An Investigation of Base Rates of Anti-Gay Hate Crimes Using the Unmatched-Count Technique

Nadine Recker Rayburn
Mitchell Earleywine
Gerald C. Davison

ABSTRACT. This study uses the unmatched-count technique (UCT) to estimate base rates for anti-gay hate crime perpetration in college students and compares the results with estimates found using conventional methods. The UCT does not require the participant to directly answer sensitive questions, which may provide more accurate responses than other methods. The UCT revealed higher estimates for having gotten into a physical fight with a person because he was gay and having damaged someone’s property because he was gay. These higher estimates provide a better feel for the level of these problematic behaviors and point to the need to target college campuses for interventions that foster a climate of zero tolerance for hate crimes. [Ankle copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: docdelivery@haworthpress.com Website: http://www.HaworthPress.com O 2003 by The Haworth Press, Inc. All rights reserved.]

Nadine Recker Rayburn is a PhD candidate in clinical psychology at the University of Southern California and a current intern at Harvard Medical School/Massachusetts General Hospital.

Mitchell Earleywine, PhD. is Associate Professor in the Department of Psychology at the University of Southern California.

Gerald C. Davison, PhD. is Professor and Chair of the Department of Psychology at the University of Southern California.

Address correspondence to: Mitchell Earleywine, PhD. Department of Psychology. University of Southern California, SGM Building. Los Angeles, CA 90089-1061 (E-mail: earleyw@rcf.usc.edu).

Journal of Aggression, Maltreatment & Trauma, Vol. 6(2) #12. 2003 http://www.haworthpress.com/store/product.asp?sku=J146 © 2003 by The Haworth Press. Inc. All rights reserved. 10.1300/J146v06n02_07
KEYWORDS. Unmatched-Count Technique, UCT, base rates, hate crimes, hate violence, anti-gay behavior, social desirability

Hate crimes, defined as criminal acts perpetrated against individuals or members of specific stigmatized groups, have the intent to express condemnation, hate, disapproval, dislike, or distrust for that group (Here, 1989). The particular individual who is attacked is of far less importance than his or her membership in the despised group. Many jurisdictions also consider vandalism and destruction of property (e.g., a place of worship) hate crimes. The disturbing incidence of hate crimes has been recognized as a societal problem that requires both legislative and policy initiatives (Herek, 1989).

Hate violence perpetrated against gay men is a significant manifestation of inter-group violence. Contrary to popular notions, members of organized hate groups such as the KKK or neo-Nazis do not commit most hate crimes against gays. On the contrary, the perpetrators tend to be otherwise law-abiding people (Berrill, 1992; Crevecoeur, Catham, Recker, & Dunbar, 1998). Moreover, the problem of anti-gay hate crimes surfaces in many domains of society, and college campuses are not spared (Stello, 1998). In fact, Comstock (1991) reported that fellow students were the second most frequently reported anti-gay hate crime perpetrators. According to Whitaker and Bastian (1991) and Hunter (1990), young adults are likely victims and perpetrators of hate-motivated assault and assault in general. Federal hate crimes statistics (U.S. Department of Justice, 1998) report that roughly 10% of all reported hate crimes are committed in educational institutions. These figures highlight the problem in schools and colleges.

With few notable exceptions (e.g., Franklin, 1998, 2000), much of prior psychological research and literature has focused upon the victims of anti-gay hate crimes and their psychological responses to the event (Berrill & Herek, 1992; Garnets, Herek, & Levy, 1992; Herek, 1989; Herek, Gillis, & Cogan, 1999). At the same time, meaningful, empirically-based information about the perpetrators of anti-gay hate crimes is scarce (Berk, Boyd, & Hamner, 1992; Comstock, 1991; Franklin, 1998; Harry, 1992).

A variety of factors, including underreporting by victims, have complicated research on anti-gay hate crime perpetration. Several studies document the reluctance of hate crime victims to report attacks (Herek et al., 1999; Recker & Dunbar, 1998). Even if the crime is reported, in a
majority of cases the identity of the perpetrator is unknown (Berk et al., 1992; Crevecoeur et al., 1998; Recker & Dunbar, 1998) and any information about him or her is based mostly on the reports of victims or witnesses.

In light of the scarcity of meaningful data on anti-gay hate crime perpetrators, the need to study the perpetrators by directly gathering information on this population is evident (e.g., Rey & Gibson, 1997). Knowledge of accurate base rates of people's engagement in anti-gay behaviors is important in order to appreciate the extent of the problem. However, an obstacle complicating direct inquiry into the behavior of hate crime perpetrators is the issue of social desirability. Social desirability is defined as the tendency to alter responses on a test, questionnaire, or interview in order to be viewed, in a favorable light by other people (Richman, Kiesler, Weisb, & Drasgow, 1999). When asked to provide sensitive information, respondents often refrain from answering with candor because their disclosure may reflect upon them in a negative way. Catania, Gibson, Chitwood, and Coates (1990) noted that socially desirable distortion is likely to increase when the topics under investigation are of a highly sensitive nature, dealing, for example, with sexuality or illegal behavior. Consequently, social desirability often leads to an underestimation of the true base rates of sensitive behaviors. For example, Waterton and Duffy (1984) found a discrepancy between people's self-reported alcohol consumption and actual alcohol sales and attributed this finding to social desirability.

Accordingly, social desirability probably reduces people's disclosure of involvement in anti-gay behavior. As previously mentioned, students are frequent perpetrators of anti-gay hate crimes. However, it is likely that college students are aware that the politically correct stance condemns hate crimes and any form of racial, ethnic, religious, or sexual prejudice. In other words, students may be concerned about violating campus codes of tolerance and fair treatment for minority groups. Hence, many students may be inclined to withhold information because they fear the potential negative consequences of admitting to anti-gay behavior. This may even be the case when students are assured that their responses are completely anonymous. Richman and colleagues (1999) found that mere assurances of anonymity do not significantly influence respondents' distortion on computer-based surveys of personal information. Thus, a straightforward inquiry about committing anti-gay hate crimes, even under conditions of anonymity, may raise a red flag for the participants to be cautious and censor their responding in a socially desirable way. Patel, Long, McCammon, and Wuensch
(1995) emphasized this point in their study of violent anti-gay behavior in a college population. They recommend that future research should focus on reducing social desirability in the investigation of self-reported hate crime perpetration.

This study uses a procedure called the unmatched-count technique (Wimbush & Dalton, 1997) in an attempt to reduce social desirability in the exploration of base rates of anti-gay hate crimes. The UCT strives to maximize responders' anonymity. Catania et al. (1990) state that modes of administration that increase anonymity reduce social desirability response bias in the investigation of sensitive topics. In the UCT method, participants read a series of five or six statements and respond by indicating the number of statements that are true for them. One of the statements is the item of interest—in this case an item about engagement in anti-gay behavior. Half the sample receives the item of interest in their set of 6 statements; the other half receives only the remaining 5 items. The base rate estimate for the item of interest is determined through random assignment of participants and comparisons between the two halves of the sample. (Please refer to the Methods section of this paper for a more thorough description of this protocol.) The key element of the UCT is that participants do not respond directly to the sensitive items. Instead, they report the number of true items in a set, which may include the sensitive item. This technique shows promise in obtaining better estimates of the perpetration of anti-gay hate crimes in a way that reduces the self-presentation bias that likely underestimates their prevalence.

AN ILLUSTRATION OF THE UNMATCHED-COUNT TECHNIQUE

Wimbush and Dalton (1997) studied base rates for employee theft. Previous studies reported widely varying rates of employee theft, implying that it was difficult to assess (Camara & Schneider, 1994; Dalton, Wimbush, & Daily, 1994; Murphy, 1993). Camara and Schneider noted base rate estimates between 3% and 62%. Since employee theft carries the potential of negative consequences (e.g., getting fired from the job if discovered), people are inclined to lie or provide evasive answers (Chaudhuri & Murkerjee, 1998). Guarantees of anonymity might not be enough to encourage truthful answering to produce accurate base rates. Thus, Wimbush and Dalton used the unmatched-count technique (UCT), offering participants a chance to answer sensitive items without ever having to directly admit to a given behavior. They found that a higher per-
percentage of participants endorsed employee theft on the UCT than on a conventional anonymous survey. The authors concluded that the higher percentages found using the UCT technique provide better estimates of the base rates of employee theft. This study about base rates of employee theft presents an illustration of the unmatched count technique. Other researchers have used this technique in the investigation of sexual risk behaviors and alcohol abuse (LaBrie & Earleywine, 2000).

THE PRESENT STUDY

This study applies the UCT protocol to the sensitive area of anti-gay hate crimes. To our knowledge, it is the first study that extends the use of this technique to the investigation of violent behavior. We hypothesized that the UCT technique would yield significantly higher percentages of persons who endorse sensitive items over an anonymous self-report questionnaire.

METHOD

Participants

Four-hundred and sixty-six college students participated in this study (118 men and 346 women; two participants did not indicate their sex). Participants were recruited with the assistance of the University of Southern California psychology department human subjects pool and received class extra credit for their participation. The unequal representation of women versus men in our sample was due to the fact that at the time of data collection, more women than men were enrolled in the USC human subjects pool. The mean age for the participants was 19.84 years (SD = 3.28). The participants came from diverse ethnic backgrounds. Eight percent identified as African-American, 41% as Caucasian, 21% as Latino/a, 16% as Asian-American, 2% as Native American, and 11% as members of other racial/ethnic groups. The subjects were randomly divided into three groups. There were no group differences in terms of age, ethnicity, and gender.

Procedure

After being randomly divided, participants in Group 1 (n = 150; 111 females and 39 males) received a conventional survey questionnaire in-
quiring about their anti-gay activities. Groups 2 (n = 173; 129 females and 44 males) and 3 (n = 143; 106 females, 35 males, and two participants who did not indicate their sex) were UCT protocol groups, with Group 2 receiving form A and Group 3 receiving form B (see Appendix).

**Conventional self-report survey protocol.** Group 1 (n = 150) received a questionnaire adapted from Patel et al.'s (1995) study of anti-gay behavior and asked participants a series of statements related to their engagement in anti-gay behavior. Groups 2 and 3 received versions of the UCT questionnaire (see below). The anonymous questionnaire for group I asked participants to indicate whether or not they had engaged in each behavior. This means that we determined the percentage of individuals who had engaged in a particular behavior at least once, as well as the percentage of those who had never engaged in it. The statements that represent the focus of the current study are: (a) I have gotten into a physical fight with a person because he was gay; (b) I have written graffiti about gay people; (c) I have verbally threatened a gay person; and (d) I have damaged someone's property because he was gay. The questionnaire instructions advised participants to fill out the questionnaire as honestly as possible and informed them that their answers were completely anonymous.

**UCT protocol.** Base rate estimates by UCT require randomly assigned groups (Dalton, Wimbush, & Daily, 1994). In the typical UCT procedure, one of the groups receives multiple sets of 5 nonsensitive items (Wimbush & Dalton, 1997). The participants are asked not to indicate directly whether a particular item is true. Rather, they are asked to report how many of the 5 items in each set are true for them. Therefore, while stating how many items are true, they never directly endorse any particular item. Someone who responds 2, for example, is indicating that 2 out of the 5 items are true for him or her.

Another group receives the same series of non-sensitive items. However, an extra item is added to this series, so that the series contains 6 items. This extra item is the sensitive item of interest. The instructions for this group are identical and participants are asked to indicate the number of items in the set that are true for them. As is the case with the first group, a response of 3 means that the participant indicates that 3 out of the 6 items are true for him or her. Again, it is impossible to determine exactly which 3 of the 6 are true for a certain person. Since participants were randomly assigned to groups, the difference in the mean responses of these two groups must be a function of some persons in the second group endorsing the sensitive item. The base rate estimate for the sensitive behavior is determined from this difference. Randomiza-
tion and adequate sample size minimize the chance that confounds (e.g., group differences on demographic characteristics, etc.) rather than the proportion of persons in the second group endorsing the sensitive item account for the mean differences. Larger samples enhance estimate stability and accuracy. Dalton and Wimbush (1997) suggest that accuracy and stability are compromised if the groups do not contain at least 40-50 subjects.

In this study, the two UCT conditions (i.e., the remaining two groups of our study) contain 173 and 143 subjects, respectively. Group 2 received form A, while Group 3 received form B (see Appendix). Each form contained four sets of items. The sensitive items were split between the two groups to further ensure that any hidden group differences were not accounting for differences in mean scores on any particular set.

For example, Form A, set 1 contains 5 non-sensitive statements (see Appendix). If a participant gives a response of 2 to this set, this indicates that 2 out of the 5 items are true for him or her. However, they do not circle or check the 2 true items, but simply put a 2 next to the set. Set 1 on form B contains the exact same 5 nonsensitive items as Set 1 on Form A (these nonsensitive items are derived from the original Dalton, Wimbush, & Daily [1994] study). But Set 1 on Form B includes an additional item: I have gotten into a physical fight with a person because he was gay. The addition of this sensitive statement is the key to the UCT technique. The 173 participants who received Form A had a mean of 1.72 true items for the 5 items in Set 1; while the 143 different participants who received Form B averaged 1.77 true items out of the 6 items that made up Set 1 on Form B. The mean of the Form B group is expected to be larger because of the additional item (physical fight with a person because he was gay). As stated earlier, given the random assignment to forms, the difference in the average responses to Set 1 between the two groups is a function of those respondents who have endorsed the "physical fight with a person because he was gay" additional item (Wimbush & Dalton, 1997).

The base rate estimate of the behavior of interest is found by subtracting the two means: $p = \text{mean (Form B, Set I)} - \text{mean (Form A, Set 1)}$, where $p$ is the proportion of participants endorsing the sensitive behavior. In the above example, $p = 1.77 - 1.72 = .05$. Thus, the base rate estimate in this population for having gotten into a fight with a person because he was gay is 5%.
RESULTS

A criterion for the effectiveness of UCT is whether it results in higher base rates of sensitive behaviors than more conventional self-report surveys (Dalton, Wimbush, & Daily, 1994; Wimbush & Dalton, 1997). This will be particularly true for the assessment of anti-gay behavior. The findings from the conventional survey and UCT protocol on the anti-gay behaviors are displayed in Table 1.

Statistics

Because participants either engaged in the behavior of interest or did not, these data are appropriate for analysis comparing two independent binomials. This analysis tests the hypothesis \( p_1 = p_2 \), where \( p_1 \) = the proportion of endorsements in the conventional survey and \( p_2 \) = the proportion of endorsements in the UCT. The conventional procedure for testing this hypothesis is the Fisher’s exact test. However, Fisher’s test has less power compared to other procedures (Wilcox, 1997). Storer and Kim (1990) compared several methods that have better power properties than Fisher’s. They recommend a modern, robust binomial test, which Wilcox (1997) named "Twobinom." In addition to better power, this procedure provides better control over Type 1 error. Analyses using this modern binomial test result in a significance level for the null hypothesis that the proportions are equal.

Findings

Significant differences were found between the two groups on the items concerning having gotten into a physical fight with a gay person \( (p < .03) \) and damaging someone’s property because he was gay \( (p < .001) \). Both of these findings revealed higher base rates when utilizing the UCT as compared to the conventional survey. Factor scores were obtained by dividing the UCT proportion by the conventional survey proportion; the factor scores of these two items were 7.14 and 50, respectively. This means that compared to conventional survey participants, people in the UCT condition are 7 times more likely to admit to having gotten into a physical fight with a gay person and up to 50 times more likely to admit to having damaged someone’s property because he was gay.

No significant difference between the UCT and the conventional survey was found for the item concerning graffiti about gay people. In ad-
### TABLE 1. Comparison of Admissions of Anti-Gay Hate Crimes Using Conventional Survey and Unmatched Count (UCT) Protocols

<table>
<thead>
<tr>
<th>Item</th>
<th>Conventional (%)</th>
<th>UCT (%)</th>
<th>Binomial Test</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical fight with a person</td>
<td>0.7%</td>
<td>5%</td>
<td>p &lt; .03</td>
<td>7.14*</td>
</tr>
<tr>
<td>because he was gay</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damaged someone's property because he was gay</td>
<td>0.7%</td>
<td>35%</td>
<td>p &lt; .001</td>
<td>50*</td>
</tr>
<tr>
<td>Written graffiti about gay people</td>
<td>0%</td>
<td>1%</td>
<td>NS</td>
<td>&quot;</td>
</tr>
<tr>
<td>Verbally threatened gay person</td>
<td>3.3%</td>
<td>0%</td>
<td>p &lt; .03</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. *p < .01. A factor score is obtained by dividing the UCT proportion by the conventional survey proportion. This means that people in the UCT condition are up to 50 times more likely to admit to certain behaviors than conventional survey participants. **Cannot compute.

...condition, there was a significant difference for the item regarding verbal threats against a gay person, with significantly more students admitting to this behavior on the conventional survey, as opposed to the UCT version protocol (p < .03).

### DISCUSSION

The UCT protocol revealed significantly higher base rates than a conventional self-report survey for having damaged someone's property because he was gay and having gotten into a physical fight with someone because he was gay. No difference was found for having written graffiti about gay people or homosexuality. The anonymous questionnaire revealed a higher base rate for verbally threatening a gay person.

The higher base rates revealed using the UCT for two of the anti-gay behaviors under investigation are consistent with the hypotheses for sensitive behaviors. Significantly higher base rates were obtained when...
inquiring about the two arguably most serious behaviors, having gotten into a physical fight with a gay person and damaging someone's property because he was gay. Among the four behaviors studied, these two are most likely to qualify as hate crimes under most current laws. A person answering "true" to one or both of these items on an anonymous questionnaire would possibly face significant legal and other ramifications if his or her identity was ever revealed. Hence, a person who actually committed these crimes may be concerned about answering truthfully, even under the promise that one's identity will remain completely anonymous. The results of this study suggest that this was the case. Students under-reported these two sensitive behaviors when filling out the anonymous questionnaire. The format of the UCT, on the other hand, made it more likely for students to admit to these behaviors. In other words, students could be sure that there was no chance of trouble when answering to these sensitive items. Consequently, it appears that more of them were willing to admit to the sensitive behaviors under these more anonymous circumstances.

The failure to find a significant difference between the groups on writing graffiti about gay people was likely due to the near-zero base rate of the behavior. This may indicate that writing graffiti is not popular among college students. However, it is also possible that the base rate is near-zero only for certain types of graffiti writing, such as spray painting walls and buildings. Participants may have concluded that the questionnaire and UCT items about graffiti did not refer to behaviors such as writing in bathroom stalls. This conclusion is conceivable since, based on observation, these "minor" types of graffiti activities are clearly more common on college campuses.

The finding that verbal threats toward a gay person were more frequently endorsed in the conventional survey condition provides information about what kinds of anti-gay behavior college students consider socially acceptable or even desirable. Our data indicate that in a college population, where heterosexism appears to be somewhat normative (Herek, 1992; Van de Ven, 1994), verbally threatening a gay person does not carry strong negative evaluations. College students did not intentionally underreport this behavior to make themselves look better on the anonymous questionnaire. On the contrary, the higher base-rate revealed by the anonymous questionnaire compared to the UCT for the verbal threat item suggests that participants possibly exaggerated their involvement in this behavior when answering the anonymous questionnaire. In other words, college students may perceive it as socially desirable to give the impression that one is a "tough guy" when confronted
with gay people. We acknowledge that this interpretation of the data is post-hoc since we had anticipated a difference between the means in the opposite direction. Nevertheless, this finding is consistent with Franklin's (2000) research on anti-gay behaviors and her conclusion that anti-gay harassment is socially acceptable among many young adults.

The findings of this study are alarming. They suggest that certain types of hate crimes, such as damage to property, may be as much as 50 times more common than conventional self-report surveys suggest. Franklin's (2000) study about anti-gay behaviors among college students contained a conventional survey item equivalent to our "property damage" item and found a base rate of only 7%. This figure is significantly lower than the base rate of 35% we obtained with the UCT methodology. Based on our UCT data, physical attacks on gays may be much more frequent than conventional self-report data indicate. Hence, conventional self-report surveys may grossly underestimate the seriousness of the problem of anti-gay hate crimes on college campuses. Our data emphasize the need to utilize methods that reduce social desirability bias in the investigation of hate crimes. In addition, our findings underline the urgency to target college campuses with hate crime prevention programs and hate crime victims assistance resources. Levin and McDevitt (1993) argue that college campuses no longer epitomize the lofty principles of diversity and tolerance but have become repositories of hatred and division. The alarming results of the present study certainly provide evidence in support of this viewpoint.

The results of this study are somewhat limited in their generalizability since college students are not representative of the population at large. We believe, however, that the college student participants in our study should not be construed as analogue subjects. This is based on the fact that anti-gay prejudice and hate crimes are found on college campuses, probably to as great a degree as in "the real world." There is no doubt that college undergraduates are frequent victims as well as perpetrators and bystanders of hate crimes. But we do believe that it is important to replicate the results of this study with other populations. First, the results should be replicated with a sample that is more representative of the entire public in terms of its level of education, range of ages, socioeconomic status, and race/ethnicity. Our sample was highly educated and from a California four-year university that is associated with liberal political attitudes. A more diverse and less educated sample might amplify the magnitude of our findings.

In addition, our sample was predominantly female. Research on anti-gay violence shows that the perpetrators are usually male (e.g.,
Comstock, 1991). Our sample did not contain an adequate number of male subjects in order to make meaningful comparisons between men and women's base rates of anti-gay behaviors. It is important to point out, however, that the UCT did result in alarmingly high base rates of anti-gay behaviors even in a sample that was predominantly female. A higher representation of men in our sample might have amplified the magnitude of the findings. Nevertheless, it is important to replicate the results of this study with a sample that features an equal representation of male and female participants.

Although the UCT is able to reveal accurate base rates, the nature of the method does not allow researchers to link other relevant data to participants. For example, since one does not exactly know who endorsed a particular sensitive item, it is impossible to determine from these data what other factors may have contributed to an individual's behavior. For example, one does not know how much personality-related factors, such as general aggressive tendencies or anti-gay attitudes, are related to a person's behavior. However, this problem could be solved easily in future research by putting the personality factor and the sensitive behavior in the same sensitive item. While it would not provide insight into a causal relationship between variables, it would nevertheless show how certain personality factors are predictive of the behavior under investigation. This study represents an important first step in answering more sophisticated questions about hate crime perpetration, such as issues related to underlying motivations for the act.

The discrepancies between the base-rates obtained by the conventional and the UCT method suggest that the UCT may be a promising new technique to inquire about sensitive behaviors, such as hate crimes. Future research should focus on extending the method to the investigation of other hate crimes and motivational factors that contribute to the occurrence of hate violence.

REFERENCES


Submitted: April 12, 2002
Revised: August 8, 2002
Accepted: September 30, 2002
APPENDIX

(Form A)

Gender: Male____ Female____
Race/Ethnicity: African-American/Black
Asian-American/Pacific Islander
Caucasian/White
Latino/Latina
Middle Eastern
Native American
Other (please specify)

Instructions: Next to each set below place the number that matches the number of items in the set that are true for you.

Set 1
- I have been to Spain.
- I would consider myself a sports fan.
- I have a brother.
- I have more than one sister. (number of items true)
- I have read the book The Pelican Brief.

Set 2
- I read the local paper almost daily.
- I read USA Today several times a week.
- I usually choose sugar-free soft drinks. (number of items true)
- I don't smoke cigarettes.
- I have more than two children.

Set 3
- I take vitamins almost every day.
- I read the book The Prince.
- There's a shotgun in my house.
- I have verbally threatened a gay person.
- I've lived outside the U.S. (number of items true)
- I've lived in at least 3 different states.

Set 4
- I have been to Ireland.
- My shoe size is over 7.
- I went to a private high school.
- I often watch television late at night. (number of items true)
- I have damaged someone's property because he was gay.
- I like the editorial section of the newspaper.
APPENDIX (continued)
(Form B)

Gender: Male_____ Female_____ 
Race/Ethnicity: African-American/Black 
Asian-American/Pacific Islander 
Caucasian/White 
Latino/Latina 
Middle Eastern 
Native American 
Other (please specify)

Instructions: Next to each set below place the number that matches the number of items in the set that are true for you.

Set 1
I have been to Spain. 
I would consider myself a sports fan. 
I have a brother. 
I have more than one sister. (number of items true) 
I have gotten into a physical fight with a person because he was gay. 
I have read the book "The Pelican Brief."

Set 2
I read the local paper almost daily. 
I read USA Today several times a week. 
I usually choose sugar-free soft drinks. (number of items true) 
I don't smoke cigarettes. 
I have written graffiti about gay people or homosexuality. 
I have more than two children.

Set 3
I take vitamins almost every day. 
I read the book "The Prince." 
There's a shotgun in my house. 
I've lived outside the U.S. (number of items true) 
I've lived in at least 3 different states.

Set 4
I have been to Ireland. 
My shoe size is over 7. 
I went to a private high school. 
I often watch television late at night. (number of items true) 
I like the editorial section of the newspaper.