

## **The Effects of Demographics on Consumer Perceptions of Identity Theft in Rural and Urban Settings**

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Identity theft is a serious crime in which an individual uses the information of another to obtain benefits such as credit or medical services. Victims bear many costs to repair the damage left by an identity thief. Environmental and social differences exist between rural and urban settings which may provide unique opportunities for identity theft to occur in addition to demographic characteristics.

This study was part of a larger study that explored individual perceptions of identity theft among rural and urban residents in a Midwestern state. A self-administered survey instrument was constructed for this study. The sample included 1,700 randomly selected residents (850 rural, 850 urban). Descriptive statistics were computed during the initial data analysis; subsequent analyses were completed using cross-tabulations.

The results of this study yield few statistically significant results for any of the demographics measured, resulting in a need for further analyses on what factors influence individual perceptions on identity theft. Understanding the factors that influence individual perceptions of identity theft will allow for more targeted consumer education programming.

Identity theft occurs when an individual obtains and uses another individual's personal information to obtain benefits such as credit cards (Social Security Administration, 2006). Nine million new cases of identity theft happen each year (Federal Trade Commission, n.d.). There are likely many more identity theft victims each year that go unreported due to the time span happening between the crime and moment of discovery. Statistics regarding identity theft often underestimate the problem. Anyone who has or has had a Social Security number is at risk for becoming an identity theft victim.

Identity theft can be classified into subtypes. These subtypes include financial identity theft, medical identity theft, and character identity theft (McCoy and Schmidt, 2008). Financial identity theft occurs when an identity thief opens up credit card accounts and bank accounts in another person's name. Medical identity theft occurs when an identity thief uses another person's information to receive medical services. Character identity theft occurs when an identity thief commits a crime and gives another person's name and personal information when arrested. An additional subtype of identity theft is child identity theft (Cullen, 2007). Children's identities are stolen in order to obtain the same benefits as adults' identities, such as credit cards and medical benefits. No matter what type of identity theft is committed, victims spend many hours and many times their own money to clear their names from the damage that was done by the identity thief.

Individuals who live in rural areas experience more personalized relationships with others because in rural communities "everyone knows everyone else" (Pozarik, n.d.). Due to resource limitations, community members often volunteer to provide services and activities that would not otherwise be available (Points of Light Foundation, 2004). Since rural communities have small populations, these positions of leadership add to the visibility of rural residents in these roles, possibly putting them at a higher risk for identity theft.

Many rural residents embody self-reliance. Self-reliance is viewed as a positive trait in rural communities—people who can take care of themselves and their own problems are held in a higher regard than those that cannot or do not (Pozarik, n.d.). Therefore, self-reliance may have an adverse effect on rural residents asking for help in fixing identity theft-related problems.

Privacy is highly valued in rural communities (Pozarik, n.d.). Individuals may be less likely to share their lives outside a trusted cluster of confidants. This may affect rural victims' ability to ask for help in fixing any identity theft problems.

### Purpose and Hypothesis

The purpose of this study is to explore demographic variables that affect an individual's perception of identity theft. The hypothesis tested in this study is "Demographic variables will influence individual perceptions regarding identity theft".

### Method, Sample, and Instrumentation

This study was part of a larger study that explored individual perceptions of identity theft among rural and urban residents in a Midwestern state. A self-administered survey instrument was constructed for the purpose of this study that was comprised of three sections: *Identity Theft Perceptions*, *Identity Theft Preventative Behaviors*, and *Demographic Information*. Before proceeding with data collection, the survey was pilot tested among a convenience sample of 41 graduate students at a Midwestern university. Ten graduate students were randomly selected from a university departmental directory and were e-mailed the survey instrument and cover letter. Responses and feedback were requested to be e-mailed back to the researcher.

Respondents were asked to rate their perception of identity theft as a serious crime, identity theft as a serious crime in the United States, and identity theft being a serious problem in their state. They were also asked to rate their perception of the prevalence of identity theft in rural versus urban locations, the prevalence of identity theft victims based on their socioeconomic status, and if they perceive identity theft as a threat to themselves or their family. The *Demographic Information* section included eight categorical questions designed to obtain data on the gender, ethnicity, education, marital status, family size, housing status, age, and annual household income of respondents.

The sample was comprised of 1,700 residents of a Midwestern state (850 rural, 850 urban). Using current telephone directories, the sample was randomly selected. To select rural and urban communities, definitions provided by the National Center for Health Statistics were utilized. The National Center for Health Statistics in 2004 classified urban environments in three ways: "Large central" includes counties with one million that contain all or a portion of the largest city of the statistical area. "Large fringe" includes counties with one million or more population that do not contain any part of the largest city of the statistical area. "Small" counties are those which have less than one million in population. The National Center for Health Statistics classifies rural environments in two ways: "non-metro counties with a city of 10,000 or more population" and "nonmetro counties without a city of 10,000 or more population". Since this study was conducted, the National Center for Health Statistics has changed their classification scheme of urban environments into four metropolitan and two nonmetropolitan categories (Ingram and Franco, 2006). These classification changes are thought to have minimal influence on the outcome of this study.

Both the rural and urban samples were highly educated and of a moderate income. The majority of respondents in both the rural and urban groups were Caucasian. Both the rural and urban respondents had a high rate of marriage. The rural sample tended to be younger than the urban sample, as a majority of the urban respondents were 60 years of age or older, while the majority of the rural respondents were under 60 years of age (see Table 1).

Table 1  
Demographic Characteristics of Rural and Urban Samples

	Rural Sample		Urban Sample	
	(N=80)	Percent	(N=97)	Percent
Gender		45.2%		54.8%
Male	39	48.8%	56	57.7%
Female	41	51.3%	41	42.3%
Ethnicity				
Caucasian	79	98.8%	89	91.8%
African American	1	1.3%	6	6.2%
Asian	0	0.0%	1	1.0%
Hispanic	0	0.0%	0	0.0%
Other	0	0.0%	1	1.0%

Table 1 (continued)  
Demographic Characteristics of Rural and Urban Samples

	Rural Sample		Urban Sample	
	(N=80)	Percent	(N=97)	Percent
<b>Education</b>				
Less Than a High School Degree	3	3.8%	2	2.1%
High School Graduate	27	33.8%	2	22.7%
Some College	25	31.3%	26	26.8%
College Degree	13	16.3%	36	37.1%
Graduate Degree	12	15.0%	11	11.3%
<b>Marital Status</b>				
Single	6	7.5%	6	6.2%
Married	62	77.5%	74	76.2%
Divorced	6	7.5%	8	8.2%
Widowed	6	7.5%	5	5.2%
Other	0	0.0%	4	4.1%
<b>Family Size</b>				
1-2 People	56	70.0%	63	65.0%
3-4 People	20	25.0%	25	25.8%
5-6 People	4	5.0%	8	8.2%
7 or More People	0	0.0%	0	0.0%
No Response/ Illegible Response**	0	0.0%	1	1.0%
<b>Housing Status</b>				
Renter	3	3.8%	7	7.2%
Home Owner	74	92.5%	89	91.8%
No Response/ Illegible Response**	3	3.8%	1	1.0%
<b>Age</b>				
Under 18	0	0.0%	0	0.0%
18-29	2	2.5%	8	8.2%
30-39	7	8.8%	6	6.2%
40-49	16	20.0%	11	11.3%
50-59	16	20.0%	26	26.8%
60-64	15	18.8%	6	6.2%
65 and Over	24	30.0%	39	40.2%
No Response**	0	0.0%	1	1.0%

Table 1 (continued)  
Demographic Characteristics of Rural and Urban Samples

	Rural Sample		Urban Sample	
	(N=80)	Percent	(N=97)	Percent
Annual Household Income				
Under \$10,000	4	5.0%	1	1.0%
\$10,000-\$29,999	19	23.8%	12	12.4%
\$30,000 to \$49,999	31	38.8%	25	25.8%
\$50,000 to \$69,999	7	8.7%	22	22.7%
\$70,000 to \$89,999	5	6.3%	15	15.5%
\$90,000 or More	6	7.5%	14	14.4%
No Response/ Illegible Response**	8	10.0%	8	9.2%

\*Percentages may not sum to 100 due to rounding.

\*\* No Response and/or Illegible Response means that no response was given by a respondent or the response received by respondent was illegible.

Description of Identity Theft Dataset and Coding

The 177 survey responses to the identity theft survey were entered into a SAS dataset. For the initial analyses, responses from the Likert scale to the Identity Theft Perceptions questions (questions 1 to 6) and the Identity Theft Preventative Behaviors questions (questions 7 to 17) were coded in the following manner: Strongly Disagree was coded as a “1”, Somewhat Strongly Disagree was coded as a “2”, Neutral was coded as a “3”, Somewhat Agree was coded as a “4”, and Strongly Agree was coded as a “5”. See Table 2.

Table 2  
Initial Coding of Identity Theft Survey Data

IDENTITY THEFT PERCEPTIONS

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
1. Identity theft is a serious crime	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
2. Identity theft is a serious problem in the United States	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
3. Identity theft is not a serious problem in Indiana	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5

Table 2 (continued)  
Initial Coding of Identity Theft Survey Data

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
4. Identity theft is something that happens only in large cities	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
5. Identity theft happens mostly to the wealthy	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
6. I don't think that identity theft is likely to happen to me or a member of my family	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5

#### IDENTITY THEFT PREVENTATIVE BEHAVIORS

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
7. I never carry my PIN or passwords in my wallet or purse	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
8. I always check my credit report annually	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
9. I always deposit mail in post office collection boxes	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
10. I never shred any of my incoming mail	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
11. I always carry my Social Security card in my wallet or purse	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5

Table 2 (continued)  
Initial Coding of Identity Theft Survey Data

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
12. When paying bills with a check, I never write the entire number on the 'For' payment line	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
13. I never share personal information with telemarketers	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
14. I always have my Social Security number printed on my checks	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
15. My first full name is printed on my checks	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
16. My mailbox is secure	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5
17. I would not know what action to take to stop identity theft, if it should happen to a family member or myself	Strongly Disagree	1
	Somewhat Strongly Disagree	2
	Neutral	3
	Somewhat Agree	4
	Strongly Agree	5

#### DEMOGRAPHIC INFORMATION

<u>Demographic Variable</u>	<u>Description of Variable</u>	<u>Coded As</u>
Gender	Sex of Respondent	
	Male	1
	Female	2

Table 2 (continued)  
Initial Coding of Identity Theft Survey Data

<u>Demographic Variable</u>	<u>Description of Variable</u>	<u>Coded As</u>
Ethnicity	Racial Background of Respondent	
	White/Caucasian	1
	African American	2
	Hispanic/Latino	3
	Asian	4
	Other	0*
Education	Education of Respondent	
	Less Than High School	1
	High School Graduate	2
	Some College	3
	College Graduate (B.S./B.A.)	4
	Graduate Degree (M.S./Ph.D.)	5
Marital Status	Marital Status of Respondent	
	Single	1
	Married	2
	Divorced	3
	Widowed	4
	Other	0*
Family Size	Family Size of Respondent	
	1-2 People	1
	3-4 People	2
	5-6 People	3
	7 or More People	4
Housing Status	Home Ownership Status of Respondent	
	Renter	1
	Home Owner	2
Age	Age of Respondent	
	Under 18	1
	18-29	2
	30-39	3
	40-49	4
	50-59	5
	60-64	6
	65 and Older	7

Table 2 (continued)  
Initial Coding of Identity Theft Survey Data

<u>Demographic Variable</u>	<u>Description of Variable</u>	<u>Coded As</u>
Annual Household Income	Household Income of Respondent	
	Under \$10,000	1
	\$10,000-\$29,999	2
	\$30,000-\$49,999	3
	\$50,000-\$69,999	4
	\$70,000-\$89,999	5
	\$90,000 and Over	6

\* One survey had other racial group checked, but no racial background was provided. These responses were coded as missing data. Four surveys had other marital status checked, but no status was provided. These responses were coded as missing data.

All of the demographic variables were categorical questions on the identity theft survey. The initial coding of the demographic variables was as follows. The variable gender was coded as “1” for Male and “2” for Female. For ethnicity, the four ethnic groups were initially coded as “1” for White/Caucasian, “2” for African American, “3” for Hispanic/Latino, and “4” for Asian. The variable education had five categories, where respondents with an educational level Less Than High School were coded as “1”, those who were High School Graduate were coded as “2”, those with Some College were coded as “3”, College Graduate (B.S./B.A. degree) were coded as “4”, and those with Graduate Degree (M.S./Ph.D.) were coded as “5”. On the survey, Marital Status had five choices. Initially Single respondents were coded as “1”, Married respondents were coded as “2”, Divorced respondents were coded as “3”, Widowed respondents were coded as “4”, and Other marital status were coded as missing data, as four respondents marked ‘Other’ on the survey, but did not indicate the other marital status to which they were referring. These responses were coded as missing data because it is not known what they truly mean. The variable Family Size was coded as follows: households with 1 to 2 people were coded as “1”, households with 3 to 4 people were coded as “2”, households with 5 to 6 people were coded as “3”, and households with 7 or more people were coded as “4”. The variable Housing Status was coded as “1” for Renters and “2” for Homeowners. Age was initially coded into seven groups: respondents Under 18 years were coded as “1”, respondents 18 to 29 years were coded as “2”, respondents 30 to 39 years were coded as “3”, respondents 40 to 49 years were coded as “4”, respondents 50-59 years were coded as “5”, respondents 60-64 years were coded as “6”, and respondents 65 and Older were coded as “7”. Annual Household Income was initially coded into six groups: respondents with annual household incomes Under \$10,000 were coded as “1”, those with annual household incomes of \$10,000 to \$29,999 were coded as “2”, those with annual household incomes of \$30,000 to \$49,999 were coded as “3”, those with annual household incomes of \$50,000 to \$69,999 were coded as “4”, those with annual household incomes of \$70,000 to \$89,999 were coded as “5”, and those with annual household incomes of \$90,000 or more were coded as “6”. See Table 2.

#### Recoding of Identity Theft Survey Data.

Recoding of the survey data was necessary to increase the reliability and validity of statistical analyses. To facilitate additional analyses, the identity theft data were subsequently recoded. Responses from Identity Theft Perceptions (survey questions 1 to 6) were recoded to form two groups, respondents who had Low Identity Theft Perception and respondents with High Identity Theft Perception. Respondents who selected strongly disagree, somewhat strongly disagree, and neutral on questions 1 to 6 were placed in the Low Identity Theft Perception group, and those who selected somewhat agree and strongly agree were placed into the High Identity Theft Perception group. See Table 3.



Table 3  
Recoding of Identity Theft Survey Data

IDENTITY THEFT PERCEPTIONS

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
1. Identity theft is a serious crime	Low Identity Theft Perception	1
	High Identity Theft Perception	2
2. Identity theft is a serious problem in the United States	Low Identity Theft Perception	1
	High Identity Theft Perception	2
3. Identity theft is not a serious problem in Indiana	Low Identity Theft Perception	1
	High Identity Theft Perception	2
4. Identity theft is something that happens only in large cities	Low Identity Theft Perception	1
	High Identity Theft Perception	2
5. Identity theft happens mostly to the wealthy	Low Identity Theft Perception	1
	High Identity Theft Perception	2
6. I don't think that identity theft is likely to happen to me or a member of my family	Low Identity Theft Perception	1
	High Identity Theft Perception	2

IDENTITY THEFT PREVENTATIVE BEHAVIORS

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
7. I never carry my PIN or passwords in my wallet or purse	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
8. I always check my credit report annually	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
9. I always deposit mail in post office collection boxes	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
10. I never shred any of my incoming mail	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2

Table 3 (continued)  
Recoding of Identity Theft Survey Data

IDENTITY THEFT PREVENTATIVE BEHAVIORS

<u>Question</u>	<u>Responses</u>	<u>Coded As</u>
11. I always carry my Social Security card in my wallet or purse	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
12. When paying bills with a check, I never write the entire number on the 'for' payment line	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
13. I never share personal information with telemarketers	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
14. I always have my Social Security number printed on my checks	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
15. My first full name is printed on my checks	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
16. My mailbox is secure	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2
17. I would not know what action to take to stop identity theft, if it should happen to a family member or myself	Low Identity Theft Behavior	1
	High Identity Theft Behavior	2

DEMOGRAPHIC INFORMATION

<u>Demographic Variable</u>	<u>Description of Variable</u>	<u>Coded As</u>
Gender	Sex of Respondent	
	Male	1
	Female	2
Ethnicity	Racial Background of Respondent	
	White/Caucasian	1
	African American and Others	2

Table 3 (continued)  
Recoding of Identity Theft Survey Data

## DEMOGRAPHIC INFORMATION

<u>Demographic Variable</u>	<u>Description of Variable</u>	<u>Coded As</u>
Education	Education of Respondent	
	Less Than High School/ High School Graduate	1
	Some College	2
	College Graduate (B.S./B.A.)	3
	Graduate Degree (M.S./Ph.D.)	4
Marital Status	Marital Status of Respondent	
	Single	1
	Married	2
	Divorced/ Widowed	3
	Other	0*
Family Size	Family Size of Respondent	
	1-2 People	1
	3-4 People	2
	5-6 People	3
Housing Status	Home Ownership Status of Respondent	
	Renter	1
	Home Owner	2
Age	Age of Respondent	
	Under 40	1
	40-59	2
	60-64	3
	65 and Older	4
Annual Household Income	Household Income of Respondent	
	Under \$30,000	1
	\$30,000-\$49,999	2
	\$50,000-\$69,999	3
	\$70,000-\$89,999	4
	\$90,000 and Over	5

\*Four surveys had other marital status checked, but no status was provided. These responses were coded as missing data.

#### Recoding of Demographic Variables.

Some recoding was also done to the demographic variables. Ethnicity was collapsed from five categories (White/Caucasian, African American, Hispanic/Latino, Asian, and Other) into two groups: White/Caucasian and African American and Others. This was necessary as the majority of the sample was Caucasian (90%) and the representation of African Americans, Hispanics/Latinos, and Other ethnic groups was very small. Therefore the data were recoded and these groups were combined.

For Education, respondents who had earned less than a high school education or a high school degree were placed into one group instead of being placed into separate groups as they were previously. This was done because only five respondents had earned less than a high school education and forty-nine had obtained a high school education. Therefore these fifty-four responses were combined. All other Education groups remained the same in the recoding process.

For Marital Status, single respondents and married responses remained in separate groups, while divorced and widowed respondents were grouped together in the recoding. This was necessary as there were only 25 respondents in the total sample that were either divorced or widowed.

The Age variable was collapsed from seven groups into four groups due to there being few responses in the under 18 years of age, 18 to 29 years of age, and 30-39 years of age. Recoding these responses into a larger group decreases the likelihood of errors in the chi-square analyses as there will be fewer zeroes present in the response cells. The first group included respondents who were less than 40 years of age. The second group was comprised of respondents who ranged in age from 40 to 59 years. The third group included who were 60 to 64 years of age, and the fourth group included individuals who were 65 years of age and older.

Annual Household Income was recoded from seven groups into five groups. Few respondents (36) had low incomes, therefore leaving responses in the first two income groups, under \$10,000 and \$10,000 to \$29,999 would have caused errors in the chi-square analysis as there would have been zero responses in the cells. The first group was comprised of respondents who had an annual household income of less than \$30,000. The other four annual household income groups remained unchanged from the initial coding. See Table 3.

The sample was stratified into rural and urban categories for data analysis. Each of the six questions in the *Identity Theft Perceptions* section of the survey instrument were cross-tabulated with each of the demographic variables measured by the survey instrument.

### **Statistical Techniques**

Descriptive statistics were computed during the initial data analysis. Further statistical analyses were done using cross-tabulations.

To test the hypothesis for this study, "Demographic variables will influence individual perceptions and preventative behaviors practiced regarding identity theft", cross-tabulations were conducted between each of the questions in the *Identity Theft Perceptions* section of the survey and each of the questions in the *Demographic Information* section of the study. Yates' correction was used in conjunction with the cross-tab analyses for some of the survey questions due to a lack of variability in the responses. Yates' correction is a conservative adjustment applied to chi-square analyses that have one or more cells with less than five observations per cell.

### **Results**

Of the 1,700 mailed identity theft surveys, a total of 188 surveys were returned, for a total response rate of 11%. Eight surveys were returned with no visible postmark, so there was no way to distinguish where the survey was rural or urban or the location from which it had originated. One survey was returned with a postmark that was outside of the survey area. These nine surveys were deemed unusable and were removed from the sample.

Eighty-one surveys were returned from the rural sample, representing a rural response rate of 10%. One survey was deemed unusable because the postmaster returned it, as the individual had moved and left no forwarding address. This left 80 completed surveys for analysis. Ninety-eight surveys were returned from the urban sample, representing an urban response rate of 12%. Of these surveys, one survey was returned with the questions unanswered. This left 97 completed surveys for analysis (see Table 4).

Table 4  
Survey Responses

<b>Total Sample</b>	<b><i>n</i></b>
Total Completed Surveys Returned	188
Total Completed Surveys Usable in Analyses	177
Total Completed Surveys NOT Usable in Analyses	11
<b>Rural Surveys</b>	
Total Completed Surveys Returned	81
Total Completed Surveys Usable in Analyses	80
Total Completed Surveys NOT Usable in Analyses	1
<b>Urban Surveys</b>	
Total Completed Surveys Returned	98
Total Completed Surveys Usable in Analyses	97
Total Completed Surveys NOT Usable in Analyses	1

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Description of Sample

This sample for the study was predominately males (54%) and whites (95%). The sample was highly educated, with 69.5% of respondents having achieved at least some college education. A majority of the sample was married (78%), and 67% lived in one to two person households. A majority of the sample (95%) owned their home and 44% had annual household incomes of \$50,000 or more (see Table 1).

To investigate this hypothesis, questions 1 to 6 of the survey instrument and questions from the Demographic Information section of the survey were analyzed. In making conclusions about statistical significance, an alpha value of .10 was used.

Cross Tab Analyses

The Cross Tab analysis of identity theft is a serious crime with demographics for the sample yielded no statistically significant demographics (see Table 5). The least statistically significant demographic was found to be gender (0.8816, Yates' correction 1.000). Education (chi-square 0.7480, Yates' correction 0), marital status (chi-square 0.7385, Yates' correction 0), and housing status (chi-square 0.6652, Yates' correction 1.000) were found to be statistically insignificant as well. Ethnicity (chi-square 0.6589, Yates' correction 1.000), annual income (chi-square 0.5442, Yates' correction 0), age (chi-square 0.4543, Yates' correction 0), and family size (chi-square 0.3752, Yates' correction 0) were found to be statistically insignificant as well.

Table 5  
 Identity Theft is a Serious Crime Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender*	0.8816	Not Significant
Ethnicity*	0.6589	Not Significant
Education*	0.7480	Not Significant
Marital Status*	0.7385	Significant
Family Size*	0.3752	Not Significant
Housing Status*	0.6652	Not Significant
Age*	0.4543	Not Significant
Annual Income*	0.5442	Not Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of identity theft is a serious problem in the United States with demographics for the sample yielded no statistically significant results (see Table 6). Family size was found to be the least statistically significant demographic with a chi-square of 0.9780 (Yates' correction 0). Education (chi-square 0.8511, Yates' correction 0), gender (chi-square 0.8063, Yates' correction 1.000), and annual income (chi-square 0.6659, Yates' correction 0) were also found to be statistically insignificant. Ethnicity (chi-square 0.4321, Yates' correction 0.9445), housing status (chi-square 0.4205, Yates' correction 0.9158) and age (chi-square 0.3571, Yates' correction 0) were found to be statistically insignificant as well. The least statistically significant demographic was found to be marital status (chi-square 0.1185, Yates' correction 0).

Table 6  
 Identity Theft is a Serious Problem in the United States Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender	0.8063	Not Significant
Ethnicity*	0.4321	Not Significant
Education*	0.8511	Not Significant
Marital Status*	0.1185	Not Significant
Family Size*	0.9780	Not Significant
Housing Status*	0.4205	Not Significant
Age*	0.3571	Not Significant
Annual Income*	0.6659	Not Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of identity theft is not a serious problem in Indiana with demographics for the sample yielded no statistically significant results (see Table 7). The least statistically significant result was found to be marital status, with a chi-square of 0.8205 (Yates' correction 0). Gender (chi-square 0.7743, Yates' correction 0.9809), education (chi-square 0.6816, Yates' correction 0), and family size (chi-square 0.4794, Yates' correction 0) were found to be statistically insignificant as well. Annual income (chi-square 0.4119, Yates' correction 0), age (chi-square 0.3908, Yates' correction 0), and ethnicity (chi-square 0.3584, Yates' correction 0.7713) were also statistically insignificant. Housing status was the least statistically insignificant, with a chi-square of 0.1403 (Yates' correction 0.3855).

Table 7

Identity Theft is a not a Serious Problem in Indiana Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender	0.7743	Not Significant
Ethnicity*	0.3584	Not Significant
Education*	0.6816	Not Significant
Marital Status*	0.8205	Not Significant
Family Size*	0.4794	Not Significant
Housing Status*	0.1403	Not Significant
Age*	0.3908	Not Significant
Annual Income*	0.4119	Not Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of identity theft happens only in large cities with demographics for the sample yielded no statistically significant results (see Table 8). Marital status was found to be least statistically significant, with a chi-square of 0.8652 (Yates' correction 0). Family size (chi-square 0.7169, Yates' correction 0), education (chi-square 0.6466, Yates' correction 0), and age (chi-square 0.6136, Yates' correction 0) were also found to be statistically insignificant. Gender (chi-square 0.5799, Yates' correction 0.8333), annual income (chi-square 0.5547, Yates' correction 0), and ethnicity (chi-square 0.5002, Yates' correction 1.000) were found to be statistically insignificant as well. The least statistically insignificant result was found to be housing status (chi-square 0.4439, Yates' correction 0.9729).

Table 8  
Identity Theft is Happens Only in Large Cities Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender*	0.5799	Not Significant
Ethnicity*	0.5002	Not Significant
Education*	0.6466	Not Significant
Marital Status*	0.8652	Not Significant
Family Size*	0.7169	Not Significant
Housing Status*	0.4439	Not Significant
Age*	0.6136	Not Significant
Annual Income*	0.5547	Not Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of identity theft happens mostly to the wealthy with demographics for the sample yielded one statistically significant result, annual income (chi-square 0.0527). See Table 9. Marital status (chi-square 0.9908, Yates' correction 0), age (chi-square 0.9589, Yates' correction 0), and housing status (chi-square 0.6356, Yates' correction 1.000) were found to be statistically insignificant. Education (chi-square 0.5997, Yates' correction 0), family size (chi-square 0.5655, Yates' correction 0), and ethnicity (chi-square 0.4106, Yates' correction 0.8930) were also found to be statistically insignificant. The least statistically insignificant demographic was gender (chi-square 0.2270, Yates' correction 0.3529).

Table 9  
Identity Theft is Happens Mostly to the Wealthy Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender	0.2270	Not Significant
Ethnicity*	0.4106	Not Significant
Education*	0.5997	Not Significant
Marital Status*	0.9908	Not Significant
Family Size*	0.5655	Not Significant
Housing Status*	0.6356	Not Significant
Age*	0.9589	Not Significant
Annual Income*	0.0527	Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of identity theft is not likely to happen to me or my family with demographics for the sample yielded two statistically significant results (see Table 10). Age was found to be significant with a chi-



square of 0.0238. Family size was found to be significant with a chi-square of 0.0624. Ethnicity (chi-square 0.7314, Yates' correction 1.000), education (chi-square 0.7069, Yates' correction 0), and annual income (chi-square 0.3319, Yates' correction 0) were found to be statistically insignificant. Housing status (0.2983, Yates' correction 0.6328), gender (chi-square 0.2047, Yates' correction 0.3147), and marital status (chi-square 0.1134, Yates' correction 0) were also found to be statistically insignificant.

Table 10

Identity Theft is not Likely to Happen to Me or My Family Cross-Tabulated with Demographics for the Sample

Select Demographics	Chi-Square	Significance
Gender	0.2047	Not Significant
Ethnicity*	0.7314	Not Significant
Education*	0.7069	Not Significant
Marital Status*	0.1134	Not Significant
Family Size*	0.0624	Significant
Housing Status*	0.2983	Not Significant
Age*	0.0238	Significant
Annual Income*	0.3319	Not Significant

\* At least one cell in the Chi-Square analysis had less than 5 observations.

The Cross Tab analysis of location with demographics for the sample yielded four statistically significant results (see Table 11). Annual income (chi-square 0.0014), education (chi-square 0.0187), ethnicity (chi-square 0.0554), and age (chi-square 0.0579) were found to be statistically significant. Marital status was found to be least statistically significant with a chi-square of 0.9403 (Yates' correction 0). Family size (chi-square 0.6527, Yates' correction 0), housing status (chi-square 0.3416, Yates' correction 0.5331), and gender (chi-square 0.2330, Yates' correction 0.2978) were found to be statistically insignificant as well.

Table 11  
Location Cross-Tabulated with Demographics

Select Demographics	Chi-Square	Significance
Gender	0.2330	Not Significant
Ethnicity*	0.0554	Significant
Education	0.0187	Significant
Marital Status	0.9403	Not Significant
Family Size	0.6527	Not Significant
Housing Status*	0.3416	Not Significant
Age	0.0579	Significant
Annual Income	0.0014	Significant

\*At least one cell in the chi-square analysis had less than five observations.

### Limitations

This study on identity theft was limited to only one rural community and one urban community in one Midwestern state, out of several that could have been selected. This study had an initial sample size of 1,700. Had a larger sampling area and sample size been selected, this could have had an effect on the results. A larger sample may have increased the response rate. In addition, a large sample area and size could have resulted in significant relationships being found during the testing of the hypothesis for the relationships that were found to be statistically insignificant. There are multiple definitions of what constitutes rural and urban environments. Had different definitions been used in this study, this may have had an effect on results.

### Conclusions

The Cross Tab analysis of demographics for the sample with identity theft perceptions yielded few statistically significant results for any of the demographics measured, therefore the hypothesis, "Demographic variables will influence individual perceptions and preventative behaviors practiced regarding identity theft", is not confirmed. These results can be partially attributed to the relatively small sample size and low response rates to the survey.

The results of this study imply a need for further analysis on what factors influence individual perceptions of identity theft. A more thorough understanding of factors that influence perceptions of identity theft will allow for the development of more targeted consumer education programs.

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