Chapter III

Methods

This chapter describes the methods and procedures that were used in this study of the consumer knowledge of high school students in Middlesex County, Virginia. The purpose of this chapter is to provide a discussion of the population, instrument development, data collection methods, and analysis that will be used.

Population

High school students enrolled at Middlesex High School between the ages of 14 – 19 were included in the study. The 375-student population was chosen because it represented all of the high school youth, at all four grade levels, enrolled in Middlesex Public High School.

Middlesex County is part of the historic Middle Peninsula of Virginia and dates back to 1668. The county lies between the Rappahannock and Piankatank Rivers, where they meet the Chesapeake Bay to create the 135 miles of waterfront within its borders (Appendix A). The county is rural with an approximate population of 8,500 living in its 138 square mile area. The bays and rivers, considered as “roads” years ago, have contributed always to the county’s economic, cultural and social advancements. Water continues to be important to Middlesex County residents. Some continue to work as watermen, while others use the recreational potential of the area to operate marinas, hotels and seafood restaurants.

There are limited locations to spend money in Middlesex County. The county has only three grocery stores, one laundromat, and one fast food restaurant. There are no malls or shopping centers. Most stores are locally owned and many are run out of people’s homes. There are movie rentals, pizza deliveries, craft stores, gas stations, hardware stores, mechanics and a few restaurants (mostly seafood). People from Middlesex have to make an effort when they want to go shopping. Transportation has to be arranged. The closest discount store is in Lancaster or Gloucester. Middlesex residents have to drive either to Richmond (63 miles), Williamsburg (40 miles), or to Newport News (52 miles) to go to a mall. Going shopping is a planned event. People
need to know ahead of time what they need and want to prevent having to backtrack the
distance to the store to get something they forgot or return something that was not right.
Impulse buying creates a possible danger for those who live away from the stores. If
someone buys something on an impulse that he/she was not satisfied with, there is a
chance that he/she will be more likely to keep it anyway, rather than to return it since
they live so far away from the store.

**Instrument**

Data were collected using a questionnaire developed by a partnership between the
Consumer Federation of America and American Express. The two groups contracted
with the Psychological Corporation to develop the test.

The instrument consisted of a 52 item questionnaire designed to measure
knowledge in six key areas of consumption—consumer credit, checking/savings,
automobile insurance, housing rental, food purchase, and automobile purchase. Fourteen
questions were asked on credit, seven on checking/savings, seven on automobile
insurance, eight on housing rental, eight on food purchase, and eight on automobile
purchase (Appendix B). The questions tested several types of consumer knowledge in
each subject area. These included:

- **Definitions**—what important terms such as APR, comprehensive
  coverage, and unit pricing mean.

- **Cost**—how to purchase goods or services efficiently, including
  awareness of relevant cost factors and their relative importance.

- **Problem resolution**—how to solve problems related to products
  including awareness of consumer rights, seller rights, and government
  and nonprofit agencies.

Each question was asked in a multiple-choice format with four possible responses.
The scoring scale used with the national sample where scores of at least 75% indicated
excellent understanding; scores between 60% and 74%, good understanding; scores
between 45% and 59%, moderate understanding; and scores below 45%, poor
understanding was used. Questions ranged in degree of difficulty, from the fairly easy to
the very difficult. Many knowledge questions from the test of consumer knowledge of
adult American by the Educational Testing Service, were included in the high school survey. For these questions, the knowledge of high school seniors and adults could be compared (Consumer Federation of America, 1991). Eight demographic questions were asked to identify specific characteristics of the participants such as gender, age, ethnicity, year in school, family income, monthly spending, possession of a checking account, plans after graduating from high school, and whether they had previously taken a consumer education course.

**Informed Consent**

The populations examined in the study were minors. For the high school student to participate as a subject in the research, both the parental or guardian Informed Consent and the child’s Informed Consent were required. The forms were collected over a two-week interval. Every student was required to return the consent form, with either a “yes” or “no they cannot participate” in the study response. The investigator created additional space for comments explaining why a student would not be allowed to participate. These results also were included in the report. Both the parents and the students were informed that the student was free to withdraw from this study at any time, without penalty. See Informed Consent in Appendix C.

**Data Collection**

Since the questionnaire being used was already piloted and tested across the nation, the researcher found it unnecessary to pilot test the survey. The ineffective questions were already removed and revised (Consumer Federation of America, 1991).

Homeroom teachers were selected to administer the questionnaire along with the researcher. The homeroom teachers were trained so each understood the questions and the objectives of the study.

The students were organized in their homeroom classrooms. There was a short introduction of the experiment, either read by the teacher or researcher. Then the homeroom teacher or researcher administered the survey along with the data-coding sheets which had assigned subject numbers. The teachers or researcher were available to answer any questions pertaining to the survey procedure, however they were instructed
not to give any hints or answers to the survey. All questionnaires and answer sheets were collected at the end of the extended homeroom. The researcher and homeroom teachers thanked the participating students and gave them a pencil. The students who did not finish the survey by the end of the homeroom reconvened in the cafeteria to complete the survey, under the supervision of the researcher. The non-participating students used the extended homeroom as a study hall—either being quiet in the room or removed to another location while the survey was being given.

Confidentiality/Anonymity

Only those student’s whose parents consented for them to participate in the study were matched with subject numbers and surveys. The homeroom teachers’ names were used as a way to organize the forms.

The individual results of this study were kept strictly confidential. At no time will the researcher release the individual results of this study to anyone without the written consent of the parent. Any information provided had the student’s name removed and only the assigned subject number identified the participant during the analysis.

Risks and Benefits

There were no risks to the participants in this study. The research was conducted in the school setting, much like the standardized tests that take place there. There were computer read answer coding sheets and pre-assigned subject numbers on the cognitive surveys to keep the students’ names anonymous.

The students of this age group benefit by having their needs assessed in concerning consumer education. The results were used to find the area(s) where the students have adequate consumer knowledge and where they need more knowledge. This study was used to determine what kinds of consumer programs need to be provided in this community.

Data Analyses

Each answer was coded on a data-coding sheet for computerized statistical analysis. The data were analyzed with descriptive statistics. The frequency distribution,
means, and percentages were calculated with SAS, a computer-analysis program. Non-statistical comparisons were made between the national average results from the 1991 survey of high school seniors and each grade level. Non-statistical comparisons also were made between each grade level and consumer area, and with demographics of grade levels and consumer areas.

Summary

This chapter describes the methods for this study to examine the consumer knowledge high school students from Middlesex County, Virginia and to determine the needs of this community. The consumer issues were defined as consumer credit, checking/savings, automobile insurance, housing rental, food purchasing, and automobile purchasing.