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Respondent Break-off Behavior in a
Telephone Audio Computer-Assisted Self Interview (T-ACASI)

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Abstract

Telephone Audio-Computer-Assisted Self Interviewing (T-ACASI) is one of the newest innovations in telephone data collection. A computer is used to administer an interview in an audio format and records the respondent's keypad-tone-based response, bypassing the need for a human interviewer. Yet, some features that normally set the context for an interviewer-administered CATI interview are not present in a TACASI environment, such as interviewer probing, responses to sample members' questions, feedback and encouragement. The result is a greater potential for mid-interview break-offs in a T-ACASI environment. We examine this possibility using data from a national, random-digit dialed survey of women. The research looks at: (1) the incidence of break-offs in a T-ACASI interview, (2) the demographic correlates of respondents most likely to break-off during such interviews, (3) the causes of break-off behavior, and (4) our success in converting "break-offs" into completed interviews. This information provides us with a better understanding of the uses and limitations of this new cutting-edge approach to telephone data collection.

Key Words: Telephone audio-computer assisted self interviewing; telephone surveys; survey nonresponse.

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Advancements in computer technology and telephony continue to open new doors to innovative modes of interviewing respondents in telephone data collection efforts. Examples include surveys based on touch-tone Data Entry (Turner et al, 1998; Turner et al., 1996; Clayton 1991; Clayton and Harrell, 1989; Werking, Tupek, and Clayton, 1988); Interactive Voice Response (IVR) technology (Tourangeau, 2002), and, most recently, integrated web/telephony surveys (Charleston et. al, 2003). Coinciding with the development and use of these technologies is the need to understand the capabilities and limits they present. Just as researchers continue to seek understanding of how respondents react to more traditional modes of interviewing -- such as mail questionnaires, computer assisted telephone interviewing (CATI), and face-to-face interviewing, including both pencil and paper (PAPI) and computer assisted personal interviewing (CAPI) approaches – survey methodologists and practitioners need to examine how respondents deal with these new technologies as well. Do respondents accept or reject these new modes of data collection? Are they easy to understand and use? Do these technologies facilitate the collection of more reliable, high quality information? What biases or unintended consequences might result from the application of these new approaches?

The research presented here begins to answer some of these questions by looking at how respondents react to one of these new modes of data collection approaches – telephone audio computer-assisted self interviewing (T-ACASI) (Cooley et al., 2000; Gribble et al., 2000;Mingay, 2000). In particular, we examine a type of respondent behavior common to all modes of data collection: respondent "break-offs" during the interview, where sample members terminate the interview before completion. T-ACASI is a relatively new mode of telephone data collection which combines advancements in audio-CASI development with touch-tone telephone

technology. Like audio-CASI, questions are administered by a computer via a digitally recorded questionnaire. Response options are then entered by the respondents using the touch-tone keypad on their telephones. The system thus allows respondents to answer questions in total privacy, with no live interviewer on the telephone. As Cooley et. al. (2000) note, such an approach to data collection has many advantages, including:

1. standardization of the presentation and administration of survey items; every respondent hears the questions in exactly the same manner;

2. administration of questionnaires in multiple languages, without the need for maintaining significant numbers of multilingual staff on hand throughout the entire data collection process;

3. improved reporting of sensitive or illegal behaviors when compared to interviewer administered questionnaires (Miller et. al, 1999) or pencil and paper self administered questionnaires (Turner et. al. 1998);

4. potential cost savings in interviewer labor hours; if using a mixed CATI/T-ACASI approach, the "live" interviewer is no longer needed once the respondent is connected to the T-ACASI computer or not needed at all if respondents are directed through mail or some other form of communication to dial directly into the T-ACASI computer.

5. Immediate access to collected data; the interview data is available for immediate analysis and review. Edits that are not performed during the interview, such as longitudinal edit checks, can be applied post facto while the data are "fresh" and follow-up for resolution as necessary.

T-ACASI is an evolving mode of data collection, however, and it is not without its potential problems. For example, the need to use the touch-tone pad on telephones to enter responses can become quite tedious and frustrating, particularly on longer questionnaires. Without a "live" interviewer on the telephone, respondents are left to answer questions and solve potential problems on their own, thereby changing the social dynamic usually associated with CATI interviews. For instance, there are no spontaneous interactions between interviewers and respondents of the type that can make responding to a "dry" questionnaire more enjoyable. Feedback and encouragement ("we're almost finished...", "I just have a few more questions...", "I understand, please remember that you answers will be strictly confidential ...") if offered in the T-ACASI environment, are no longer spontaneous or based on a trained interviewer's sense of respondent boredom or concern, but rather scripted and offered at identical spots in the questionnaire. This absence of interaction with a "live" interviewer means that the "social norms" often established in person-to-person interviews (such as in a CATI environment) are no longer developed. In other words, norms of reciprocity which help to sustain many interviewer-administered surveys may be absent. For example, in a CATI environment generally if the interviewer is professional and courteous, most respondents will behave in a similar manner and continue to participate in the interview – rather than hanging-up in the middle of the interview.

The mode may also increase respondent burden. Unlike a CATI survey where respondents' actions are limited to passively giving verbal responses to questions posed, T-ACASI requires respondents to take an active role both mentally and physically in entering their responses. Additionally, respondents must first be "educated" in the use of the mode. In most T-ACASI interviews, at the point where the respondent is connected to the questionnaire, they are read a series of instructions for entering their responses, accessing a "helpline" (if one is in use),

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backing up to correct answers, etc. Respondents, therefore, must listen to, understand, and utilize

these instructions to complete the questionnaire. These difficulties can be compounded if the

format of a question requires that more than one button be pressed (for instance, "How many

miles do you drive to work?", "How many sex partners have you had in the past ten years?") or

if a lot of response options are presented for categorical variables. Because modern touch-tone

telephone key pads only contain 10 digits (0 through 9), questions requiring the entry of multiple

digits are accomplished either by requiring a leading zero for responses of 0 to 9 given in a

multi-digit format or by having the respondent press a function key (such as #) after they have

entered their response. If the leading zero is not entered or the function key is not pressed, then

the application will not move the respondent forward, an obvious problem in a CAI environment.

There is also the issue of framing the questionnaire to accommodate the limitations of the

telephone keypad. The typical telephone keypad offers twelve response options, two of which (#

and *) are typically used for survey navigational/operational functions, leaving the remainder (0

through 9) available to respond to questions that are presented without any visual cues. This

limitation requires questionnaire designers to limit response categories and frame questions in a

more direct and explicit manner than might be the case with other modes. Not doing so could

lead to greater respondent difficulties and frustration and ultimately to more break-offs within

the T-ACASI environment.

These limitations associated with the T-ACASI approach raise some serious questions

about its use as an effective data collection tool: Do respondents have trouble operating within a

T-ACASI environment? What types of problems do they experience? Do certain types of

respondents (i.e., older or less educated) have more difficulties than others using the technology?

In general, do respondents appear to accept or reject the use of this technology as a data

collection vehicle? We examine these and related questions by analyzing the "break-off" behavior of respondents selected to participate in a nation-wide survey of women's sexual health and behaviors.

Study Design

Our analysis of respondent break-off behavior in a T-ACASI environment, uses data from a nation-wide survey of 1030 women between the ages of 20 and 65 on the topic of women's sexual health and behavior. The study employed a mixed mode (CATI/T-ACASI) approach. Traditional CATI methods using a "live" telephone interviewer were used to screen households for eligible sample members and to administer a series of demographic and general health-related questions. Random-digit dial methods were used to select households at the initial sampling level. Women age 20 to 65 were selected within these households using the "Next Birthday" method of respondent selection. If a woman meeting the age requirements was selected within the household, a series of additional eligibility questions was asked, including whether or not the respondent had a touch-tone telephone. Those meeting all of the eligibility requirements were then asked basic demographic questions and several general health-related questions. One of the advantages of this mixed-mode design is that we were able collect basic demographic information about respondents up front (before the TACASI portion of the interview), which provides us with greater insight into potential related to the administration of the T-ACASI portion of the questionnaire.

Once a respondent finished the CATI portion of the questionnaire, the interviewer explained the procedures for completing the questionnaire in the T-ACASI environment. A three-way call was then initiated by the interviewer, connecting the respondent and the interviewer to the T-ACASI computer. The procedure used in this study involved placing the

respondent on hold while the TI made the connection with the TACASI computer. The respondent was then reconnected thus establishing a three-way telephone connection between the respondent, interviewer, and TACASI computer.

The interviewer stayed on the line, while the first question was answered. Then, the interviewer answered any questions the respondent might have about either the computer technology or the survey in general and exited the call, thereby leaving the respondent connected to the T-ACASI computer to finish the questionnaire.

To track the progress of the respondents within TACASI, at the start of each day supervisors were provided with a listing of respondents who completed the T-ACASI interview and those who did not. Respondents who "broke-off" during the TACASI interview, were called back by senior interviewers, who inquired about the nature of the "break-off" (i.e., problems with the technology, displeasure with the content of the questionnaire, lack of time to complete, etc.) and attempted to reconnect the sample member to the T-ACASI computer to complete the interview. These follow-up calls are analogous to more traditional "refusal conversion" efforts, with the added component of assisting those who broke-off due to problems with using the technology. Several pieces of information about the break-off were captured and used in the analysis presented here, including the reason for the break-off, the point at which the break-off occurred, and the success or failure in attempting to persuade the respondent to finish the computerized interview.

Analysis of T-ACASI Break-off Behavior

Although the eligibility criteria employed on this study limit the generalizability
of our conclusions, the design does allow us to begin to understand who is most likely to break-
off during a T-ACASI interview, the nature of those break-offs, and some of the consequences of
break-off behavior.

Prevalence of Break-off Behavior

We begin by examining the frequency of break-off behavior after sample members were
transferred from CATI to the TACASI computer and our ability to persuade respondents to
reconnect and complete the TACASI portion of the interview. Table 1 provides an overview of
the number and percentage of sample members who broke-off during the TACASI interview.
About one-in-ten (10.7%) disconnected from the TACASI at some point during the interview.
This was approximately four times higher than the break-off rate associated with the CATI
portion of the interview, where only 2.4% of respondents terminated the interview once they had
completed the eligibility questions. The likelihood of breaking-off was higher among those with
less education and those with lower incomes. Among those with a high school education or less,
15.4% broke-off during the interview, compared to 7.4% of those with some college or more
education. A similar pattern is seen across income groups, with 12.7% of those with family
incomes at or below $40,000 breaking-off during the interview, compared to 8.5% of those with
family incomes above $40,000 per year. Age, race, and the presence or absence of children in the
household were not significantly related to this behavior.

[INSERT TABLE 1 ABOUT HERE]

How successful were we in reconnecting those who broke-off and convincing them to complete the interview? As shown on Table 1, we were able to convert approximately two-thirds of those who initially broke-off into completed interviews. Of the 110 who disconnected from the TACASI computer, 71 (or 64.5%) were reconnected at some later point in time and completed the interview. There were no significant differences across demographic groups in our ability to reconnect those who terminated early.

Reasons for Break-offs

Delving into the problem of respondent breakoffs further, if we want to understand how sample members interact with this new technology, we need to understand *why* respondents broke-off during the T-ACASI interview. To capture this information, interviewers who recontacted these sample members asked them why they disconnected from the TACASI interview, probing specifically for whether the reason was related to technical issues of using TACASI (i.e., difficulties entering responses, moving back, accessing the help-line, telephone line trouble, etc.) or related to the questionnaire (personal nature of the content, questionnaire length, etc.), or some other type of trouble. A listing of the responses given is shown on Table 2.

[INSERT TABLE 2 ABOUT HERE]

Most respondents (nearly 60%) had difficulties in using the technology: problems entering the responses or getting TACASI to move forward (25.5%), entering the wrong response and not know how to correct it (13.6%), phone problems of an unspecified nature (10.9%), ending the interview prematurely because they thought the interview was over (6.4%), and placing TACASI on hold to answer call waiting (2.7%). Those who had difficulty entering responses or getting the TACASI to move ahead tended to have difficulties in one of two locations in the interview – at the outset just after the interviewer exited the three-way

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connection or at the first multi-digit question, which required the respondent to press the pound key (#) after entering the number. These two problems tended to occur with about the same frequency and point to one of the more problematic aspects of this mode of interviewing – the need to educate the respondents in the use of the technology.

Some respondents indicated that although they thought they understood the instructions they were provided upon being connected to TACASI, once the interviewer was no longer on the telephone to guide them, they became confused and decided not to proceed. Others said that they were initially able to operate within the TACASI environment with few problems, until they were confronted with a multi-digit question format. As noted above, multiple digits in a questionnaire are often necessary to gather information such as "How many times ...", "How many miles ...", etc. Within the TACASI environment this can be handled one of two ways. One approach is for the instrument to be programmed to move to the next question automatically if the specified number of digits are entered. For instance, if a question has an allowable range of 00 to 99, then two digits must be entered before TACASI will present the next question. With this type of question format, the respondent must enter a leading zero if his/her response is 00 to 9 (for instance, if the respondent's answer is "7", then the respondent needs to enter 07, not just 7 to move forward). An alternative approach is to have the respondent press the # key after entering his/her response rather than entering a leading zero. For instance, if the allowable range is 00 to 99 and the respondent answers "7", then he/she would enter 7# to record the response and move to the next question. Either approach requires educating the respondent in how to enter the response for these types of questions. We chose to use the latter approach and to remind the respondents how to enter their responses by ending each multi-digit question with the phrase

"enter the number of times followed by the pound sign." It is clear, however, that even with these instructions, some respondents still had difficulty with this question format.

A related problem reported by some respondents was not knowing how to back-up in the interview to correct a previous incorrect response. Respondents were informed at the outset of the TACASI interview how to back up in the interview and that they could press "*" at any time to reach a help menu, which included the option of accessing the help line for a live interviewer. Periodically throughout the interview the TACASI system reminded the respondent of this option. Once again, however, some respondents did not remember or did not understand this action.

Respondents also had several other technology-based problems. Several respondents terminated the interview thinking the interview was complete, when it actually was not. These terminates took place at different points in the questionnaire (4 hung-up after the interviewer exited the three-way call, 6 after the first multi-digit question, and 2 towards the end of the interview), thus no clear pattern can be gleaned from these responses. Fifteen respondents reported some type of general "problem with the telephone", which they did not describe in specific detail. Finally, three respondents placed the TACASI system on hold to answer a call via call waiting. The system was programmed to wait for up to two minutes for a response and then disconnect. Therefore, if a respondent answered another call and placed TACASI on hold for more than two minutes the session "timed-out" and the connection was terminated.

Problems using the TACASI technology were not, however, the only reasons given for terminating the interview. The content and length of the TACASI interview were also at issue for one-third (33.6%) of the sample members who broke off. More than one-in-five said they broke-off because they felt the content of the questionnaire (which focused on sexual health and sexual

behavior) was too personal. An additional 10.9% said they terminated the interview because it was too long or they had to go. The CATI portion of the interview, including the screening questions took an average of 12 minutes. The TACASI portion averaged 20 minutes. Thus, completion of both portions required respondents to stay on the telephone for a minimum of half an hour.

A breakdown by demographics of the reasons given by respondents for disconnecting from the TACASI interview show that both age and education make a difference in why sample members tended to break-off (see Table 3). In terms of age, a significantly higher percentage of those age 50 to 65 than those under age 50 said they disconnected due to problems with or using the technology (20 to 35 = 59.5%; 36 to 50 = 51.2%; and, 51 to 65 = 70.4%). Those with a high school education or less were also more likely than those with some college or more education to report hanging-up due to technical reasons, rather than problems with the content or length of the questionnaire.

[INSERT TABLE 3 ABOUT HERE]

According to the respondents, therefore, a high percentage of the break-offs could be attributed to difficulties in using the technology. Not surprisingly, older respondents and those with lower levels of education were the groups most likely to report such problems.

Where the Break-off Occurred

Next, we take a somewhat different look at respondent break-off behavior by examining where in the questionnaire respondents terminated the interview, looking specifically at the role questionnaire content (health-related questions versus sex behavior-related questions) may have

played in break-off behavior, and the degree to which question format (single versus multiple digit) contributed to the early termination of the interview.

The content of the TACASI instrument was divided into two parts. The first 13 questions dealt with general health-related issues, while the remaining 57 questions focused on sexual behaviors and satisfaction. This second set of questions was obviously of a much more personal nature and could be expected to cause respondents to terminate the interview early. Looking at the findings on Table 4, however, we see that a higher percentage of respondents broke-off during the health questions (58.2%) than during the sexual behavior questions (41.8%). This pattern holds for each of the demographic groups examined (although differences between groups were not statistically significant), with the exception of income. Among women with family incomes of $40,000 or less, 67.3% broke-off during the health questions, while 32.8% broke-off during the sexual behavior questions. Among those with incomes above $40,000, however, a higher percentage (52.4%) terminated the interview during the sexual behavior questions, while 47.6% terminated during the health-related questions. Looking only at questionnaire content, therefore, it appears that a majority of the break-off occurred before the sexual behavior questions were reached, so while questionnaire content was at issue for some respondents, it does not appear to have been a leading cause of TACASI break-offs.

[INSERT TABLE 4 ABOUT HERE]

Next, we look at the possible effects of questionnaire format (single digit versus multi digit) and the demographic correlates associated with break-offs at these types of questions (see Table 5). Over two-thirds (67.3%) of the break-offs occurred at questions where a single digit response was necessary; one-third (32.7%) of the break-offs occurred at questions requiring a multiple digit response. Once again, the only significant differences noted across subgroups are

seen across income groups. While a majority of respondents in both income groups broke-off during single digit questions, the percentage was much higher among those with incomes at or below $40,000 (77.0%) than it was for those with incomes above $40,000 (54.8%). No significant differences were noted in terms of age, race, education, or having children in the household. Once again, while the multi-digit format certainly caused problems for some respondents, it was not the primary cause of the break-offs.

"Costs" of Break-offs (in Terms of Level of Effort)

Finally, we examine the "cost" of TACASI break-offs in terms of the increased level of effort required to recontact and reconnect sample members to complete the interview. This process is very similar to refusal conversion efforts that are a routine part of most CATI interviews. As is the case with traditional refusal conversion efforts, this process can involve multiple call attempts to reestablish contact with the sample member. Next, the interviewer needs to determine the nature of the break-off (intentional/not intentional, technical problem/questionnaire-related problem, refusal/non-refusal, etc.) and address any concerns the sample member might have had. Then the respondent must be reconnected to the TACASI computer to complete the interview. If the percentage of break-offs is high, then this – like other refusal conversion activities -- can become a non-trivial exercise.

This point is illustrated on Table 6, which shows the average number of call attempts made to cases where break-offs were not a problem and cases were break-offs were a problem. On average, 10.8 call attempts were made to all cases where the CATI interview was complete. Among cases where the respondent did not break-off during the TACASI interview, an average of 7.3 call attempts were made. This level of effort, however, was nearly three times greater among cases where the TACASI interview was terminated. On average, 21.5 call attempts were

made to such cases. Such a higher level of effort certainly has implications for both project budgets and schedules, requiring additional resources for added interviewer time and longer fielding periods for resolution of break-off cases. In essence the cost saving that might be realized by conducting an interview in TACASI (rather than with a "live" interviewer) may be off-set by the costs required to recontact and convert sample members who terminate the TACASI interview before it is completed.

[INSERT TABLE 6 ABOUT HERE]

Conclusions

TACASI offers a new mode of interviewing that has the potential to increase data quality, particularly on studies where the subject matter is of a personal nature. It also offers the potential of reducing interviewer costs, since an interview conducted in TACASI mode does not require a live interviewer once the respondent is connected to the TACASI computer. However, as with any new mode of data collection, there are still a number of unknowns associated with this mode. The research presented here provides a first look at some of these potential problems, particularly those associated with respondent break-off behavior or early termination of the TACASI interview.

The percentage of break-offs during the TACASI portion of the interview was relatively high compared to CATI mid-interview break-offs. We were able to recontact and complete interviews with nearly two-thirds of these cases; however, it took nearly three-times as many call attempts to complete this task than it did when respondents didn't break-off. While use of the technology and the content and length of the questionnaire each contributed to early terminations, it appears that difficulties in using the technology were the most prevalent problems. These problems included respondent's not remembering how to access help, how to

back-up in the questionnaire, how to enter a multi-digit response, and not recognizing when the interview was or was not over. These difficulties point to the twin challenges of applying computerized self-interviewing technology in a telephone setting.

First, there is the challenge of ensuring that the technology is as easy to learn and use, while at the same time keeping the instrument streamlined. If TACASI requires longer scripting for instructions, not just at the outset, but throughout the interview, then the length of the questionnaire can increase significantly, thus adding to respondent burden. Additionally, the percentage of break-offs could probably be reduced if the questions and their responses were simplified and the number of multi-digit responses minimized. This implies that only certain types of questions should be included in T-ACASI surveys (i.e., those which can be framed clearly) and the mode should not be treated as an audio-CASI equivalent.

Second is the challenge of educating respondents in a very brief amount of time to use this technology. Without a live interviewer directly on the telephone with them, respondents are forced to deal with questions and problems on their own. Some respondents have no apparent problems with this, while others simply get frustrated and terminate the interview. The findings seem to indicate, not surprisingly, that older respondents and those with lower levels of education are the most prone to having difficulties with the technologies. Unless ways are developed to make the technology more accessible to these groups, the utility of TACASI for studies focused on such groups will be limited.

In sum, while advances in technology allow survey researchers to develop and utilize new modes of collecting data, we need to recognize that these new modes bring with them both old and new problems – problems which require redress before the full potential offered by these advances can be realized.

Endnotes

[1] The study employed rather stringent eligibility requirements. Those eligible for the study had to be: (1)female, (2) age 20 to 65, (3) white or African American, (4) English-speaking, (5) sexually involved over the past six months with a male partner, and (6) have a touch-tone telephone. The generalizability of the findings presented here, therefore, are limited to persons who match these criteria.

[2] The response rate for this survey was 53.1% and was calculated as completes+partials / completes+partials+(known households*estimate percent eligible)+(estimated households among unknown households*estimated percent eligible).

[3] The small number of break-off cases (110) does limit the statistical power of our significance calculations for this table and much of the subsequent analysis.

Table 1
One or More Break-Offs within TACASI Questionnaire
By Demographic Characteristics

Demographics	Total (N)	Break-offs (N)	Break-offs (%)	Sig.[1]	CPL Given Break-off (N)	CPL Given Break-off (%)	Sig.[1]
Total	1030	110	10.7	---	71	64.5	---
Age				P<.311			P<.458
20-35	406	42	10.3		30	71.4	
36-50	427	41	9.6		24	58.5	
51-65	197	27	13.7		17	63.0	
Race				P<.684			P<.292
White	692	72	10.4		49	68.1	
Black	338	38	11.2		22	57.9	
Education				P<.000			P<.371
High School or Less	408	63	15.4		37	58.7	
Some College	329	25	7.6		18	72.0	
College Degree	292	21	7.2		15	71.4	
Income				p<.020			p<.297
$40,000 or less	480	61	12.7		36	59.0	
$40,001+	495	42	8.5		29	69.0	
Children in HH				P<.200			P<.544
Yes	644	75	11.6		47	62.7	
No	384	35	9.1		24	68.6	

[1] Significance based on chi square test

Table 2
Particular Reason Given for Break-off

Reason	Frequency (N)	Percent %
Technical Problems Using TACASI	*65*	*59.1*
Problem entering information into TACASI/ Couldn't get computer to take answers	28	25.5
Respondent hit wrong button & didn't know how to correct it	15	13.6
Phone problems (unspecified)	12	10.9
Respondent thought interview was over / Hung-up before final question	7	6.4
Respondent answered call waiting – put TACASI on hold (TACASI timed-out)	3	2.7
Didn't Like Questionnaire Content	*37*	*33.6*
Questionnaire was too Personal	25	22.7
Questionnaire was too long/No time	12	10.9
Other Problems	*8*	*7.3*
Refusal – Unable to obtain information on reason for break-off	8	7.3
Total	110	100

Table 3
Reason for Breakoff by Demographics

Demographics	Total Number	% Technical Problem	% Nature of Questions	% Refusal (Unknown)	Sig.[1]
Total	110	59.1	33.6	7.3	---
Age					P<.049
20-35	42	59.5	26.2	14.3	
36-50	41	51.2	43.9	4.9	
51-65	27	70.4	29.6	0.0	
Race					P<.246
White	72	61.1	34.7	4.2	
Black	38	55.3	31.6	13.2	
Education					P<.061
High School or Less	63	68.3	28.6	3.2	
Some College or More	46	47.8	41.3	10.9	
Income					P<.691
$40,000 or less	61	57.4	34.4	8.2	
$40,001 or more	42	64.3	31.0	4.8	
Children in HH					P<.620
Yes	75	56.0	36.0	8.0	
No	35	65.7	28.6	5.7	

[1] Significance based on chi square test

Table 4
Content of Question Where Break-off Occurred by Demographics

Demographics	Total Number	% Health Questions	% Sex Questions	Sig.[1]
Total	110	58.2	41.8	---
Age				P<.351
20-35	42	50.0	50.0	
36-50	41	61.0	39.0	
51-65	27	66.7	33.3	
Race				P<.441
White	72	55.6	44.4	
Black	38	63.2	36.8	
Education				P<.818
High School or Less	63	58.7	41.3	
Some College or More	46	56.5	43.5	
Income				P<.047
$40,000 or less	61	67.2	32.8	
$40,001 or more	42	47.6	52.4	
Children in HH				P<.791
Yes	75	57.3	42.7	
No	35	60.0	40.0	

[1] Significance based on chi square test

Table 5
Format of Question Where Break-off Occurred by Demographics

Demographics	Total Number	Single Digit Response Questions	Multi-Digit Response Questions	Sig.[1]
Total	110	67.3	32.7	---
Age				P<.798
20-35	42	69.0	31.0	
36-50	41	63.4	36.6	
51-65	27	70.4	29.6	
Race				P<.537
White	72	65.3	34.7	
Black	38	71.1	28.9	
Education				P<.457
High School or Less	63	69.8	30.2	
Some College or more	46	63.0	37.0	
Income				P<..018
$40,000 or less	61	77.0	23.0	
$40,001 or more	42	54.8	45.2	
Children in HH				P<..843
Yes	75	66.7	33.3	
No	35	68.6	31.4	

[1] Significance based on chi square test

Table 6
Level of Effort for Break-off Cases –vs- Non Break-off Cases
(Mean Number of Call Attempts for Completed TACASI Interview)

Type of Case	N	Mean Call Attempts
Total	1030	10.8
Non-Break-off Case	920	7.3
Break-off Case	110	21.5

Significance: (p < .001) based on F-test of means.

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