



# **Technology-based Harassment Victimization Survey**

## **METHODOLOGY REPORT**

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## Study Overview

The Technology-based Harassment Victimization Survey (THV) was conducted on behalf of the University of New Hampshire and funded by the Office of Juvenile Justice and Delinquency Prevention (OJJDP). THV is a telephone follow-up study of a subset of households that completed the Second National Survey of Children's Exposure to Violence (NatSCEV II) conducted in 2011-2012. The subset of NatSCEV II respondents eligible for THV includes:

- all non-deceased youths between the ages of 8 and 9 at the time that their parent or guardian completed the NatSCEV II interview on their behalf
- all non-deceased youth respondents 10 years old or older who completed the youth portion of the NatSCEV II survey and agreed to a follow-up for a future study

The initial THV sample consisted of 2,203 parent/youth pairs. During the course of data collection, we determined that six of the youths were deceased, yielding an eligible sample of 2,197 youths, all of whom were expected to be between the ages of 10 and 20 at the time of THV data collection.

NatSCEV II was conducted in 2011-2012 on behalf of the University of New Hampshire under a grant from the Department of Justice. A total of 4,503 telephone interviews were completed: 2,191 with adult parents or guardians of children ages 0-9 and 2,312 with adult parents or guardians and youths ages 10-17. In NatSCEV II, the parent or guardian took the entire survey on behalf of the child when the selected focal child was 0-9 years old. When the selected focal child was 10 or older, the parent or guardian completed a short survey and granted consent to speak to the youth. Then, assenting youths completed the longer youth portion of the survey. NatSCEV II included questions about things that may have happened in a child's school, neighborhood, or home, and questions about the child's health. Some questions were sensitive such as those that asked about the child's experience with violence and unwanted sexual advances.

The specific goals of the THV Survey are:

1. to understand technology-based harassment as it is occurring in the context of concurrent and prior victimization experiences, including whether poly-victimized youth are at particular risk for technology-based harassment;
2. to define a typology of technology-based harassment incidents and their relationship to adverse consequences for youth;
3. to determine whether technology-based harassment has similar risk and protective factors as other types of peer victimizations such as physical violence, sexual harassment, and bullying;
4. to explore the role that incident-level characteristics of technology-based harassment (e.g., duration, relationship with the perpetrator) have on its impact (distress and disclosure); and
5. to assess the frequency and level of involvement of youth as bystanders of technology-based harassment.

The data collected in the THV follow-up study will help to improve current policy and practice on technology-based harassment victimization by examining it within the context of other types of youth victimization, risk, and protective factors.

## Data Collection Overview

The study began with an advance letter, reply form, and \$5 cash mailed to the 2,127 sample households with an address on file. The survey was administered by computer assisted telephone interviewing (CATI), and data collection ran from December 12, 2013 to March 3, 2014. A total of 791 interviews were completed. The average time for a completed survey was 58 minutes. Youth respondents who completed the survey were sent a \$25 check.

After a brief parent/caretaker survey, interviewers asked for permission to conduct the remainder of the survey with the youth. After parent/caretaker consent was obtained and the youth came to the phone, the youth was read the oral assent. Those who agreed proceeded with the youth portion of the interview. The telephone survey included questions about things that may have happened in a child's school, neighborhood, or home in the past year. Some of the questions involved sensitive issues, such as whether the child had ever experienced unwanted sexual advances or any form of violence. A large portion of the survey focused on technology-based harassment (online or involving a cell phone), including victimization and bystander experiences.

Whereas NatSCEV II was conducted in both English and Spanish, THV was conducted in English only due to budget limitations that precluded translation, programming, and administration of the THV questionnaire in Spanish. While we recognized the potential bias that might be caused by this decision, surveys are often required to make difficult tradeoffs between costs, coverage, nonresponse, and sample size. With respect to the tradeoff in THV, only 24 of the 2,197 eligible youth, or 1.1%, had both the parent and youth portions of the NatSCEV II interview completed in Spanish. Nevertheless, 77 parents or guardians of the THV eligible youth, or 3.5% of the THV eligible sample completed NatSCEV II in Spanish.

To increase the likelihood of contacting an English-speaking adult and successfully reaching the eligible youth in THV, the adult respondent was not required to be the same parent or guardian who completed NatSCEV II as long as the adult was familiar with the focal child's daily routine and experiences. If we reached a youth respondent who was 18 years or older who did not have contact with a parent or if that parent only spoke Spanish, the entire interview (including a modified parent portion) was conducted with the youth respondent.

# Survey in Detail

## Sample

The subset of NatSCEV II respondents eligible for THV included:

- all non-deceased youths between the ages of 8 and 9 at the time that their parent or guardian completed the NatSCEV II interview on their behalf
- all non-deceased youth respondents 10 years old or older who completed the youth portion of the NatSCEV II survey and agreed to a follow-up for a future study

The initial THV sample consisted of 2,203 parent/youth pairs. During the course of data collection, we determined that six of the youths were deceased, yielding an eligible sample of 2,197 youths who were expected to be between the ages of 10 and 20 at the time of THV data collection.

Upon contacting an adult on the phone, the interviewer asked if the person speaking was the same parent or guardian we interviewed in NatSCEV II. If it was, the interviewer proceeded with the study consent. If the person speaking was not the same caretaker interviewed last time, the interviewer asked to speak to a parent or guardian who was 18 years or older and familiar with the focal child's daily routine and experiences. If a new adult respondent was located, the interviewer proceeded with the study consent. A total of 757, or 95.7% of all THV interviews were completed with the same parent or guardian as NatSCEV II.

If we reached a youth respondent who was 18 years or older who did not have contact with a parent or if that parent only spoke Spanish, the entire interview (including a modified parent portion) was conducted with the youth respondent. A total of 15 interviews in this category were completed. In the discussion that follows, these 15 interviews are included in the counts for both the parent and youth interviews. Table 1 displays the focal child's expected age at the start of THV data collection.

**Table 1. Expected Age of Focal Child at Follow-Up**

| Expected Age at Follow-Up | Number in Sample | Percent in Sample |
|---------------------------|------------------|-------------------|
| 10                        | 143              | 6.5%              |
| 11                        | 231              | 10.5%             |
| 12                        | 233              | 10.6%             |
| 13                        | 160              | 7.3%              |
| 14                        | 204              | 9.3%              |
| 15                        | 184              | 8.4%              |
| 16                        | 221              | 10.0%             |
| 17                        | 273              | 12.4%             |
| 18                        | 261              | 11.9%             |
| 19+                       | 287              | 13.1%             |
| <b>Total</b>              | <b>2,197</b>     | <b>100.0%</b>     |

## **Advanced Mailing**

On December 4, 2013 a study packet was mailed to the 2,127 respondents for whom we had an address on file. The mailing included a personalized introductory letter and reply form. The letter was signed by the Principal Investigator Kimberly Mitchell, Ph.D., and it provided a general overview of the study, what participants were being asked to do, the voluntary nature of participation, and study contact information. Instructions for updating respondent contact information (both parent and youth name as well as phone number) were provided on a separate reply form along with a postage paid return envelope.

## **Reply Forms**

Returned reply forms were delivered to the Abt SRBI office in Cambridge, MA where they were logged and scanned. If the reply form included an updated respondent name (parent or youth), the information in the CATI system was replaced. If a new phone number was provided, the number in the CATI system was updated. A total of 672 respondents (31.6% of those mailed) returned reply forms expressing their interest in participating in the survey.

## **Telephone Contact and Data Collection**

A total of 791 interviews were conducted over the course of three months. Data collection began December 12, 2013 after an interviewer training and ended March 3, 2014. The average interview length was 58 minutes.

## **Training**

A training led by Project Director Rachel Martonik was conducted December 12, 2013 via Go-to-Meeting with interviewers and supervisors from the Abt SRBI call center in Hadley, MA. Interviewers and supervisors were introduced to the study, and all survey questions were reviewed. Interviewers and supervisors were trained on frequently asked study questions as well as the adverse event protocol. Only female interviewers worked on THV.

## **Telephone Contact**

The maximum number of call attempts was 8 for non-qualified callbacks. Non-qualified callbacks include busy, ring no answer, fax tone, and other similar dispositions under the condition that we do not know if the respondent could be reached at that number. The maximum number of call attempts was set to 16 for qualified callbacks. Qualified callbacks indicate that contact has been made at the telephone number with the respondent or someone in the respondent's household. The number of callback attempts was reset at the parent/youth handoff part of the survey.

Daytime calls were made on every third call attempt and answering machine messages were left on the 3<sup>rd</sup> consecutive answering machine disposition.

If a telephone number was deemed bad (e.g., wrong number, disconnected) and we had an additional phone number on file for that case, the bad number was replaced in the CATI system. This could be an additional phone number given in NatSCEV II, a number given at the parent/youth hand-off, or a number obtained from a returned reply form.

## **Adverse Events**

Interviewers were trained on the sensitive nature of some of the survey questions as well as how to deal with upset respondents. Interviewers were trained to offer the Boys and Girls Town Hotline number (1-800-448-3000) to respondents if warranted.

## **Child in Danger Protocol**

This study employed a Child in Danger (CID) protocol. The CID protocol was intended to alert study clinicians of a possible child in danger (i.e., child has been attacked/assaulted with a weapon by parent, sexual assault, neglect, etc.). The CATI program included algorithms that flagged cases for predetermined incidents. If the case was flagged, at the end of the survey, the interviewer was prompted to ask the respondent the following: “Someone may need to contact you again. When is the best time to call you back?” The interviewer was also asked if, in her opinion, the child was in danger (even if CATI did not flag the case). These data were checked twice a week and transferred securely to the UNH study clinician, Kim Mitchell, Ph.D. A total of 69 (8.7% of the 791 completed interviews) cases were flagged over the course of data collection.

## **Questionnaire Changes**

As a result of monitoring interviews and a longer than expected average survey length, cuts were made to the survey instrument shortly into the data collection field period. On December 23, 2013, several questions were deleted from the Social Networking, Technology-Based (Tech) and Non-Technology-Based (Non-Tech) Harassment sections of the survey. In addition, the entire Self Concept and Community Disorder sections were removed.

## **Final Disposition and Response Rates**

### **Eligibility**

The sample for this study was comprised of respondents who: (1) completed the NatSCEV II survey, (2) were eight years old or older during NatSCEV II, and (3) if age 10 or older, agreed at the end of the NatSCEV II interview to be called again to be part of a follow-up study. All NatSCEV II respondents who met these criteria, minus any respondents who had died (n=6), were eligible for the survey. In order to make sense of the final disposition summary and calculate a meaningful response rate, each case was classified at two levels: (1) contact was made with a household (or not), and (2) contact was made with the listed respondent (or not).

### **Any Household Contact**

“Any household contact” means that an interviewer spoke with someone on the telephone but not necessarily the listed respondent or the listed respondent’s household. This definition excludes any bad numbers such as those that rang to a business, were disconnected or otherwise not in service, or were busy at every attempt. It also excludes a number at which no one ever picked up the phone, or an answering machine was reached at every attempt.

Table 2 displays the rate of household contact and shows that we were able to contact 75% of the 2,197 eligible households.



**Table 2. Any Household Contact**

| Household Contact | Total Sample | Percent of Sample |
|-------------------|--------------|-------------------|
| Yes               | 1,657        | 75%               |
| No                | 540          | 25%               |
| Total             | 2,197        | 100%              |

### Respondent Household Contact

It was determined that the respondent's household was contacted if at some point the respondent (or someone from the confirmed respondent's household) was spoken to. This includes appointment callbacks, qualified callbacks, health and hearing problems, qualified refusals, and completed interviews. Table 3 displays the contact rates for respondent households. As shown in Table 3, we confirmed contact with the respondent's household for 52% of the 2,197 eligible households and 68% of the 1,657 households contacted.

**Table 3. Respondent Contact within Contacted Households**

| Respondent Contact | Contacted Households |      | All Eligible Households |      |
|--------------------|----------------------|------|-------------------------|------|
| Yes                | 1,132                | 68%  | 1,132                   | 52%  |
| No                 | 525                  | 32%  | 1,065                   | 48%  |
| Total              | 1,657                | 100% | 2,197                   | 100% |

### Refusals

A total of 399 cases ended as refusals, and 128 of these were hang-ups. Table 4 displays the refusal rate by contact type. Just under one-in-five (18%) of the 2,197 eligible households refused to participate in THV. This represents 24% of all contacted households and 20% of all contacted respondents.

**Table 4. Refusals**

| Refusals | All Contacted Respondents |      | All Contacted Households |      | All Eligible Households |      |
|----------|---------------------------|------|--------------------------|------|-------------------------|------|
| Refusal  | 225                       | 20%  | 399                      | 24%  | 399                     | 18%  |
| Other    | 907                       | 80%  | 1,258                    | 76%  | 1,798                   | 82%  |
| Total    | 1,132                     | 100% | 1,657                    | 100% | 2,197                   | 100% |

### Completed Interviews

A total of 1,027 (46.7% of total sample) parent respondents completed the caretaker portion of the interview. Of those, 791 (77.0% of parent completes; 36.0% of total sample) were also completed by the youth respondent. Table 5 shows parent completed surveys, and Table 6 shows total completed surveys (both parent and youth portions completed.)

**Table 5. Parent Survey Completed**

| Parent Survey Completed | All Contacted Respondents |      | All Contacted Households |      | All Eligible Households |      |
|-------------------------|---------------------------|------|--------------------------|------|-------------------------|------|
| Yes                     | 1,027                     | 91%  | 1,027                    | 62%  | 1,027                   | 47%  |
| No                      | 105                       | 9%   | 630                      | 38%  | 1,170                   | 53%  |
| Total                   | 1,132                     | 100% | 1,657                    | 100% | 2,197                   | 100% |

**Table 6. Parent and Youth Survey Both Completed**

| Parent and Youth Both Completed | All Contacted Respondents |      | All Contacted Households |      | All Eligible Households |      |
|---------------------------------|---------------------------|------|--------------------------|------|-------------------------|------|
| Yes                             | 791                       | 70%  | 791                      | 48%  | 791                     | 36%  |
| No                              | 341                       | 30%  | 866                      | 52%  | 1,406                   | 64%  |
| Total                           | 1,132                     | 100% | 1,657                    | 100% | 2,197                   | 100% |

Figure 1 provides an overview of the contact type and complete type by the total sample.

**Figure 1. Percent Contact and Complete Type for All Eligible Households (n=2,197)**

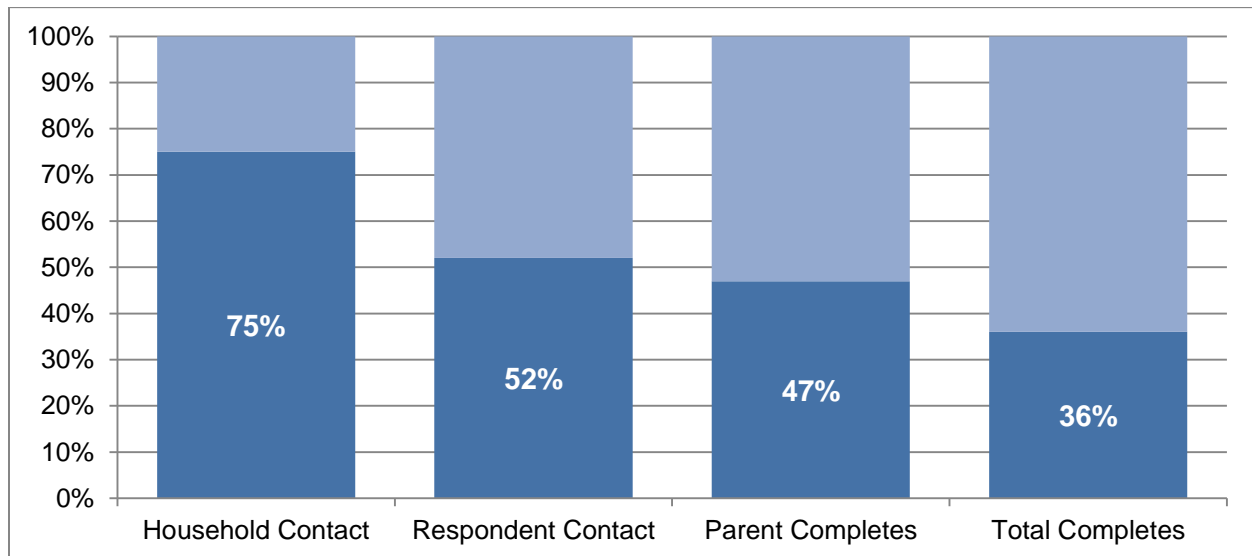
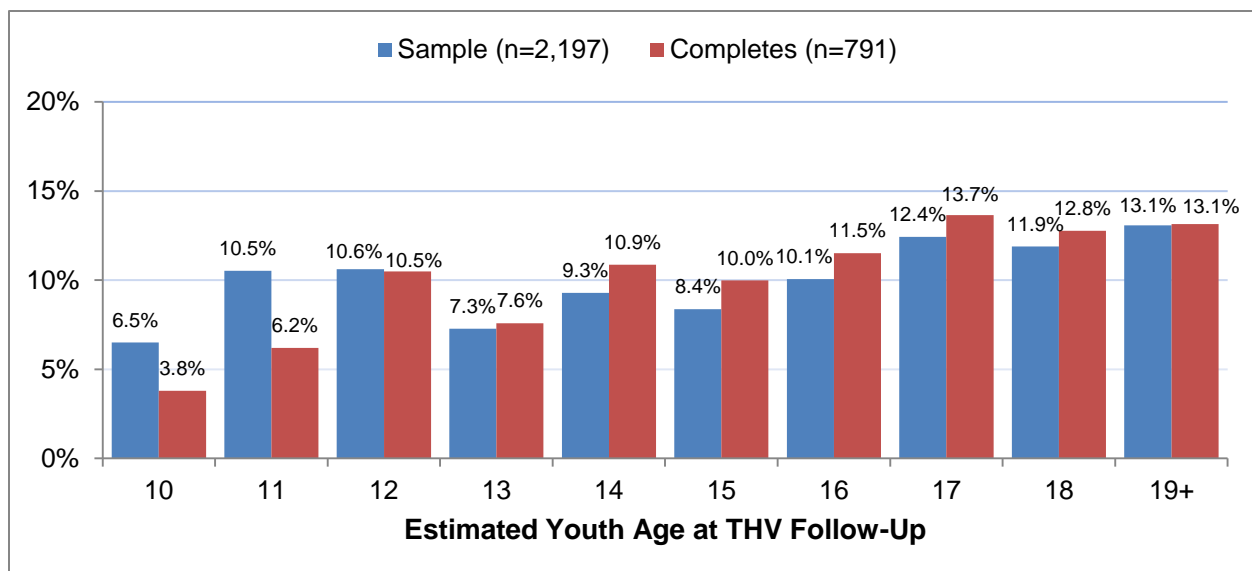


Table 7 provides the contact details by estimated age at the THV follow-up.

**Table 7. Contact by Estimated Age at THV Follow-Up**

| Estimated Age at THV | Number in Sample | Percent of Sample | Household Contact | Percent of Household Contact | Respondent Contact | Percent of Respondent Contact |
|----------------------|------------------|-------------------|-------------------|------------------------------|--------------------|-------------------------------|
| 10                   | 143              | 6.5%              | 103               | 6.2%                         | 60                 | 5.3%                          |
| 11                   | 231              | 10.5%             | 158               | 9.5%                         | 95                 | 8.4%                          |
| 12                   | 233              | 10.6%             | 162               | 9.8%                         | 103                | 9.1%                          |
| 13                   | 160              | 7.3%              | 123               | 7.4%                         | 84                 | 7.4%                          |
| 14                   | 204              | 9.3%              | 154               | 9.3%                         | 112                | 9.9%                          |
| 15                   | 184              | 8.4%              | 141               | 8.5%                         | 98                 | 8.7%                          |
| 16                   | 221              | 10.1%             | 174               | 10.5%                        | 119                | 10.5%                         |
| 17                   | 273              | 12.4%             | 219               | 13.2%                        | 155                | 13.7%                         |
| 18                   | 261              | 11.9%             | 190               | 11.5%                        | 140                | 12.4%                         |
| 19+                  | 287              | 13.1%             | 233               | 14.1%                        | 166                | 14.7%                         |
| <b>Total</b>         | <b>2,197</b>     | <b>100%</b>       | <b>1,657</b>      | <b>100%</b>                  | <b>1,132</b>       | <b>100%</b>                   |

Figure 2 and Table 8 display completed surveys by the youths' estimated age at the start of THV data collection. Estimated age was calculated using the date of birth given in NatSCEV II. As Figure 2 and Table 8 show, completing the survey with the youngest respondents (estimated ages 10-11 at THV) was difficult. This group comprised 17.0% of the sample, 10.0% of the completed interviews, and a disproportionate 25.8% of the partial interviews (defined as parent complete with youth non-complete). As shown in Table 8, the oldest group of eligible youth (19 years old or older) is also overrepresented among partial interviews. These older youths account for 13.1% of the sample but comprise 21.6% of the partial interviews.

**Figure 2. Proportion of Eligible Households and Completed Interviews by Estimated Age at Follow-Up**

**Table 8. Completes and Partial Completes by Estimated Age at THV Follow-Up**

| Estimated Age at THV | Number in Sample | Percent of Sample | Completed Interviews | Percent of Completes | Partial Completes | Percent of Partial Completes |
|----------------------|------------------|-------------------|----------------------|----------------------|-------------------|------------------------------|
| 10                   | 143              | 6.5%              | 30                   | 3.8%                 | 23                | 9.7%                         |
| 11                   | 231              | 10.5%             | 49                   | 6.2%                 | 38                | 16.1%                        |
| 12                   | 233              | 10.6%             | 83                   | 10.5%                | 14                | 5.9%                         |
| 13                   | 160              | 7.3%              | 60                   | 7.6%                 | 13                | 5.5%                         |
| 14                   | 204              | 9.3%              | 86                   | 10.9%                | 12                | 5.1%                         |
| 15                   | 184              | 8.4%              | 79                   | 10.0%                | 12                | 5.1%                         |
| 16                   | 221              | 10.1%             | 91                   | 11.5%                | 17                | 7.2%                         |
| 17                   | 273              | 12.4%             | 108                  | 13.7%                | 28                | 11.9%                        |
| 18                   | 261              | 11.9%             | 101                  | 12.8%                | 28                | 11.9%                        |
| 19+                  | 287              | 13.1%             | 104                  | 13.1%                | 51                | 21.6%                        |
| <b>Total</b>         | <b>2,197</b>     | <b>100%</b>       | <b>791</b>           | <b>100%</b>          | <b>236</b>        | <b>100%</b>                  |

### Partial Interviews

The 236 cases where the parent completed the parent portion of the survey but the youth did not complete the youth portion were classified as partial completes. Of these, 222 (94.1%) were surveys that ended with the parent; the youth interview never started. The remaining 14 partials were cases in which the youth started the survey, but never finished. Table 9 shows partial complete dispositions.

**Table 9. Final Dispositions for Partial Completes**

| Final Disposition                        | Number     | Percent     |
|--|------------|-------------|
| Refusal                                  | 136        | 58%         |
| Callback - over max attempts             | 80         | 34%         |
| Health Problems                          | 8          | 3%          |
| Away for duration                        | 6          | 3%          |
| Not In Service / Disconnected/Bad Number | 6          | 3%          |
| <b>Total</b>                             | <b>236</b> | <b>100%</b> |

Figure 3 illustrates the THV sample flow from the end of NatSCEV II through follow-up data collection.

**Figure 3. THV Sample Flow Chart**

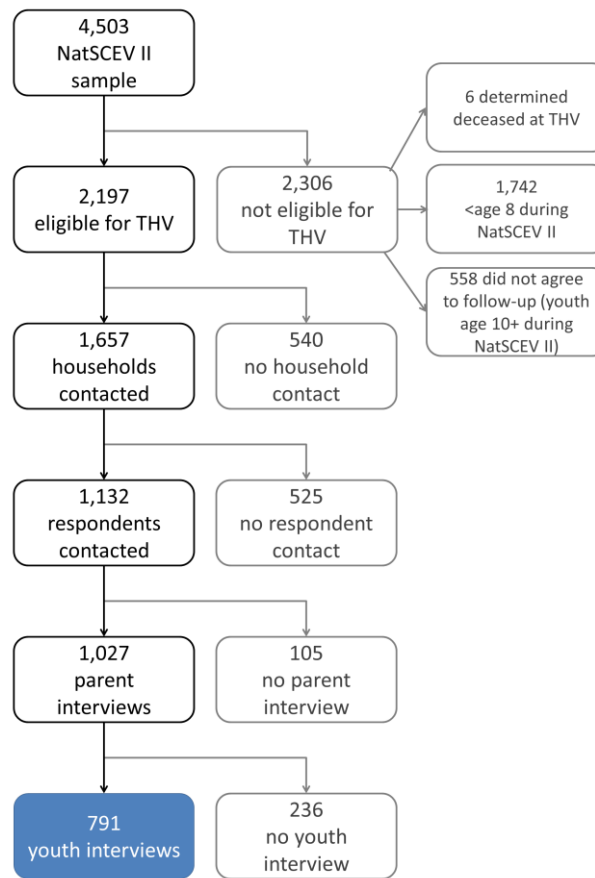
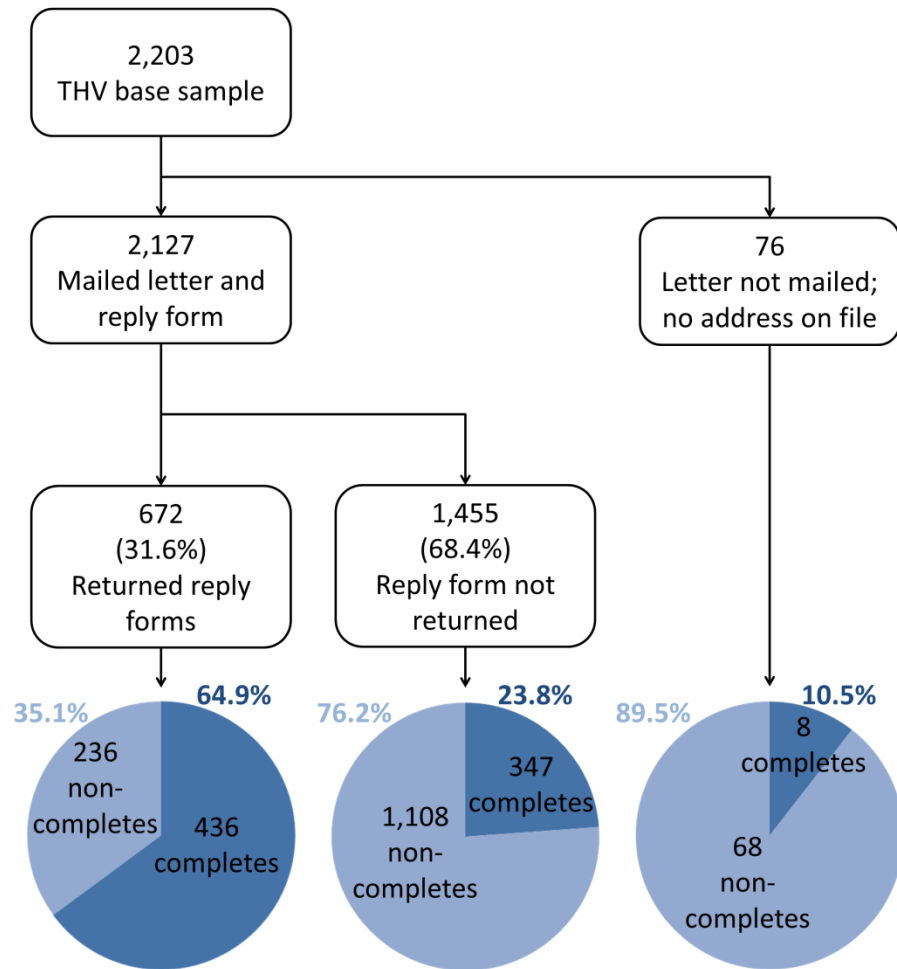


Figure 4 illustrates the THV sample flow details starting with the advance mailing and ending at the conclusion of data collection. Figure 4 shows that of the 2,127 advance mailings (all of which included a prepaid \$5 cash incentive), less than one-third (31.6%) returned the reply form with updated contact information. Among those who returned the form, less than two-thirds (64.9%) completed the THV interview. Among the 1,455 households that did not return the reply form, less than one-in-four (23.8%) completed the interview. Among the 76 households with no address on file, only 10.5% completed.

**Figure 4. THV Advance Mailing Flow Chart**



## Nonresponse Overview

Nonresponse bias is a function of both the nonresponse rate and the difference between respondents and nonrespondents on the statistic of interest (National Research Council, 2013). A low response rate may not yield high nonresponse bias if the difference between respondents and nonrespondents on the statistic of interest is small or ignorable in a statistical sense. Nevertheless, the steady decline in survey response rates over the past 20 years is particularly high among single-parent households, families with young children, certain minorities, and residents of high crime rate areas. This pattern suggests that the potential for nonresponse bias should be examined and addressed if there is any concern about the representativeness of the sample respondents.

Compared to cross-sectional surveys that are subject to nonresponse at a single point in time, follow-up surveys suffer from initial nonresponse at baseline as well as attrition, or loss of sample members between the baseline and follow-up (National Research Council, 2013). Attrition between the baseline and follow-up interviews can reduce the sample's representativeness and introduce bias. Additionally, the loss of sample size over time increases the variance (reduces the precision) of the estimates. Whereas sampling weights can ameliorate the effects of attrition bias, the effectiveness of this approach varies (Cellini et al., 2008).

The tradeoffs between field, management, incentive costs, response rates, and sample size are well documented. For example, significant increases in the incentive size between waves (e.g., from \$20 at baseline to \$50) can decrease attrition and improve data quality (Rodgers, 2011). Extensive tracking procedures including between-wave contact by mail and telephone can help to mitigate attrition, as demonstrated, for example, by the National Longitudinal Survey of Youth (NLSY). Small prepaid cash incentives mailed with the advance letter sent prior to follow-up, as was done in THV, have also been shown to decrease attrition. Yet, there is no proof that efforts to enhance response rates or reduce attrition will automatically reduce nonresponse bias on survey estimates (Curtin et al., 2000; Keeter et al., 2000; Merkle and Edelman, 2002; Groves, 2006). Moreover, extraordinary efforts to secure responses from reluctant respondents may actually increase the bias on some survey estimates (Merkle et al., 1998) and lead to poorer data quality (Fricker and Tourangeau, 2010).

There are three points in time that THV was subject to noncontact, nonresponse, or attrition and the potential for nonresponse bias. The first point occurred at the end of the NatSCEV II interview when the youth respondent (aged 10 or older) was asked if he or she would be willing to be interviewed again in a year or two. Of those asked, 1,754 or 75.8% agreed to a future interview.

If the youth agreed to a follow-up, additional contact information was collected including the names of the youth and the youth's parent(s), and in all but five cases we had at least the youth's initials on file. In contrast, when the child was 8-9 years old at NatSCEV II, the caretaker took the entire survey, was not asked about a follow-up survey, and the child's name was not collected. We did, however, collect one adult caretaker's name (vs. mother and father) in order to issue and mail the incentive check.

The second point was noncontact during THV data collection, where younger youth (ages 8-9 at NatSCEV II) were more difficult to contact at both the household and respondent level (Table 10). For this group, much of the disproportionate noncontact can most likely be attributed to the lack of contact information from NatSCEV II, particularly the child's name, which was missing for this entire group. Without the child's name, interviewers could only identify the focal child by gender and age unless a reply form was returned, whereas with older children, the youth could be identified by name. Without the youth respondent's name, establishing legitimacy on the phone was much more challenging.

Based on conventional survey wisdom, the oldest group of eligible youth respondents, ages 19 or older at the time of THV data collection, should also have been difficult to contact. At this age, many young adults initiate important life course transitions such as finding a job, enrolling in post-secondary education or training, and moving out of the family home. These life course transitions tend to increase the likelihood that young adults are reachable by cell phone only. They are also likely to increase the mobility of this age group and complicate tracing and contact which can, in turn, lower the response rate. Yet, the youth who were 19 or older at the time of THV comprised 13.1% of the eligible sample and 13.1% of completed THV interviews indicating that they were not more difficult to contact or less likely to be interviewed compared to younger youth (Table 8). Where we observed overrepresentation of this group was among the partially completed interviews, 21.6% of which are attributed to the oldest group (Table 8).

**Table 10. Attrition Points for THV Eligible Respondents**

|              | Age Group<br>at<br>NatSCEV II |       | Eligible<br>for<br>THV |       | Household<br>Contact | Respondent<br>Contact | Refusal | Partial<br>Interview<br>(Parent Only) | Completed<br>Interview |
|--------------|-------------------------------|-------|------------------------|-------|----------------------|-----------------------|---------|---------------------------------------|------------------------|
|              | n                             | %     | n                      | %     | (n=1,657)            | (n=1,132)             | (n=399) | (n=236)                               | (n=791)                |
| <b>8-9</b>   | 449                           | 16.3% | 447                    | 20.3% | 18.6%                | 15.8%                 | 28.1%   | 28.8%                                 | 11.9%                  |
| <b>10+</b>   | 2,312                         | 83.7% | 1,750                  | 79.7% | 81.4%                | 84.2%                 | 71.9%   | 71.2%                                 | 88.1%                  |
| <b>Total</b> | 2,761                         | 100%  | 2,197                  | 100%  | 100%                 | 100%                  | 100%    | 100%                                  | 100%                   |

Table 10 compares the 8-9 year olds at NatSCEV II to those who were 10 or older at each of the attrition points. As shown in Table 10, the younger group is underrepresented among household and respondent contacts, overrepresented among refusals and partial interviews, and underrepresented among completed interviews. Comparing the youths who were 8 or 9 at the time of NatSCEV II to those 10 and older who completed the youth portion of the interview, respondents in the younger age group comprised 20.3% of the THV eligible sample and only 11.9% of completed surveys. In contrast, youths 10 years old and older comprised 79.7% of the THV eligible sample and 88.1% of completed interviews.



## Weighting

Final weights were created for the 791 youth who completed the THV interview. These weights were designed to correct for the nonresponse and attrition that occurred between NatSCEV II and the THV follow-up and to build upon the representative qualities of the NatSCEV II weights.

For the purposes of the THV weighting and nonresponse analysis, the primary source of refusal was the first adult to answer the phone. Our experience in this and other youth victimization studies suggests that it is crucial to talk to the same parent who was interviewed in the first wave. Table 10 reports the unweighted completion statistics for THV. In Table 11, and for the purposes of creating the THV weights, all 2,203 youth, including the 6 determined to be deceased, were initially selected in Step 1 for weight adjustment. The deceased youth are included in weight development because it was contact with the household that provided us with the information that these youths had died.

**Table 11. THV Contact with NatSCEV II Parent Respondents**

|                          | THV Not Completed | THV Completed | Total        |
|--------------------------|-------------------|---------------|--------------|
| Same adult               | 289 (27.6%)       | 757 (72.4%)   | 1,046 (100%) |
| Other adult              | 27 (44.3%)        | 34 (55.7%)    | 61 (100%)    |
| Did not enter the survey | 1,096 (100%)      | N/A           | 1,096 (100%) |
| Total                    | 1,412 (64%)       | 791 (35.9%)   | 2,203 (100%) |

In Step 2 of the weight adjustment, we fit a logistic regression model for response propensity (i.e., the likelihood of completing THV; yes vs. no). The model, reported in Table 12, uses the following explanatory variables from NatSCEV II.

1. A subset of variables used in the NatSCEV II weight calibration, selected for their statistically significant effect on THV response propensity:
  - a. child age (9 or younger in NatSCEV II, vs. 10 or older)
  - b. household income (<\$50K, vs. \$50K+ and DK)
  - c. child race
  - d. parent race
  - e. child ethnicity (Hispanic vs. non-Hispanic)
  - f. interaction of income and child ethnicity
  - g. phone usage (landline vs. cell only vs. cell mostly)
2. Number of children in household (capped at 3)
3. Parent demographics:
  - a. Education
  - b. Employment status
  - c. Marital status
  - d. NatSCEV II parent interview conducted in Spanish
4. Child behaviors and outcomes from NatSCEV II, used to determine if victimized and delinquent youth were subject to disproportionate attrition (which could potentially bias the THV estimates downward):
  - a. Yes/no indicator of any JVQ episodes (QD variables)

- b. Yes/no indicator of any delinquency (D1 variables)
- c. Yes/no indicator of internet victimization specifically (Int1 variable)

From the THV data we added a 3-category measure of reply form status: reply form mailed and returned vs. reply form mailed but not returned vs. no reply form mailed (no address on file).

**Table 12. THV Response Propensity**

| Variables in the Model           | OR       | Std. Err. | Variables in the Model          | OR       | Std. Err. |
|----------------------------------|----------|-----------|---------------------------------|----------|-----------|
| Reply form mailed, not received  | 0.156*** | 0.018     | Parent < HS                     | 1.353    | 0.404     |
| Reply form received              | 1        | .         | Parent HS/GED                   | 1        | .         |
| No address for reply form        | 0.042*** | 0.028     | Parent some post HS             | 1.136    | 0.207     |
|                                  |          |           | Parent college+                 | 1.649**  | 0.298     |
| Income <\$50K, vs. \$50K+ and DK | 0.792    | 0.122     | Parent education missing        | 1.434    | 2.15      |
| Hispanic youth                   | 0.462    | 0.189     |                                 |          |           |
| Hispanic * income <\$50K         | 0.457    | 0.22      | No delinquency in N2            | 1        | .         |
|                                  |          |           | 1+ delinquency episodes in N2   | 0.84     | 0.105     |
| Cell only                        | 0.832    | 0.243     | No JVQ episodes in N2           | 1        | .         |
| Cell mostly                      | 0.600*** | 0.085     | 1+ JVQ episodes in N2           | 1.033    | 0.148     |
| Other phone use                  | 1        | .         | No Internet victimization in N2 | 1        | .         |
|                                  |          |           | Internet victimization in N2    | 1.109    | 0.246     |
| Employed FT/PT                   | 1        | .         |                                 |          |           |
| Looking for work                 | 0.745    | 0.214     | Parent interview in Spanish     | 0.255    | 0.255     |
| Other employment status          | 0.696**  | 0.097     |                                 |          |           |
|                                  |          |           | Parent race: White              | 1        | .         |
| Married                          | 1        | .         | Parent race: Black              | 1.58     | 1.853     |
| Other marital status             | 0.782    | 0.13      | Parent race: Other              | 0.398*   | 0.171     |
| Never married                    | 0.516*   | 0.139     |                                 |          |           |
|                                  |          |           | Child race: White               | 1        | .         |
| 1 child in family                | 1        | .         | Child race: Black               | 0.581    | 0.69      |
| 2 children in family             | 0.949    | 0.123     | Child race: Other               | 2.900*   | 1.385     |
| 3+ children in family            | 0.796    | 0.132     |                                 |          |           |
|                                  |          |           | Age 8-9 in NatSCEV II vs 10+    | 0.414*** | 0.071     |
| N                                | 2,203    |           |                                 |          |           |
| AUC                              | 0.783    |           |                                 |          |           |
| Hosmer-Lemeshow p-value          | 0.077    |           |                                 |          |           |

Since the purpose of the response propensity analysis is to build a predictive model rather than generalize to the NatSCEV II population, no weights were used. While the NatSCEV II victimization and delinquency variables were included in the analysis because we were concerned about the potential for losing high risk youth, these variables were not statistically significant predictors of THV response propensity. Nor were the bivariate associations with response propensity (not shown) statistically significant. This means that both victimization and delinquency did not affect response propensity in either direction.

While child ethnicity and parent interview language were also not significant predictors of THV response propensity, their bivariate associations with response propensity (not shown) were negative and statistically significant. Thus, the lack of significance in the propensity model means that the effect was fully mediated by other variables in the model.

As shown at the bottom of Table 12, the model demonstrates adequate fit demonstrated by the non-significant Hosmer-Lemeshow test p-value ( $p=0.077$ ). It also has sufficient explanatory power as demonstrated by the Area Under the Curve (AUC) value of 0.783.

In Step 3 of the weight adjustment, predicted probabilities of unit response were obtained from the response propensity model given in Table 12.

Then in Step 4, to avoid extreme weights at the next stage, the predicted probabilities of unit response were truncated (trimmed) from below so that all of the propensities are at least 5%. No other attempts to trim the weights were undertaken.

Finally, in Step 5, the nonresponse adjusted THV weights, THV\_COMPLETES\_WEIGHT, were calculated as the ratio of the NatSCEV II final weight to the truncated response propensities from Step 4, and normalized to sum to the sample size ( $n=791$ ). THV\_COMPLETES\_WEIGHT is suitable for both cross-sectional and longitudinal analyses because the THV sample is a fully contained subset of the NatSCEV II sample. Everyone in the THV sample was in the NatSCEV II sample, and only a portion of the NatSCEV II respondents was eligible for THV. For longitudinal analyses, any estimates of change from NatSCEV II to THV should be done within the THV sample using the 791 completed THV interviews.

The descriptive statistics for the THV weights (THV\_COMPLETES\_WEIGHT) are given in Table 13.

**Table 13. Descriptive Statistics for THV Weights**

| <b>N</b> | <b>Mean</b> | <b>Min</b> | <b>Max</b> | <b>SD/CV</b> | <b>DEFF = <math>1+CV^2</math></b> |
|----------|-------------|------------|------------|--------------|-----------------------------------|
| 791      | 1           | 0.091      | 17.2       | 1.521        | 3.314                             |

## Nonresponse Analysis

To assess whether the nonresponse adjusted weights successfully removed the biases introduced into the THV sample by attrition and nonresponse, we compared the distribution of several NatSCEV II variables based on the following subsets of eligible respondents:

1. The 2,203 NatSCEV II respondents who were initially eligible for THV, applying the final NatSCEV II weights (the baseline)
2. The 791 THV respondents (applying the final NatSCEV II weights *without* nonresponse adjustments)
3. The 1,412 THV nonrespondents (applying the final NatSCEV II weights *without* nonresponse adjustments)
4. The 791 THV respondents applying the final nonresponse adjusted THV weights.

The results are shown in Table 14.

Table 14 reports NatSCEV II outcomes only even though THV weights are used in Column (4). This is done to demonstrate how different weights work on different sample groups (including THV respondents and nonrespondents) based on a common denominator, which is provided by NatSCEV II.

The simplest way to understand Table 14 is to focus on Columns (1), (2), and (4). Column (1) reports the frequency distribution percentages (with standard errors in parentheses) for selected NatSCEV II variables using all of the THV eligible respondent data (n=2,203) with the original NatSCEV II weights applied. Column (1) provides the baseline that we compare all other estimates to. Column (2) reports the same information as Column (1) with the original NatSCEV II weights applied as in Column (1), but in this case, the estimates are based only on the subgroup of THV respondents (n=791). Of the variables included in Table 14, only JVQ and delinquency indicators (0 vs. 1+) were used in propensity modeling.

Comparing Column (1) and Column (2), higher percentages in Column (2) vs. Column (1) indicate that the group was overrepresented among THV respondents; lower percentages in Column (2) vs. Column (1) indicate that the group was underrepresented among THV respondents; and ideally the two sets of estimates should be close in value. Comparing the Column (1) and (2) estimates for college education, we see that 42.28% of THV eligible youth had a responding parent in NatSCEV II who was a college graduate compared to 54.69% of THV respondents. This indicates that youth with highly educated parent respondents in NatSCEV II were overrepresented among THV respondents. At the low end of the parent education level frequency distribution, youth whose responding parent in NatSCEV II had less than high school education (8.26%) were underrepresented among THV respondents (4.71%).

Column (4) provides the same information as Column (2) applying the nonresponse adjusted weights (THV\_COMPLETES\_WEIGHT) rather than the original NatSCEV II weights (SESTRWEIGHT). As in Column (2), the estimates are based only on the THV respondents (n=791). Ideally, compared to the estimates in Column (2), the estimates in Column (4) should be closer to the estimates in Column (1). Consider again the lowest level of parent education. The baseline estimate for all THV eligible respondents from Column (1) is 8.26%, and this group was underrepresented among THV respondents (4.71%). Ideally, the application of the nonresponse adjustment weight in Column (4) should move the estimate from 4.71% closer to the baseline estimate of 8.26%. In this case, the nonresponse adjusted estimate is 8.13% and close to perfect as indicated by the removal of 96.3% of the bias in Column (5). The correction for the overrepresentation of college graduates among the responding parents is also good, moving the THV

based estimate from 54.69% to 46.83% and significantly closer to the 42.28% baseline. Here, 63.3% of the nonresponse bias was reduced as shown in Column (5).

Turning to the computations in Table 14 and indicating column number in parentheses, the relative bias removed is the ratio of point estimates  $[(4)-(1)] / [(2)-(1)]$ . A value of zero indicates no improvement compared to the THV completes with the NatSCEV II weights applied. A value of 100% indicates a perfect correction of nonresponse bias. Values between 0% and 100% indicate a partial correction of nonresponse bias with larger values indicating a better correction. Values greater than 100% indicate an overcorrection of nonresponse bias. Values below 0% indicate that the weighted statistic is even further from the baseline in Column (1) than the analysis for THV respondents based on the original weights NatSCEV II weights in Column (2).

The t-statistic for bias removed is the ratio  $[\text{point estimate in (4)} - \text{point estimate in (1)}] / \text{standard error in (4)}$ . The proper standard error to use for the difference in the numerator is very difficult to compute, so the value of this t-statistic should be used as a secondary indication of whether large values of the relative bias should be seen as problematic. For example, there is a slight overcorrection in the percentage of THV respondents reporting neighborhood violence as a problem in NatSCEV II (overcorrection with more than 100% bias removal). In a second example, the percent of non-delinquent youth moving in the wrong direction (negative relative bias) is not problematic given that the difference between the baseline point estimate in (1) and the nonresponse adjusted estimate in (4) is less than one standard error in (4).

As seen in response propensity modeling, response propensity was not strongly related to the JVQ or delinquency once the demographic factors were controlled for. Thus the nonresponse adjustments for these two key variables provided only minor if any adjustment as shown in Table 14. Although statistical adjustment cannot be expected to remove all of the bias in all of the variables, the nonresponse adjusted weights removed a sizeable portion of nonresponse bias in other variables shown in Table 14. While parent education and marital status were used in the propensity modeling, and we would expect the nonresponse adjustments to reduce or remove biases in these variables, other variables such as neighborhood violence, TANF and school performance, which were absent from the propensity model, also showed reductions in nonresponse bias. At least 20% of nonresponse bias was removed from the biological father variable which indicates whether or not the NatSCEV II adult respondent was the youth's biological father. The bias was completely corrected with respect to the NatSCEV II adult respondent's perception of neighborhood violence as a problem. Overall, we believe that it is reasonable to expect that the nonresponse biases will be at least partially ameliorated in THV when the nonresponse adjusted weights are used to analyze THV data.

**Table 14. Bias Correction for Selected Variables**

|                                       | Eligible,<br>NatSCEV II<br>weights<br>(1)<br>%/se | THV<br>completes,<br>NatSCEV II<br>weights<br>(2)<br>%/se | THV<br>nonrespondents,<br>NatSCEV II<br>weights<br>(3)<br>%/se | THV<br>completes,<br>THV non-<br>response<br>adjusted<br>weights<br>(4)<br>%/se | Non-<br>response<br>bias<br>removed<br>(5)<br>%/t |
|---------------------------------------|---|---|--|---|---|
| Parent education                      |   |   |  |   |   |
| < HS                                  | 8.26<br>(0.07)                                    | 4.71<br>(0.05)  | 10.12<br>(0.12)  | 8.13<br>(0.16)  | 96.3%<br>-0.81                                    |
| HS/GED                                | 16.41<br>(0.19)                                   | 12.32<br>(0.21)   | 18.55<br>(0.28)  | 15.33<br>(0.40)   | 73.6%<br>-2.70                                    |
| Some post-HS                          | 32.86<br>(0.47)                                   | 28.20<br>(0.67)   | 35.30<br>(0.64)  | 29.68<br>(0.87)   | 31.8%<br>-3.66                                    |
| College                               | 42.28<br>(0.62)                                   | 54.69<br>(1.40)   | 35.77<br>(0.63)  | 46.83<br>(1.50)   | 63.3%<br>3.03                                     |
| DK/REF                                | 0.19<br>(0.00)                                    | 0.08<br>(0.00)  | 0.25<br>(0.00)   | 0.04<br>(0.00)  | -36.4%  |
| Neighborhood violence is a<br>problem | 14.68<br>(0.17)                                   | 12.35<br>(0.25)   | 15.90<br>(0.23)  | 14.75<br>(0.42)   | 103.0%<br>0.17                                    |
| Adult R is biological mother          | 69.29<br>(0.93)                                   | 66.94<br>(1.59)   | 70.53<br>(1.15)  | 67.94<br>(2.01)   | 42.6%<br>-0.67                                    |
| Adult R is biological father          | 18.21<br>(0.20)                                   | 22.01<br>(0.47)   | 16.22<br>(0.20)  | 21.25<br>(0.55)   | 20.0%<br>5.53                                     |
| JVQ count                             |   |   |  |   |   |
| 0                                     | 22.32<br>(0.27)                                   | 23.67<br>(0.51)   | 21.61<br>(0.31)  | 23.53<br>(0.64)   | 10.4%<br>1.89                                     |
| 1                                     | 17.16<br>(0.20)                                   | 15.90<br>(0.28)   | 17.83<br>(0.28)  | 15.67<br>(0.34)   | -18.3%<br>-4.38                                   |
| 2                                     | 12.31<br>(0.12)                                   | 11.36<br>(0.16)   | 12.81<br>(0.16)  | 10.97<br>(0.20)   | -41.1%<br>-6.70                                   |
| 3                                     | 11.54<br>(0.12)                                   | 13.86<br>(0.31)   | 10.33<br>(0.11)  | 13.34<br>(0.39)   | 22.4%<br>4.62                                     |
| 4                                     | 9.12<br>(0.08)                                    | 9.67<br>(0.13)  | 8.82<br>(0.09)   | 9.99<br>(0.17)  | -58.2%<br>5.12                                    |
| 5+                                    | 27.54<br>(0.38)                                   | 25.53<br>(0.55)   | 28.60<br>(0.50)  | 26.50<br>(0.72)   | 48.3%<br>-1.44                                    |

**Table 14 (continued)**

|                                  | Eligible,<br>NatSCEV II<br>weights<br>(1)<br>%/se | THV<br>completes,<br>NatSCEV II<br>weights<br>(2)<br>%/se | THV<br>nonrespondents,<br>NatSCEV II<br>weights<br>(3)<br>%/se | THV<br>completes,<br>THV non-<br>response<br>adjusted<br>weights<br>(4)<br>%/se | Non-<br>response<br>bias<br>removed<br>(5)<br>%/t |
|----------------------------------|---|---|--|---|---|
| Delinquency count                |   |   |  |   |   |
| 0                                | 60.06<br>(0.89)                                   | 61.44<br>(1.53)   | 59.33<br>(1.10)  | 61.82<br>(1.90)   | -27.5%<br>0.93                                    |
| 1                                | 30.82<br>(0.43)                                   | 29.34<br>(0.69)   | 31.60<br>(0.55)  | 31.08<br>(0.93)   | 117.6%<br>0.28                                    |
| 2+                               | 9.12<br>(0.08)                                    | 9.22<br>(0.13)  | 9.07<br>(0.10)   | 7.09<br>(0.08)  | 2130.0%<br>-25.38                                 |
| Receives aid                     | 23.54<br>(0.33)                                   | 16.20<br>(0.34)   | 27.40<br>(0.50)  | 18.92<br>(0.54)   | 37.1%<br>-8.56                                    |
| Parent is married                | 62.32<br>(0.96)                                   | 69.97<br>(1.80)   | 58.31<br>(1.11)  | 65.30<br>(2.20)   | 61.0%<br>1.35                                     |
| School performance, parent-rated |   |   |  |   |   |
| Below average                    | 5.54<br>(0.04)                                    | 4.76<br>(0.05)  | 5.96<br>(0.05)   | 5.98<br>(0.11)  | 156.4%<br>4.00                                    |
| Average                          | 31.65<br>(0.46)                                   | 26.80<br>(0.64)   | 34.20<br>(0.63)  | 29.38<br>(0.87)   | 53.2%<br>-2.61                                    |
| Above average                    | 61.81<br>(0.92)                                   | 67.31<br>(1.66)   | 58.93<br>(1.10)  | 63.86<br>(2.02)   | 62.7%<br>1.01                                     |
| DK/REF                           | 0.99<br>(0.00)                                    | 1.12<br>(0.00)  | 0.92<br>(0.00)   | 0.79<br>(0.00)  | 253.8%  |
| N                                | 2203  | 791   | 1412   | 791   |   |

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