affect recruitment. Although longitudinal studies offer obvious methodological benefits, they also possess a unique set of methodological problems related to recruitment and retention of participants (Krohn & Thornberry, 1999; Menard, 1991). Recruitment is typically more difficult in a longitudinal study, in which participants are asked to commit to multiple years of assessments, than in a cross-sectional study or one-time request. In longer studies, it is often advantageous to offer realistic incentives at the time of assessment (such as money or small gifts) to encourage participation and to make repeated contacts between assessments, such as mailed birthday cards and newsletters, to enhance retention (Krohn & Thornberry, 1999).

Recruitment methods

Researchers face many decisions when selecting recruitment methods. Issues to consider include the type of sample (random or convenience), cost, ease, participant time demands (e.g., total time, days of week, and time of day), and efficiency (e.g., staff hours per recruited participant). Researchers have a number of methods from which to choose, including advertising, direct mail, and telephone. Advertising can be used both to publicize a study and to recruit participants. Recruitment via advertising has the advantages of low cost and convenience, but the samples are nonrandom and often highly motivated, and youth may be especially hard to reach this way. Recruitment via mail is also low in cost and convenient, but youth are difficult to reach by mail and return rates tend to be low. An added problem with mail requests or surveys is that one can never be certain who completed the request/survey (Krysman, Schuman, & Beatty, 1994). Institutions or events (such as medical offices, schools, community sports organizations, health fairs, community events, and churches) often are used as a setting for recruitment. Schools present a promising avenue for the recruitment and assessment of youth. Their primary advantage is that they house a large number of children in

one place and present a captive audience, although parental consent usually is still required. However, recruitment of participants from schools may meet resistance from school administrations for political or practical reasons. Additionally, recruitment at schools may not achieve the goal of sample representativeness as student characteristics vary between different types of schools (e.g., private vs. public) and between schools in different neighborhoods. Recruitment at schools may not be appropriate in studies having a family or neighborhood context, requiring a greater dispersal of participants from a larger area, or focusing on data collection in the home.

Door-to-door recruitment is another option. For large studies, this recruitment method can be costly in terms of staff time and travel expenses, and it is difficult to assure that recruiters randomly sample homes. Despite these concerns, door-to-door recruitment may be a necessary recruitment strategy for certain potential participants (e.g., those who do not have a residential phone).

Telephone recruitment has an important advantage over these methods in that it can be used, in a fairly straightforward way, to randomly select respondents from the larger population. The telephone provides a relatively low-cost, effective means of contacting many households, as is often required for large-scale etiological research, and of making a quick determination of eligibility and willingness to participate in the study (Verboncoeur et. al., 2000). Disadvantages of the telephone method include its limitation to households with telephones, the problems of missing or changed phone numbers, challenges presented by technology (such as answering machines or caller ID) that complicate the ability to reach people, and relatively easy refusal or termination of the conversation by unwilling respondents (Weaver, Holmes, & Glenn, 1975). Perhaps the largest problem with telephone contact methods involves rates of nonresponse. Aquilino (1992) found that the number of people who refused to provide screening information tended to be higher by telephone than in person. However, refusals over the telephone tend to be less likely than with mailed surveys (Groves, Cialdini, & Couper, 1992; Verboncoeur et. al., 2000).

It should be noted that telephone methods can be used not only for recruitment, but also for data collection. Recent advances in telephone survey methodology have made telephone recruitment and surveying an increasingly attractive option in many research fields (Aquilino, 1992). Random digit dialing (RDD), which involves calling numbers completely at random (since the digits are randomized), is used mostly in household survey research. Other systems, such as computer-assisted telephone interview (CATI) programs, are used in marketing research and can be adapted for telephone recruiting and data collection in studies requiring specific samples. Working from an appropriate database of phone listings, the CATI system can be used to select and queue numbers randomly, set specific quotas on key respondent variables (e.g., age, sex), and keep track of interviewer productivity and call outcomes.

Recruitment procedures need not be limited to one method. It is possible and often desirable to combine methods to enhance the recruitment success of a particular project. For example, use of focus groups and pilot studies that involve the community, and pre-recruitment publicity can lead to higher rates of consent (Boult et. al., 1998; Hunninghake, Darby, & Probstfield, 1987; Riesch, Tosi, & Thurston, 1999). Study awareness can be heightened by media coverage or the distribution of posters and flyers in the local community. Recruitment may be carried out in different stages, or through different contact steps. For example, initial contact may be made via one method (e.g., telephone) and followed by another (e.g., face-to-face contact). Recruitment of a participant should not be considered successful until the participant has completed informed consent procedures.

Focus of this study

Little has been published about the recruitment of random youth or family samples for physical activity or other health-related studies. Recruitment is a difficult, yet critical part of any research project, and should be reported along with study results. The purpose of this paper is to document the effectiveness of a multi-method strategy to recruit a random stratified youth sample for a longitudinal (4-year) physical activity study. Specific challenges to recruitment in this study included stringent inclusion criteria (i.e., age, gender, and neighborhood requirements), a vulnerable population (i.e., children and young adults), the requirement of more than one family member to participate, and a longitudinal design (Eaves, 1999).

Method

Study protocol

The study originally sought to recruit 360 males and females evenly divided in 10-, 12-, and 14-year-old age cohorts, along with a parent and "best" friend of each target youth, nested within 60 different neighborhoods. Prior power analyses had determined that at least 50 clusters were required to conduct multilevel analyses (Muthén, 1991). The inclusion of 60 neighborhoods, with approximately six families per neighborhood, was thus considered a conservative target, affording some room for unforeseen problems. Other participant inclusion criteria were ability to speak and write in English, and completion of informed consent.

Participants were asked to commit to the project for annual assessments over 4 years. Assessments consisted of in-home surveys, completion of 7-day physical activity records, and tracking steps for a week with a pedometer supplied by the project.

Youth participants were paid $25, parents were paid $15, and peers were paid $10 for completing the assessment in the first year. Payments were increased by $5 for each participant in succeeding years. All participants were entered in annual drawings to win $100 cash and in a final drawing to win $500 cash. At each assessment, young people also were given a choice of popular snacks as "food for thought," emblazened with the project logo. Birthday cards, reminder postcards, and biannual newsletters were used to maintain interest in the project, track participant relocation, and enhance retention.

After agreeing to take part, participants were visited in their homes by project staff to explain the study in detail and obtain informed consent from youth and parents. Once consent was given, young people were weighed and measured, supplied with a pedometer, and given a 7-day physical activity recording form to use over the next week. They also were asked to supply names of best friends who might participate in the project. Initial visits lasted about 30 minutes (± 10 minutes). Project staff returned about a week later to pick up the pedometer and 7-day record, and to administer surveys to the target youth and one parent. Surveys asked a variety of questions related to physical activity and other health behaviors for self, friends, and family members. The second visit lasted about 90 minutes (± 30 minutes). Participants completed individual surveys in private, away from other family members, to enhance confidentiality.

Project staff attempted to contact by telephone a best friend identified by target youth. The goal was to invite one peer to join the study for each target youth. The peers were asked to complete a brief survey concerned with their own physical activity and the physical activity of the target child who named them. Peers agreeing by telephone to participate were visited in their homes or at the home of the target child, where informed consent was obtained and short surveys were administered, in private away from other family members.

Recruitment methods

Prior to the main study, focus groups and a pilot study were conducted in the community, and the project was well publicized. About 150 brightly colored posters and flyers designed by project staff were distributed in the target neighborhoods. News releases were sent to local print and electronic media, and to neighborhood associations. Six radio interviews and two television interviews featured the project during the initial months of recruitment.

The main recruitment method was telephone cold-calling, utilizing a digitized 1998 CD-ROM telephone database that was limited to residences in the metropolitan area. Calling started in August 1999 and continued through September 2000. The database provided first and last names, phone numbers, and addresses. An additional file containing a list of all the city streets and associated neighborhood codes was matched to each of the street names in the database to link each resident to the neighborhood codes. Residences were selected based on the neighborhood codes to obtain a final sampling pool consisting of 100,783 listings in 60 neighborhoods.

Once the sampling database was created, it was imported into computer-assisted telephone interviewing (CATI) software. Produced by Sawtooth Technologies, CATI is a flexible, moderately expensive (about $4,000 per station) program that facilitates telephone recruitment and interviewing with features such as random selection of telephone numbers from the database, automatic queuing of calls and call-backs based on prescribed settings, on-screen interview script display, storage of answers given during interviews, and reports on quotas, dispositions of calls, and interviewer productivity.

Following CATI specifications, a script was written for the recruitment call, and a quota system was set up so that the final sample would be properly stratified by age (10, 12, and 14 years), gender (male and female), and neighborhood (60 neighborhoods). Since the version of CATI used in this study was not designed for such intricate stratification, the coding necessary to specify quotas was lengthy and tedious. Anticipating that busy families would be difficult to reach by phone, CATI settings were specified so that calls would be made during most hours each day: between 9 a.m. and 9 p.m. weekdays and weekends with call backs for non answering residences at different times from the initial calls (e.g., unsuccessful calls from 9 a.m. to noon were automatically rescheduled for 12:30 to 6 p.m.). In addition, a set of disposition codes was established in the CATI system to cover all possible call outcomes (e.g., “no children 10, 12, or 14”; “qualified but declined”; “quota filled”; “nonresidential”; “answering machine”). As a further challenge, the study design necessitated that recruitment of age cohorts was balanced across seasons. Thus, for every quarter (i.e., September/October/November; December/January/February; March/April/May; June/July/August) approximately 30 children from each cohort were recruited.

Trained staff made calls continuously each day, weekdays and weekends, until the final sample size was reached. Calling was done in shifts of no more than 4 hours to prevent interviewer burnout. Initially, recruitment calls were made from 1 p.m. until 9 p.m. As the 360 quota cells started to fill up, the hours of recruitment were increased and calls were made from 9 a.m. until 9 p.m.

Once a resident answered a CATI dialing attempt, staff interviewers followed the script on the computer screen, identifying themselves and explaining the project briefly, determining the eligibility and interest of the family, inviting participation to qualified families, and scheduling an initial home visit for prospective participants. Because time and scheduling factors have been reported as the most frequent barriers to successful project recruitment, interviewers were flexible in scheduling these visits.

In response to widespread use of telephone “screening” technology, such as caller ID and answering machines, project staff left a brief message at non-answering residences that identified the project and asked the family to call back. Project staff did not attempt to recruit participants from phone numbers that screened solicitation calls.

Families agreeing on the telephone to participate received a reminder call and postcard before the first home visit.

Project supervisors produced weekly recruitment reports and regularly monitored interviewer productivity so that adjustments could be made (i.e., more hours scheduled for recruiters on the telephone, constructive feedback given to interviewers) to attain recruitment goals.

After 6 months of telephone recruitment, two of the original 60 neighborhoods were removed from the study sample. It was determined that recruitment would not be successful in these neighborhoods due to their small size, primarily industrial nature and location, and lack of households with children. The final study sample comprised 58 neighborhoods.

Door-to-door recruitment was implemented to boost participation in low socioeconomic areas where telephone recruitment was slow. Field researchers canvassed these areas systematically (e.g., research assistants approached all households within a targeted apartment complex rather than selecting residences likely to have children). Door-to-door recruiters used scripts and follow-up recruitment procedures similar to those employed by telephone recruiters.

Results

Descriptive statistics of participant characteristics are presented in Table 1. A sample of 360 youth was recruited in the target 58 neighborhoods, equally split between sexes. Youth participants were divided roughly in thirds between 10- (31%), 12- (34%), and 14-year-old (35%) cohorts. The number of youth from each neighborhood ranged from 4 to 11, with an average of 6.2 per neighborhood. Most parents/guardians who participated in the project were female (81%), and average age for parents was 42. A total of 296 peers (82% of target youth sample) were recruited for the study, equally split between sexes (50.7% were male); the average age was about 12.

In addition to representing equally boys and girls in three age cohorts, the recruited population generally reflected the ethnicity of the youth population in Oregon, but with a higher-than-expected proportion of African Americans: 77.1% White, 11.2% African American, 1.7% Native American, 2.0% Asian, and 3.6% other, with 4.5% Hispanic of one race. This compares to 77.9%, 6.6%, 1.1%, 6.3%, and 7.6% [“other” races as well as people of more than one race], respectively, with 6.8% Hispanic of any race, reported in the 2000 U.S. Census for the city of Portland (U.S. Census Bureau, American FactFinder). Family income was 9.7% below $20,000, 27% $20,000-$49,999, 25.5% $50,000-$59,999, 20.3% $60,000-$79,999, and 17.5% $80,000 or above. Twenty-three percent of the sample were single-parent families, compared to 20.3% single-parent households reported among family households in the 2000 Census for the city of Portland. Of participating adults 8.5% had not reached high school graduation, 49% graduated from high school or equivalent, and 42.5% had completed college and/or graduate school.

To obtain the sample, a total of 55,999 cold calls were made to residences over 12.75 months. Overall, 37.6% of calls resulted in contact with a person at the number. An average 168 calls were made for each successfully recruited family.

Most successful times of day for reaching residents were between 5 p.m. and 9 p.m. on weekday evenings.

Final dispositions of recruitment phone calls are listed in Table 2. As can be seen, call attempts were unsuccessful in 61.3% of all calls, most commonly because of answering machines (13.2%), disconnected phones (7.1%), and no answer (6.4%). When call attempts were successful, about 97.7% were unqualified, either because there were no children of the target ages (71.3%), the listing was commercial rather than residential (9.3%), or the quota was already filled (1.8%).

A recruitment "tree" is illustrated in Figure 1. As shown, of the 55,999 cold calls made, 21,085 (21085/55999; 37.6%) succeeded in reaching the family, of which 490 (490/21085; 2.3%) were qualified and 334 (334/490; 68.2%) agreed to participate. Of these families, 96% have so far returned in the second year of the study. Only 1% of the first year's participants have refused to participate in the second assessment, the others having either moved out of the study area (2%), or entered residential care facilities or been unable to contact (1%).

Productivity varied widely among staff interviewers, ranging from 18 to 32 calls per hour, depending somewhat on the experience of the interviewer, the time of day the calls were made, the month of the project, and the interviewer's success in contacting families. Cost of making the calls was estimated to be about 1,955 staff hours and $33,000. This represents about $99 per telephone recruited family. Once eligible families were contacted, successful recruitment calls lasted, on average, about 10 minutes. Prior to being called, 12.8% of families reported that they had heard about the project through advance publicity, such as advertisements (0.8%), media coverage (1.1%), poster or flyer (1.4%), leaflets (1.4%), word of mouth (5.8%), or some other way (2.8%).

Included in the final randomly recruited sample of 360 were 26 families recruited via door-to-door procedures. The door-to-door sample was obtained after making 1,692 contact attempts, of which 808 (808/1692; 47.8%) resulted in contact. Of these, 61 families (61/808; 7.5%) were eligible but 10 were not recruited because of already-filled quotas. Of the remaining 51 families, 26 were successfully recruited (26/51; 51.0%). Youth recruited via door-to-door were predominantly White (73.1%) and African American (15.4%), distributed across age cohorts (eight 10-year-olds, eight 12-year-olds, and 10 14-year-olds), equally split by gender (13 boys and 13 girls), and dispersed over 14 different neighborhoods.

Discussion

In any research endeavor, recruitment of a sample that adequately fits the needs of the study is critical. Yet little has been written to guide researchers in the recruitment of youth or family samples for physical activity or other health-related studies. Research on youth physical activity behavior must be based on samples that both generalize to the larger population, rather than relying on highly motivated or unmotivated youth, and are large enough to ensure adequate statistical power. Ideally, the sample should be drawn randomly. This paper documented the methods and procedures employed to successfully recruit a random stratified youth sample for a longitudinal physical activity study. Recruitment consisted of a combination of methods, including media exposure, posters and flyers, incentives, door-to-door recruitment, and, mainly, cold call telephone interviewing.

Using these methods, a sample of 360 youth was recruited in the target 58 neighborhoods, equally split between sexes, divided roughly in thirds between 10-, 12-, and 14-year-old cohorts, and seasonally balanced. The sample also represented the ethnicity in the target population. A parent or guardian was recruited for each family, and a best friend or peer was recruited for 296 target youth. A total of 55,999 cold calls were made, of which about a third succeeded in reaching the family. As expected, few of the families were qualified (about 2%), but most qualifying families ultimately agreed to participate (about 68%). Similar to other

studies, records were kept regarding the number of participants who declined to participate, but no further information about this group was collected (Eaves, 1999). Although information from nonparticipants would be useful, this was beyond the scope of the present study.

To date, the study has a 96% retention rate. We believe that the high retention rate has much to do with the recruitment protocol, participants' positive experience with the recruitment and initial assessment, and continued efforts and strategies of research staff to maintain participation.

The cold call and door-to-door recruitment strategies used for this study had benefits and limitations:

a. Use of the telephone for recruitment

An advantage to using the telephone, compared to advertising, was that it provided a convenient way of obtaining a random sample. Disadvantages included a large staff demand for relatively few recruits, a large number of families reached and screened that did not qualify for the study (e.g., families with no children, the elderly), difficulties in reaching this population by phone most times of the day, and challenges related to widespread use of telephone “screening” technology such as caller ID and answering machines.

b. Use of CATI software

The major advantage of using CATI for telephone recruitment was the flexibility and capability of the software to deal with issues such as random selection of telephone numbers from the database, automatic queuing of calls and call-backs, on-screen script display, storage of respondent answers, and regular reports on quotas, dispositions of calls, and interviewer productivity. A major disadvantage to the CATI system and of telephone databases in general is that they quickly become out of date, which results in a large number of “bad” phone numbers (e.g., phone disconnected, family kept the number but moved outside of the target neighborhood, number changed from a residence to a business). The cost of the software is also a limitation, as is the need for expertise in programming the system - especially in handling special problems (e.g., coding quotas to provide for multiple stratification).

Door-to-door recruitment

The primary advantage of the door-to-door approach, which was used only as a supplement in this study, is the ability to concentrate recruitment efforts in specific areas where telephone recruitment is slow and/or where some families may not have telephones. Disadvantages of the door-to-door approach are the staff and travel costs, the necessity for many attempts with few recruits, and the fact that truly random selection is difficult (in this study, time and costs prohibited the random selection of households from across the entire neighborhood).

Recommendations for future studies

Although the current study reached its recruitment goal, a weakness of this research is that it was conducted in only one metropolitan area, and in a largely white population. Despite this, the recruitment methods yielded a sample that cut across SES lines and over-represented African-Americans. However, additional research is required to determine if similar recruitment procedures will apply in other areas and to minority populations.

In order to enhance the validity, reliability, and generalizability of individual research efforts on youth physical activity and other health-related studies, researchers should regularly report recruitment strategies and statistics along with study outcomes. Recruitment techniques that prove effective in one study may not be as effective in studies with differing designs and sampling needs, but more widespread reporting of recruitment efforts generally would advance

the field of health research and aid scientists seeking to recruit representative samples (Drotar & Riekert, 2000; Eaves, 1999; Grunbaum et. al., 1996).

Riesch et al. conducted an intervention study on communication skills with families and young adolescents ages 11-14 years (Riesch, Tosi, & Thurston, 1999). The investigators attributed their successful recruitment and retention to three guiding principles: (1) community involvement, (2) taking into consideration the developmental perspectives of adolescents, and (3) minimizing participant burdens.

Based on the findings of this study, we believe the following to be important considerations and strategies for recruiting a random sample of youth or families for research related to physical activity:

1. Use of focus groups and piloting to test materials and methods with the target population prior to the main study.
2. Advance publicity in the community to increase awareness prior to recruitment.
3. A telephone recruitment system that randomly selects residences, allows for stratification on key variables, limits interviewer burnout, maximizes the available hours of the day, incorporates callbacks, and provides ongoing reports of productivity.
4. A study protocol that provides incentives (financial and/or relevant gifts) and that recognizes the needs of the sample. Riesch et al. (1991) found that young adolescents value the opportunity to earn money for research participation. Youth also prefer to have their own surveys, which they can complete in private, away from parents.
5. A study protocol that minimizes participant burden (i.e., uses surveys that are as short and clear as possible, in-home visits), and allows flexibility in initial contact and later assessment times for participants.
6. Planned procedures for the retention of participants over the duration of the study.

Longitudinal studies incorporating stratified samples are necessarily complex and time consuming. Such studies need to be well-funded (Krohn & Thornberry, 1999). The generous support of agencies like the National Institute on Child Health and Human Development makes it possible to recruit and retain such samples. In addition, all research staff involved in the project are vital to the success of the study. Much of our recruitment and retention success can be attributed to the commitment, hard work, and experience of the project manager and field staff involved in this study.

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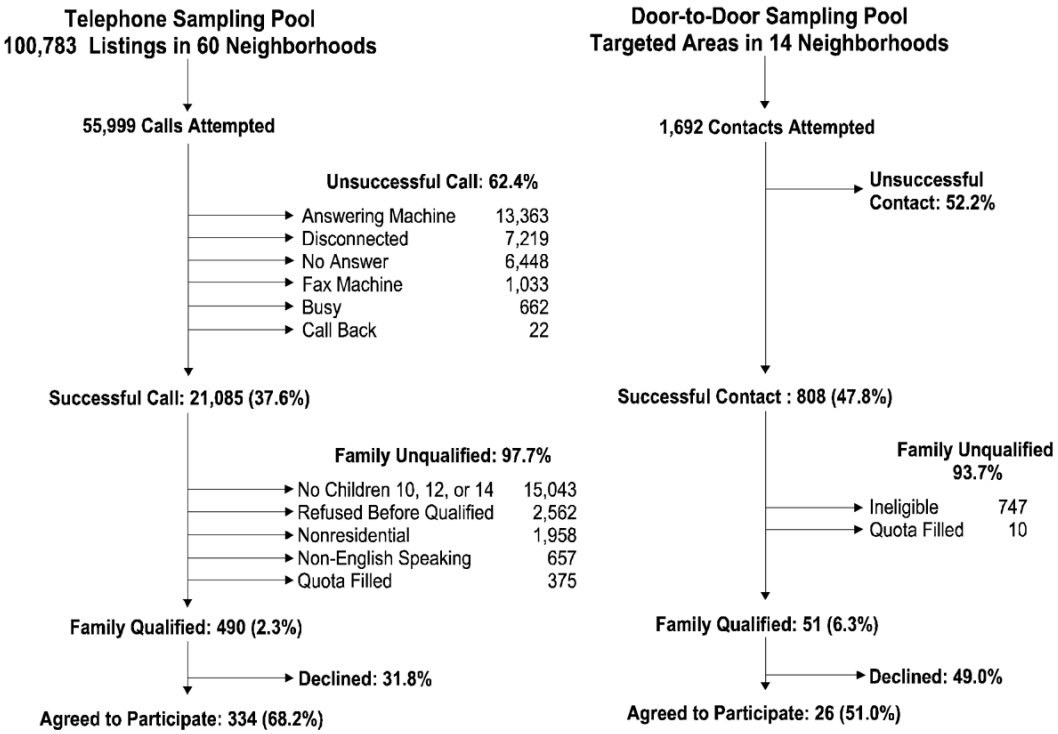

Figure 1.
Recruitment tree

Table 1

Descriptive statistics of participant characteristics

Characteristic	Mean (SD) or %
Target Youth (N=360)	
% Male	50.0%
Cohorts	
10-Year-Old	31.0%
12-Year-Old	34.3%
14-Year-Old	34.7%
Ethnicity	
African-American	11.2%
White	77.1%
Other	11.7%
Target Youth Per Neighborhood (Range = 4-11)	
Parents/Guardians (N=360)	
% Male	18.9%
Age	42.1 (6.8)
Single-Parent Families	23.0%
Ethnicity	
African-American	8.3%
White	83.9%
Other	7.8%
Income	
Below $20,000	9.7%
$20,000-$49,999	27.0%
$50,000-$59,999	25.5%
$60,000-$79,999	20.3%
$80,000 or Above	17.5%
Education	
Less Than High School	8.5%
High School (or Equivalent) Graduate	49.0%
College and/or Graduate School Graduate	42.5%
Peers ("Best Friends") of Target Youth (N=296)	
% Male	50.7%
Age (Range = 9-19)	12.1 (1.8)
9-10	21.7%
11-12	40.2%
13+	38.2%
Ethnicity	
African-American	14.9%
White	75.3%
Other	9.8%

Table 2

Dispositions of Recruitment Telephone Calls

Disposition	Percent of Calls
Calls Not Attempted	
Neighborhood Filled	27.4%
Not Attempted	22.3%
Unsuccessful Call Attempt	
Answering Machine	13.2%
Disconnected	7.1%
No Answer	6.4%
Fax Machine	1.0%
Busy	0.7%
Call Back	0.02%
Successful Call Attempt But Family Unqualified	
No Children 10, 12, or 14	14.8%
Refused Before Qualified	2.5%
Nonresidential	1.9%
Non-English Speaking	0.7%
Quota Filled	0.4%
Successful Call Attempt And Family Qualified	
Agreed to Participate (Complete)	0.35%
Declined	0.13%