A Study of the Relationship between Church Sponsored K-12 Education and Church Membership in the Seventh-Day Adventist Church

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A STUDY OF THE RELATIONSHIP BETWEEN CHURCH SPONSORED K-12 EDUCATION AND CHURCH MEMBERSHIP IN THE SEVENTH-DAY ADVENTIST CHURCH

by

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Church growth continues to be a concern for religious sects. Writers on church growth hold that all the various ministries of the church must assist the church in accomplishing church growth.

The purpose of this study was to determine whether or not persons who had been students in the Adventist school system had greater probability of joining the church and staying in the church than those who did not attend an Adventist school but were from homes where at least one parent was a Seventh-day Adventist.

There were two dependent variables in the study: initial baptism to join the church and continued retention on the church books as a church member at the time of the study. There were five independent variables in the study: (a) amount of K-12 education, (b) church membership of the parents, (c) amount of education of the parents, (d) church involvement of the parents, and (e) whether or not a parent worked for the church.

The research involved collecting data from Adventist families in Illinois, Indiana, Michigan, and Wisconsin. Data were analyzed using chi square, Cramer's $V$, and logistic multiple regression. Major conclusions are: (a) students who attend all 12 grades in an Adventist school have approximately a 50% greater probability of joining and
staying in the church, (b) there is no cumulative effect of the number of years of Adventist schooling on church joining, (c) there is a cumulative effect of the number of years of Adventist schooling on remaining in the church if the person joins, and (d) more college graduates tend to stay in the church than non-college graduates.

The study leads to suggestions for further research related to church growth and K-12 education, its applicability to other denominations, and implications for the viability of K-12 education in the Adventist church.
ACKNOWLEDGMENTS

It is with sincere appreciation that I wish to express gratitude to my dissertation chair, Dr. Larry Schlack, and committee members, Dr. Dave Cowden and Dr. James Petersen, for their ready encouragement and gentle criticism in guiding the preparation of this dissertation.

Special mention is due my associate, Gary Randolph, who gave immeasurable assistance to me with his willing attitude and readiness to help me by meeting various appointments and accepting varied office tasks above and beyond his own responsibilities. To him, as well as Agnes Anderson and Luella Wilbur, my understanding and helpful office associates, I extend my sincere appreciation.

I wish to express a special measure of gratitude and appreciation to Joanne, my wife, for her understanding and willingness to assume extra duties in the home during the time of my graduate studies.

Elder Fred Stephan not only gave encouragement but also provided needed financial support for the research portion of my dissertation. I owe a debt of gratitude to him and the North American Division Office of Education for that assistance.

Finally, I wish to acknowledge and extend appreciation to the Lake Union Conference Administration for the support given financially along with the encouragement to initiate and complete the research necessary in the accomplishment of this dissertation.

Warren Earl Minder

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Church growth has been and continues to be a major concern for many religious denominations. Churches as organizations have goals and concern for productivity. Transferring these organizational concepts of productivity and goal attainment to a church organization involves knowing what a church organization does to meet it's stated mission. Christianity as expressed in many churches has the common goal of evangelism. Evangelism is operationalized by Christian churches in various ways. Some churches have extensive outreach ministries to foreign countries as well as outreach ministries in their own homeland. The basic purpose behind the outreach programs is evangelism which results in church growth. Church growth, therefore, is the bottom line factor in determining the effectiveness of a Christian religion. This research project is a study of the relationship between church growth and one of the church ministries in the Seventh-day Adventist church.

Maloney and Phillips (1984, p. 82), commenting about church growth in the United States, indicated that between 1973 and 1983 the membership in Protestant churches increased about 40% and the Catholic churches increased their membership by about 56%. According to the United States Department of Commerce, Bureau of Census (1983),
the United States general population increased approximately 11.4% during the latest 10-year population study (1970 to 1980). It is obvious that the church growth trend exceeds the general population growth trend in a substantial way.

During the 1973 to 1983 time period used in the report by Maloney and Phillips (1984), the Seventh-day Adventist church grew approximately 34% in the United States, according to the Seventh-day Adventist church's 121st Annual Statistical Report--1983 (1984c, p. 5). From the reported data it is obvious that the Adventist church is growing. Wagner (1976) stated that the "indispensable condition for a growing church is that it wants to grow" (p. 47). For a church to want to grow it must make a conscious effort and take carefully considered action to insure that each program of the church has as its basic purpose church growth.

Seventh-day Adventist church growth writers Dudley and Cummings (1983a) hold that the church's multitude of ministries must all focus on church growth. They stated that "the church demands that every program demonstrate how it will help the congregation grow" (p. 27).

This study attempted to fulfill that demand with respect to the Seventh-day Adventist elementary and secondary (K-12) educational program.

Church Schools and Church Growth

The Adventist church operates a worldwide elementary and secondary school system. It was stated in the World Report--1983 (1984) that the school system is comprised of 5,348 schools, 29,584
teachers, and 658,407 students. The millions of dollars spent by parents for tuition, coupled with the millions of dollars the church allocates to the educational K-12 program, must support the church mission and the church educational philosophy.

The Seventh-day Adventist North American Division Education Code, K-12 (1984b) states that the primary purpose of the school system is to transmit to the children the "ideals, beliefs, attitudes, values, habits, and customs... There is peculiar to the church a body of knowledge, values, and ideals that must be transmitted to the younger generation in order that the church may continue to exist" (Item 1020).

"Continuing to exist" implies that a church must add new members to replace those that die or leave the church. The way the Seventh-day Adventist church adds members to its fellowship is through the rite of baptism or profession of faith.

These rites indicate that the person accepts the beliefs, values, and doctrines of the church. Until a person is baptized he is not considered a church member and is not listed on the church books as a member. Church growth, therefore, is determined by the number of new members minus those who leave the church or die.

When a person joins the Adventist church by baptism, a certificate is signed by the officiating clergyman signifying that the new member knows, understands, and accepts the beliefs, values, and doctrines of the Adventist church.

In the Mid-Century Survey of Seventh-day Adventists (Seventh-day Adventists [SDA], 1951), the most critical age for church member
baptism was listed in the age range of 7 to 14. It was pointed out that 70% of all Adventist church members were baptized during those years, with 19% baptized between the ages of 15 and 18. According to Wharton (1971), the most critical year for baptism was the age of 12, with 20.6% of the Adventist church members being baptized at that age. Age 13 had 13% of the membership baptisms, while ages 14 and 11 had 12.8% and 10.8% of the membership baptisms, respectively.

Selected Influences on Baptism

A number of factors have been suggested as having an influence on whether or not a person joins the Seventh-day Adventist church. Church school education has been assumed to be a part of the constellation of factors related to church membership. Stephan (1979) suggested, after studying church membership gains and losses in the Lake Union territory, that young people who were from homes with both parents as Seventh-day Adventists and who attended church school were more likely to join the church by baptism. In a study conducted in California, Lee (1980) prioritized the factors influencing a person to become a Seventh-day Adventist as (a) Adventist friends, (b) marital status, and (c) parental employment in the church. Banta (1977) found that children would more likely be baptized into the Seventh-day Adventist church when both parents were Seventh-day Adventists than if only one parent were a church member.

Lewis (1974) suggested that highly religious Seventh-day Adventist parents are more likely to educate their children in Seventh-day Adventist schools than marginally religious parents. Metcalfe (1969)
suggested that unskilled, or poorly educated, parents were most favorable toward Seventh-day Adventist church school education, as compared to professionally employed or highly educated parents. In a study conducted by Abbey and Lee (1981), it was reported that Seventh-day Adventists with higher education tended to send their children to a Seventh-day Adventist school and were more likely to have attended Seventh-day Adventist schools themselves. The factors of educational level of the parents and parental religiosity are variables that were identified as possibly having an affect on the decision of church joining.

This study investigated the relationship between student attendance in Seventh-day Adventist K-12 schools and persons being baptized and remaining as church members, while controlling other selected factors that have been suggested as possibly influencing the decision of a person to join the church through baptism.

Baptism and Church School Curriculum

A child that is in a church school will be exposed each year to religious training in the form of a Bible curriculum that includes the basic beliefs of the Seventh-day Adventist church. In addition, the total school curriculum is designed to include the integration of faith and learning that provides the student with an exposure to a philosophy of life based on the beliefs of the Seventh-day Adventist church. The North American Division Education Code, K-12 (SDA, 1984b) outlines the purpose of the school curriculum by stating that it is:

To nurture spiritual sensitivity and awareness.
To teach and encourage internalization of Christian doctrine and practice as believed and taught by Seventh-day Adventists.

To make religion—worship, faith, participation—an integrating and unifying force in learning.

To provide an environment in which students are exposed to Seventh-day Adventist standards of modesty and moral behavior by precept and example. (p. 9)

This philosophy and curriculum endeavor is operationalized by teachers, principals, and church pastors as they organize and teach each classroom subject in the school program. A child not in the church school, therefore, does not experience the in-depth exposure to the Adventist beliefs or modeling influence of Seventh-day Adventist teachers.

Church School Enrollments

The church school enrollments in the Adventist system in North America have been dropping. According to the North American Division Education Annual Report—1984 (SDA, 1985b, p. 45), school enrollments peaked between 1976 and 1978. Table 1 shows the enrollment trends of Adventist education in comparison with church membership increases in the United States. Table 2 shows that both public school and private school enrollments peaked at about the same time. It is evident that the declining school enrollments of the Seventh-day Adventist church parallel, in a substantial way, the declining national public and private school enrollments.

The U.S. Department of Commerce, Bureau of Census (1983, p. 103), lists the birth rate in 1951 at 31 births per 1,000 persons
Table 1
National Seventh-day Adventist School Population and Church Membership, 1951-1984

<table>
<thead>
<tr>
<th>Year</th>
<th>Church members Dec. 31</th>
<th>K-8</th>
<th>9-12</th>
<th>13-20</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Opening enrollment</td>
<td>%</td>
<td>Opening enrollment</td>
<td>%</td>
</tr>
<tr>
<td>1951</td>
<td>260,185</td>
<td>29,124</td>
<td>11.2</td>
<td>11,169</td>
<td>4.3</td>
</tr>
<tr>
<td>1956</td>
<td>299,984</td>
<td>36,617</td>
<td>12.2</td>
<td>13,412</td>
<td>4.5</td>
</tr>
<tr>
<td>1961</td>
<td>343,664</td>
<td>43,554</td>
<td>12.7</td>
<td>16,950</td>
<td>4.9</td>
</tr>
<tr>
<td>1966</td>
<td>391,014</td>
<td>47,325</td>
<td>12.1</td>
<td>18,878</td>
<td>4.8</td>
</tr>
<tr>
<td>1971</td>
<td>454,096</td>
<td>52,216</td>
<td>11.5</td>
<td>20,145</td>
<td>4.4</td>
</tr>
<tr>
<td>1976</td>
<td>536,649</td>
<td>53,808</td>
<td>10.0</td>
<td>22,534</td>
<td>4.2</td>
</tr>
<tr>
<td>1981</td>
<td>622,961</td>
<td>54,099</td>
<td>8.7</td>
<td>19,497</td>
<td>3.1</td>
</tr>
<tr>
<td>1982</td>
<td>642,317</td>
<td>52,780</td>
<td>8.2</td>
<td>18,225</td>
<td>2.8</td>
</tr>
<tr>
<td>1983</td>
<td>660,253</td>
<td>52,009</td>
<td>7.9</td>
<td>17,977</td>
<td>2.7</td>
</tr>
<tr>
<td>1984</td>
<td>679,000(^a)</td>
<td>50,669</td>
<td>7.5</td>
<td>18,064</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Note. From North American Division Education Annual Report--1984 (p. 45) by Seventh-day Adventists, 1985, Washington, DC: General Conference of Seventh-day Adventists, Department of Education.

\(^a\)Estimate.
Table 2
National K-12 Enrollments, 1970-1986
(in thousands)

<table>
<thead>
<tr>
<th>Year</th>
<th>Public K-12</th>
<th>Private K-12</th>
<th>Total K-12</th>
</tr>
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<tr>
<td>1970</td>
<td>45,908</td>
<td>5,363</td>
<td>51,272</td>
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<tr>
<td>1971</td>
<td>46,081</td>
<td>5,200</td>
<td>51,281</td>
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<tr>
<td>1972</td>
<td>45,744</td>
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</tr>
<tr>
<td>1973</td>
<td>45,429</td>
<td>5,000</td>
<td>50,430</td>
</tr>
<tr>
<td>1974</td>
<td>45,053</td>
<td>5,000</td>
<td>50,053</td>
</tr>
<tr>
<td>1975</td>
<td>44,791</td>
<td>5,000</td>
<td>49,791</td>
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<td>1976</td>
<td>44,317</td>
<td>5,167</td>
<td>48,484</td>
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<tr>
<td>1977</td>
<td>43,577</td>
<td>5,140</td>
<td>48,716</td>
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<tr>
<td>1978</td>
<td>42,550</td>
<td>5,085</td>
<td>47,636</td>
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<tr>
<td>1979</td>
<td>41,579</td>
<td>5,100</td>
<td>46,679</td>
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<tr>
<td>1980</td>
<td>40,995</td>
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<td>40,189</td>
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<tr>
<td>1982</td>
<td>39,544</td>
<td>5,000</td>
<td>44,544</td>
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<tr>
<td>1983</td>
<td>39,169</td>
<td>5,000</td>
<td>44,169</td>
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Projected

<table>
<thead>
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<th>Private K-12</th>
<th>Total K-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>39,039</td>
<td>5,000</td>
<td>44,039</td>
</tr>
<tr>
<td>1985</td>
<td>39,166</td>
<td>5,000</td>
<td>44,166</td>
</tr>
<tr>
<td>1986</td>
<td>39,456</td>
<td>5,000</td>
<td>44,556</td>
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</table>

in comparison with 14.5 births per 1,000 persons in 1983. It is obvious that the declining birth rates account for a large share of the drop in school enrollments. These same demographic factors influence the Seventh-day Adventist school system. From Table 1 it can be calculated that the church membership in the United States has increased about 234% over the last 34 years, and the school enrollments grew about 172%. The declining enrollments started after 1976, in spite of the increasing church membership.

In addition to the lowered student population, a larger percentage of the available youth of the church seems not to choose to attend Adventist schools, Voyles (1981) reported. He pointed out that in the United States the percentage of the youth, from families where at least one parent is an Adventist, who attend church schools dropped from approximately 60% in 1960 to 40% in 1981.

Kroman (1982) endeavored to determine why youth were not attending church schools. He found in his study that finances and school availability were the two overriding factors why Seventh-day Adventist parents do not send their children to church school.

If there is a substantial positive relationship between church school attendance and baptism into the church, the church must carefully review strategies to increase enrollments purely from a church growth concern. If there is no relationship between church growth and K-12 church school education, the stated reason for the primary purpose of the church school system, which is to transmit beliefs of the church so the church may continue to exist (church growth), is in question.
The Problem

The primary purpose of this study was to answer the following two questions:

1. Does attendance at a Seventh-day Adventist K-12 school substantially increase the probability of a person being baptized into the Seventh-day Adventist church?

2. Does attendance at Seventh-day Adventist K-12 schools substantially increase the probability that those who join the church will remain in the church?

The population for this study was the Seventh-day Adventist families of the Lake Union Conference territory (Illinois, Indiana, Michigan, and Wisconsin). There are nine union conferences in the North American Division of Seventh-day Adventists. Each of these unions operates a school system in harmony with North American Division policy and guidelines. The curriculum is essentially the same in all schools. Textbooks for religion classes are produced at the North American Division level as well as curriculum frameworks for all levels of content and skills that are being taught. The churches all operate with the same church manual and policy book. Ministers, administrators, teachers, and other church workers all transfer between unions and are paid essentially the same no matter where they live. There is adequate reason to believe that the answers to the stated research questions can be applicable in determining the effectiveness of the church growth potential of K-12 Adventist education in general. Other denominations may also find the results of this
study informative as they also look at their parochial educational programs in the context of evangelism.

Definitions

An explanation of the following terms which have been used in this study may be helpful to the reader:

**Baptism:** In the Seventh-day Adventist church baptism is by immersion only and is entered into only by a person that can cognitively understand the meaning of the rite. It is usually performed only after a person has the ability to make the decision for him/herself. The age of 12 is usually considered to be the youngest a person should be for baptism. It is through baptism that a person becomes a church member.

**Church involvement:** This term refers to the active participation of a person in an assigned task of the church. Such tasks will be teacher, deacon, deaconess, elder, receptionist, superintendent of Sabbath school, division leader or assistant, and other various tasks a person is involved with as opposed to sitting in a pew in passive participation.

**Church membership:** Membership in the Seventh-day Adventist church is by the rite of baptism or profession of faith. The latter is used only when a person is incapable of being baptized because of some physical condition or a person has previously been baptized into a Christian Protestant communion and wishes to express that commitment as espoused in the Adventist fellowship.
Retention: This term refers to staying in the church after a person has joined the church by baptism.

Seventh-day Adventist: This religious sect, with headquarters in Takoma Park, Maryland, which is comprised of approximately 4 million members, was founded in 1863 in Battle Creek, Michigan. The denomination is considered to be an evangelical Protestant church and has churches, schools, and hospitals throughout the United States as well as in most inhabited parts of the world. In this study the church and/or church members may be referred to as SDA, Adventist, or Seventh-day Adventist.

"Worker": This term is used only in reference to a person being employed by the SDA church and/or one of its institutions.
CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The purpose of this chapter is to review the related literature as it pertains to parochial education and its relationship to church growth. The first section of this chapter will deal with the history and growth of the Seventh-day Adventist church. The second section will relate to the history and growth of the Seventh-day Adventist school system. The third section will cite pertinent literature regarding the purpose and effectiveness of church related schooling in the Catholic, Lutheran, and Seventh-day Adventist denominations. The fourth section will review the literature on church growth and church related K-12 schooling. The summary of this chapter focuses on the conclusions drawn from the literature and gives the rationale for this study.

History and Growth of the Seventh-day Adventist Church

The religious denomination known as Seventh-day Adventist had its rise about the middle of the 19th century. The name is based upon two of the distinctive beliefs they hold, namely, the observance of the Sabbath of the Scriptures, and the imminent, personal second advent of Christ to the earth.
Neufeld and Neuffer (1962) pointed out that many students of the Bible became convinced that the second advent was drawing near, and this belief resulted in a great religious awakening in Britain, in some countries on the continent of Europe, and in North America. According to Schwartz (1979), "Adventists" were found among the church goers in various denominations. He cited William Miller as the one individual who provided the nucleus around which other individuals gathered to start a religious sect with common beliefs, goals, and interests.

It was from among the "adventists" engaged in the religious awakening in the United States and Canada that there arose a small group in 1844 in Washington, New Hampshire, who began to observe the seventh-day Sabbath, as they found it enjoined in the fourth commandment of the Decalogue. Thus came the first Seventh-day Adventists, though the name was not formally adopted until later years.

By 1860 the movement had grown until, in connection with the organization of the first publishing house in Battle Creek, Michigan, the denominational name was assumed. Schwartz (1979), commenting about the beginnings of the SDA church stated, "The legal ownership of property—church buildings and the publishing office—eventually propelled the Sabbath keepers into formal organization" (p. 93). In May 1960, local church members began incorporating legally and signed articles of association, reported Schwartz. Because each group of churches were choosing slightly different names of incorporation, a continual debate over the need to have a central organization was taking place; the final decision to incorporate under the name
Seventh-day Adventist did not take place until October 1, 1860. By 1863 it became clear that the newly formed church, in order to carry on the work of preaching the gospel of Jesus Christ, needed leadership and a degree of formal organization. The Seventh-day Adventist Yearbook—1983 (SDA, 1984d, p. 3) lists May 21, 1863, as the date on which John Byington was elected to be president of the General conference of Seventh-day Adventists.

According to Schwartz (1979, p. 628), the membership of the Adventist church in 1863 was 3,500 members. The 121st Annual Statistical Report—1983 (SDA, 1984c) lists the current Adventist church membership as 4,140,206. This membership comes from 185 of the 213 United Nations recognized nations of the world. Table 3 shows the last 5 years' church membership by Divisions.

It is with this background of SDA church growth that the program of Adventist schooling is reviewed.

History and Growth of the SDA School System

The Seventh-day Adventist denomination maintains a church-related system of education embracing schools of all levels from kindergarten through the university. As with the beginnings of the Adventist church, the school system started in a fragmented way until the corporate church body started to give particular attention to the matter of church oriented schooling for the youth of the church.

Cadwaller (1975) indicated that from 1853 to 1872, in various parts of the United States, church-oriented elementary schools were conducted by individual families, groups of families, or local SDA
### Table 3

**Church Membership by World Divisions**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa-Indian Ocean</td>
<td>---</td>
<td>---</td>
<td>362,873</td>
<td>391,006</td>
<td>437,194</td>
</tr>
<tr>
<td>Australasian</td>
<td>137,215</td>
<td>142,010</td>
<td>147,522</td>
<td>154,026</td>
<td>161,000</td>
</tr>
<tr>
<td>Eastern Africa&lt;sup&gt;a&lt;/sup&gt;</td>
<td>217,252</td>
<td>225,542</td>
<td>239,941</td>
<td>263,569</td>
<td>284,273</td>
</tr>
<tr>
<td>Euro-Africa</td>
<td>249,148</td>
<td>258,167</td>
<td>229,137</td>
<td>238,125</td>
<td>250,502</td>
</tr>
<tr>
<td>Far Eastern</td>
<td>402,087</td>
<td>430,313</td>
<td>454,170</td>
<td>483,361</td>
<td>505,958</td>
</tr>
<tr>
<td>Inter-American</td>
<td>608,567</td>
<td>646,969</td>
<td>685,832</td>
<td>737,791</td>
<td>774,807</td>
</tr>
<tr>
<td>North American</td>
<td>585,050</td>
<td>604,430</td>
<td>622,961</td>
<td>642,317</td>
<td>660,253</td>
</tr>
<tr>
<td>Northern European&lt;sup&gt;b&lt;/sup&gt;</td>
<td>128,644</td>
<td>138,582</td>
<td>42,014</td>
<td>42,570</td>
<td>43,015</td>
</tr>
<tr>
<td>South American</td>
<td>465,054</td>
<td>496,954</td>
<td>534,561</td>
<td>564,944</td>
<td>608,830</td>
</tr>
<tr>
<td>Southern Asia</td>
<td>101,657</td>
<td>106,929</td>
<td>117,418</td>
<td>128,317</td>
<td>139,514</td>
</tr>
<tr>
<td>Trans-Africa</td>
<td>352,349</td>
<td>369,454</td>
<td>179,886</td>
<td>197,379</td>
<td>220,155</td>
</tr>
<tr>
<td>Middle East Union</td>
<td>---</td>
<td>---</td>
<td>2,888</td>
<td>2,990</td>
<td></td>
</tr>
<tr>
<td>China&lt;sup&gt;c&lt;/sup&gt;</td>
<td>21,168</td>
<td>21,168</td>
<td>21,168</td>
<td>21,168</td>
<td>21,168</td>
</tr>
<tr>
<td>SDA Church in USSR&lt;sup&gt;d&lt;/sup&gt;</td>
<td>40,000</td>
<td>40,000</td>
<td>30,604</td>
<td>30,344</td>
<td>30,547</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>3,308,191</td>
<td>3,480,518</td>
<td>3,668,087</td>
<td>3,897,814</td>
<td>4,140,206</td>
</tr>
</tbody>
</table>


<sup>a</sup>Afro-Mideast Division became the Eastern Africa Division January 1, 1982, except for the Middle East Union which is attached to the General Conference.

<sup>b</sup>Became the Northern European Division January 1, 1981.

<sup>c</sup>China—1951 figures.

<sup>d</sup>USSR—Accurate figures begin in 1981.
churches. In 1872, according to Brown (1972, p. 8), the first "denominationally-sponsored" SDA church school (elementary and secondary) opened at Battle Creek, Michigan, with 12 students. The teacher was Goodloe Harper Bell. The first college was established in Battle Creek, Michigan, in 1874. The school officially opened in 1875 with 200 students. The school moved to Berrien Springs, Michigan, in 1901 and is now known as Andrews University. According to Brown (1972, p. 10), the first secondary school (academy) opened at Healdsburg, California, in 1882, followed closely by another at South Lancaster, Massachusetts, in that same year.

The growth in educational facilities was slow until the 1890s. During that decade five colleges, many academies, and more than 200 elementary schools were established in the United States. This same period, according to Brown (1972) and Cadwaller (1975), witnessed new Adventist schools in Canada, England, Australia, Switzerland, Sweden, Germany, Africa, Argentina, Denmark, and Brazil.

Table 4 shows the latest data on the number of schools, students, and teachers in the Adventist school system.

Purpose and Effectiveness of Church Related Schooling

To understand the purpose of parochial (church controlled) education, one needs only to review the beginnings of education in America. The first school in the American colonies was an elementary school founded by members of the Massachusetts Bay Colony at Boston in 1636, according to Thut (1957). He stated that this was "only seventeen years after the Pilgrims landed at Plymouth" (p. 19).
Table 4
Summary of Educational Statistics for the Seventh-day Adventist School System

<table>
<thead>
<tr>
<th>Level of schools</th>
<th>Number of schools</th>
<th>Enrollment</th>
<th>Teachers</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universities/colleges</td>
<td>92</td>
<td>37,622</td>
<td>4,049</td>
<td>7,491</td>
</tr>
<tr>
<td>Secondary schools</td>
<td>927</td>
<td>116,838</td>
<td>6,943</td>
<td>18,593</td>
</tr>
<tr>
<td>Elementary schools</td>
<td>4,334</td>
<td>502,575</td>
<td>18,871</td>
<td>53,357</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>5,353</strong></td>
<td><strong>657,035</strong></td>
<td><strong>29,863</strong></td>
<td><strong>79,441</strong></td>
</tr>
</tbody>
</table>


Venable (1958) pointed out that early schools were religiously controlled.

Beginning with Harvard College, established in 1637 by the Puritan Church, we have a pattern of religiously controlled colleges throughout the colonies. By 1750 there were five colleges in the American Colonies, four of which were under the direct control of religious bodies and specifically pointed toward the education of ministers. (p. 11)

According to Damm (1963), in 1638 the Lutheran churches of America already had a system of parochial education. The churches dominated the running of schools in America, even after the American Revolution, with the establishment of many academies after the pattern set by Benjamin Franklin (Venable, 1958). Like the church run Latin-grammar school that preceded it, the academy declined as social conditions changed to make it an inadequate institution.
Society began to agitate and demand schools maintained at public expense (Thut, 1957). As early as 1821 a public high school had come into existence in Boston, Massachusetts (Venable, 1958). Venable (p. 15) pointed to the Kalamazoo Decision of 1874 as one of the significant court cases that established the legal precedent for public education. Between 1850 and 1920 public education came into its own and parochial education became the exception instead of the rule (Venable, 1958).

The primary purpose for church controlled education is the Christian religious viewpoint from which the curriculum is taught along with the controlled environment (Kass, 1972). This concept was supported by Gratiot (1979) in her study of growth of students and parochial education in the San Francisco area. She cited two basic reasons: (a) parents wanted their children to have religious training, and (b) they were dissatisfied with the approach to discipline in the public schools.

In Ballweg's (1980) study on the growth of students and schools in parochial education since 1966, he found that there were no significant socioeconomic, cultural, philosophical, or theological reasons for attendance. According to Ballweg, the primary reason stated was that parents wanted to exercise their right to educate their children in their families' value system.

The three systems of parochial education that will be reviewed as to purpose and effectiveness are the Catholics, Lutherans, and the Seventh-day Adventists.
Catholics

Catholic schools represent 75% of the parochial schools and 63% of private education in the United States (Education Almanac--1983, 1984). The growth of Catholic education took an upswing at the beginning of the 1980s. Though religious oriented schooling has continued to grow, the sponsoring religious denominations have been slow in monitoring this growth and studying reasons for it. Koss (1931) did a comparative study of private secondary education and public education and found that although the students in the church-related (predominately Catholic) schools had more ability, they were inferior in attainment. Hill (1957) did a similar study and found that when scholastic aptitude was controlled, the college freshmen from public schools were superior to parochial school students. The adverse findings of the few studies about the effectiveness of Catholic schools provided the impetus for the National Catholic Educational Association (NCEA) to look at the Catholic school system.

It is only within the last 3 years that research on the effectiveness of Catholic schools appeared. Cibulka, Erickson, Elson, and Cooper (1982) reported on an examination of inner-city private elementary schools, most of which were Catholic. They concluded the effectiveness of these schools derives from strong institutional leadership, environment, and clarity of mission and purpose. Cibulka et al. (1982) gathered only limited data on student achievement, basing the conclusions primarily on parents' reports about school quality and their reasons for choosing a Catholic school.
The purpose of Catholic schools is to make Catholics (Bernardin, 1979). The only study this researcher found that directly addressed this basic concept of purpose was by Ferguson (1983). Her study examined the influence of parochial religious education on the religious commitment of college students. It was conducted at State University at Buffalo in 1980. Six hundred students responded to an 87-item questionnaire designed to measure religious attitudes and behavior. When controlling for church attendance by denomination and previous education, a markedly greater number of Catholic parochial school graduates attended church services than did their public school counterparts. The weekly church attendance was 60% as compared to 49% for public high school graduates. Ferguson (1983) held that the data showed that two-thirds more of the Catholic school graduates were in the committed group than the public high school graduates. The basic conclusion of Ferguson (1983) was that "the evidence still points to the wisdom of Catholics in investing in a Catholic school educational program in order to provide a firmer commitment for its future members" (p. 12).

Two of the most recent studies (Coleman, Hoffer, & Kilgore, 1982; Greeley, 1982) were the seminal works on Catholic school effectiveness. Coleman et al. (1982) concluded that Catholic schools produce higher cognitive achievement than public schools, that they are less racially segregated, and that the variation across students in patterns of achievement is much less dependent upon family background. Greeley (1982), using the same data base, claimed large differences in the achievement of minority students in Catholic and
in public schools. Further, these differences are greatest for the most disadvantaged youth. Both Greeley's (1982) and Coleman et al.'s (1982) reports give extensive support for the effectiveness of Catholic schools as compared to their public counterparts; their results provide limited information about how these higher achievement levels are produced. Coleman et al. (1982) suggested that school policies on order and discipline and features of school climate, such as the amount of homework and absenteeism, play a major role. Greeley (1982) added to this list of explanatory factors the nature of the governance arrangement of the school and the quality of instruction as reported by students. Since a comparison of public and private schools was the primary focus of both studies, the educational variables examined were primarily those that differed between the two types of schools.

Bruno, in writing the Foreword of the report from the National Center for Research in Total Catholic Education (1984), clearly pointed out that the mission of the Catholic school system is religious. He quoted from a speech given by Pope John II to young people at Madison Square Garden in New York:

I would like to tell you why the church considers it so important and expends so much energy in order to provide you and millions of other young people with a Catholic education. The answer can be summarized in one word, in one person, Jesus Christ. The church wants to communicate Christ to you. This is what education is all about, this is the meaning of life: to know Christ. (p. viii)
The growth and decline of Lutheran parochial schools from 1636 to 1830 was the subject of a study by Damm (1963). He attributed the collapse of the system to immigrant and language problems and the rise of the common school in America. Damm indicated that the history of the early Lutheran school program demonstrated that when the insistence upon purity of teaching and doctrine was not strong in a synodical organization, then parochial schools were not considered necessary.

Johnstone (1966) stated that his research about Lutheran schools indicated they were not very effective. Brekke (1974) compared Lutheran public school students with Lutheran church school students and concluded that the student's beliefs were different but that behavior and attitudes were the same.

Luebbe (1983), in commenting about the purpose of Lutheran schools, stated,

Community Lutheran secondary education has experienced unprecedented expansion in recent years. . . . Interest in Lutheran secondary education stems from church and parental concerns regarding moral and spiritual education, quality programs, school climate, disciplined and wholesome classroom atmospheres, Christian life-styles, and other factors. . . . Lutheran schools are "church." (p. 1)

Dickman and Luebbe (1983) cited the purpose of Lutheran schools when they stated,

Lutheran schools are a mission of the church. They teach and apply Lutheran doctrine to the lives of their pupils. . . . They must also be about the business of being in mission as the church. Just as the church proclaims Jesus Christ, so does the Lutheran school. (p. 3)
It is clear that the primary purpose of the Lutheran church school system is to teach the Lutheran doctrine of Christianity just as the Catholics' purpose is to teach the Catholic doctrine of Christianity in their schools.

The Lutheran school system, after the significant collapse as cited by Damm (1963), has rebounded back to a K-12 enrollment of 217,400 pupils in 1978 and 282,094 in 1983, according to Dickman and Luebbe (1983).

This researcher wrote (Appendix A) to Dickman and Luebbe of the Lutheran Church--Missouri Synod. A request was made for information about studies concerning the effectiveness of the Lutheran schools in meeting their stated purpose of assisting youth to become Lutheran church members. The reply (Appendix B) confirmed this researchers' findings in the literature. There are no known studies about the effectiveness of the Lutheran schools as it pertains to Lutheran church growth.

**Seventh-day Adventists**

The clearest statement about the purpose of the Seventh-day Adventist K-12 school system is in the North-American Division Education Code, K-12 (SDA, 1984b). In Section 1020 of the Education Code the following statement is made:

The church operates a school system to ensure that its youth may receive a balanced physical, mental, moral, social, and practical education in harmony with denominational standards and ideals with God as the source of all moral value and truth. The stated interest of the church is in the optimum development of the whole child for both this life and the life hereafter.
Seventh-day Adventists conduct their own schools, elementary through university, for the purpose of transmitting to their children their own ideals, beliefs, attitudes, values, habits, and customs.... There is peculiar to the church a body of knowledge, values, and ideals that must be transmitted to the younger generation in order that the church may continue to exist. (p. 19)

The first study found that in any way related to the purpose of K-12 education in the Adventist church was *A Study of Seventh-day Adventist Church Membership* (SDA, 1962). It was conducted in the Pacific Union Conference of Seventh-day Adventists. This study indicated that the church indeed relied upon the education system for the major share of the biological (children of SDA parents) growth of the church. The study was based on data gathered from 52,091 members of the SDA church and 31,571 nonmembers living in households with church members. The data were gathered with the use of a 26-item questionnaire. The study was accomplished by having church members fill out the survey form on a given Saturday at a church service. In addition, surveys were mailed to members not attending church on the given Saturday. A little over 50% of the membership responded to the survey.

The church membership study (SDA, 1962) reported that, if youth attended all 12 grades of SDA schools, 97% joined the church as opposed to 32% if the SDA reared youth attended non-SDA schools all 12 years of elementary and secondary schooling. Further, it was reported that 57% of the youth joined the church if they received some K-12 schooling. There was no attempt to determine which of the years of K-12 schooling was the most influential in the child's decision to become a church member.
The studies that related to SDA school effects dealt with religiosity (Lewis, 1974); values and church doctrine assumption (Plummer, 1975); moral development of students in SDA schools (Bothwell, 1979/1980); academic achievement, conceptualization, and internalization (Beltz, 1980); and religious value assumption (Vonhof, 1972). None of these studies related directly to the concern of whether or not SDA church education influenced the school attendee to join the SDA church.

Church Growth and Church Related K-12 Schooling

Oosterwall (1974) found in his opinion survey that education ranked third, after parents and SDA friends, as the influencing factor in the decision to join the church. He pointed out that 80% of the members surveyed came from an Adventist background. Dudley and Cummings (1983b), in their church growth studies, indicated that a growing church exhibits several characteristics. One of the characteristics was the religious education-outreach factor. This factor had the fourth highest correlation with baptism per capita. The study did not isolate K-12 education as a separate influencing factor from other church education (i.e., Sabbath school) so inferential conclusions concerning the effectiveness of K-12 education were not made.

According to Lee (1980), the strongest factors that influence individuals to become Adventists were SDA friends, the marital status of the parents, and whether or not a parent was a worker for the church. Lewis (1974), in his study of religiosity, concluded that
the more religious the parents were, as evidenced by their activity in the church, the more likely their children were to become baptized into the church. Banta (1977) concluded from his study that the greatest influence for children to join the church was for both parents to be SDA church members.

The most critical age for baptism was held to be in the age range of 7 to 13, according to the Mid-Century Survey of Seventh-day Adventists (SDA, 1951). Wharton (1971) supported this conclusion in his study by stating that the most critical age for baptism was the age of 12, with 20.6% of the SDA church members being baptized at that age. He further stated that age 13 represented 13% of the membership baptisms with the age of 14 representing 12.8% and the age of 11 representing 10.8% of membership baptisms.

Banta (1977) concluded that Adventist schooling, in addition to influencing baptism, also was a significant factor in a person staying in the church (retention). Abbey and Lee (1981) pointed out that 58.1% of the church membership had attended SDA schools and that the more education the parents had the more likely they were to send their own children to Adventist schools. Metcalfe (1969) concluded some years earlier that the opposite was the case when he pointed out that the data from his study seemed to indicate that parents with less education seemed to support Christian education better than parents with greater amounts of education.
Summary

The literature provides a limited picture about the relationship between education and church growth. There is support (Bernardin, 1979; Dickman & Luebbe, 1983; Gratiot, 1979; Kass, 1972; Luebbe, 1983; Seventh-day Adventists, 1984b) for the notion that parochial education has as one of its basic purposes the goal of influencing youth to become members of the church that supports the church-related school.

Both the Catholics and the Adventists have attempted to investigate the success of this stated purpose (Ferguson, 1983; Seventh-day Adventists, 1962). There have been a number of studies concerning opinions and/or attitudes about parochial education (Beltz, 1980; Dudley, 1977; Lee, 1980; Lewis, 1974; Metcalfe, 1969; Noble, 1971; Plummer, 1975; Vonhof, 1972; Wharton, 1971). These studies have mixed conclusions, yet have identified several suggested factors that may influence a person to join the church sponsoring the religious educational program. In the studies related to Adventist education, the factors of parents' church membership (Banta, 1977; Lee, 1980), education of the parents (Abbey & Lee, 1981; Metcalfe, 1969), church involvement of the parents (Lewis, 1974), and worker status of a parent (Lee, 1980) were identified as possibly influencing the baptism of a person.

Hodge (1979) posited the notion that children from within the church may have a significant effect on church growth. Oosterwall (1974) found that 80% of the members in a limited study of the Lake
Union were baptized in the age range of 12-15.

The notion that Adventist education substantially increases the probability that children join and remain in the church was supported by the Pacific Union study (SDA, 1962). This outdated study is the last study found that supplied empirical data to support the posited relationship between Adventist education and church growth. Other related studies cite opinions of church members about the influence of SDA elementary and secondary education on church growth. Because the literature results in a void on the subject of parochial education and church growth, it can be concluded that research is needed in the area of elementary and secondary education and its effects on church growth in the Seventh-day Adventist church.
CHAPTER III

DESIGN AND METHOD OF THE STUDY

Introduction

The purpose of this study was to determine whether students who attend Seventh-day Adventist K-12 schools will have an increased probability of being baptized into, and remaining in, the Seventh-day Adventist church.

The steps taken in conducting this investigation are described in this chapter. The sections include: (a) population and sample, (b) description of variables, (c) hypotheses, (d) research instrument, (e) data collection procedures, and (f) data analysis.

Population and Sample

The population for this study was the family units within the territory of the Lake Union Conference of Seventh-day Adventists (Illinois, Indiana, Michigan, and Wisconsin). Each family unit surveyed had at least one member of the family who is a Seventh-day Adventist. Data were gathered on each person of the family unit whether they were living at home or not. It was determined that this approach was the only way to gather data on those individuals that had not joined the SDA church or had left the church after once joining.
Four hundred family units were randomly selected from the population of families in the Lake Union territory. From this group of families data were gathered on 993 individuals. Because of some unusable data and the arbitrary parameters of including only those individuals who had graduated from the 12th grade or had reached the age of 18 years, there was a usable sample of 807 individuals. Tables 5 and 6 show the population and sample for this study.

The most current Lake Union Conference membership list of all the Seventh-day Adventist members in the Lake Union Territory was used. The membership of the Lake Union is 62,866 individuals from 24,434 family units, according to the Lake Union Conference Directory (SDA, 1985a). The most recent quarterly membership report was December 31, 1984. The mean number of Seventh-day Adventist members per Seventh-day Adventist family was calculated by dividing the total membership (62,866) by the number of family units (24,434). The mean was found to be 2.57 Seventh-day Adventist members per family unit. This mean is lower than the general population, according to the U.S. Department of Commerce, Bureau of Census (1983). The mean number of family members per family unit of the population within the four states is 3.32, which gave an estimated study population of 81,770 individuals. The projected ratio of Seventh-day Adventists to non-Seventh-day Adventists in the family units of the study population was 2.57/3.32, or 78%, baptized church members. The actual percentage of non-Adventist members in the total sample was 24.2% of the 896 individuals. These 896 individuals were further reduced as a result of determining that only those who had completed 12th grade or were
Table 5
Population Surveyed Showing Individuals That Received and Returned the Questionnaire

<table>
<thead>
<tr>
<th>State</th>
<th>Population SDA family units</th>
<th>Members per family census factor</th>
<th>Mailed questionnaires</th>
<th>Returned questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sample family units</td>
<td>Estimated individuals per sample</td>
</tr>
<tr>
<td>Illinois</td>
<td>6,510</td>
<td>3.33</td>
<td>108</td>
<td>360</td>
</tr>
<tr>
<td>Indiana</td>
<td>3,887</td>
<td>3.26</td>
<td>64</td>
<td>209</td>
</tr>
<tr>
<td>Michigan</td>
<td>10,865</td>
<td>3.34</td>
<td>180</td>
<td>601</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>3,172</td>
<td>3.31</td>
<td>48</td>
<td>159</td>
</tr>
<tr>
<td>Totals</td>
<td>24,434</td>
<td>$\bar{x}$ 3.32</td>
<td>400</td>
<td>1,329</td>
</tr>
</tbody>
</table>


$\bar{x} = $ Weighted mean.
<table>
<thead>
<tr>
<th>State</th>
<th>Sample family units</th>
<th>Individuals per state</th>
<th>Individuals not used</th>
<th>Tabulated sample</th>
<th>Individuals in Grades 5-12</th>
<th>Net sample used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>76</td>
<td>260</td>
<td>17</td>
<td>243</td>
<td>20</td>
<td>223</td>
</tr>
<tr>
<td>Indiana</td>
<td>46</td>
<td>155</td>
<td>20</td>
<td>135</td>
<td>15</td>
<td>120</td>
</tr>
<tr>
<td>Michigan</td>
<td>132</td>
<td>463</td>
<td>48</td>
<td>415</td>
<td>46</td>
<td>369</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>33</td>
<td>115</td>
<td>12</td>
<td>103</td>
<td>8</td>
<td>95</td>
</tr>
<tr>
<td>Totals</td>
<td>287</td>
<td>993</td>
<td>97&lt;sup&gt;a&lt;/sup&gt;</td>
<td>896</td>
<td>89</td>
<td>807</td>
</tr>
</tbody>
</table>

<sup>a</sup> Individuals under fourth grade = 64; individuals with unusable data = 33.
over 18 years of age should be used in the study. The final sample was 807 individuals with 26.6% non-Seventh-day Adventists (215 individuals). The 215 non-Adventists were composed of 138 individuals who had never joined the church and 77 individuals who left the church after once joining. Population and sample data are shown in Tables 5 through 8.

The 400 family units were selected randomly for the study by state with the aid of the computer at the Lake Union Conference. Each family was asked to supply nonopinion type data for each member of the family. Since the data were all demographic in nature, the accuracy of the data gathered was not threatened by a parent or knowledgeable person supplying the information about other family members.

It should be noted that the method of collecting data did not insure responses from all former members of the Adventist church. No practical method could be devised for securing this type of data. The one group of church defectors this study was unable to relate to was a total family that left the church at the same time. According to church pastors interviewed and interviews with the conference ministerial directors this happens very seldom. Therefore, the potential bias in the study was felt to be very minimal. There is reason to believe, however, that church defections reported in this study by members of the family still connected with the Seventh-day Adventist church are typical of the entire group. This judgment was reviewed with pastors and church clerks from each of the four states represented in this research. This study, therefore, is provided
Table 7
Gender of Sample by Church Membership

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Church membership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not baptized</td>
<td>11.4</td>
<td>49</td>
<td>23.5</td>
</tr>
<tr>
<td>Baptized</td>
<td>88.6</td>
<td>380</td>
<td>76.5</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>429</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 8
Age Groupings of Sample by Church Membership

<table>
<thead>
<tr>
<th></th>
<th>Up to 25 years old</th>
<th>26-45 years old</th>
<th>45 plus years old</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church membership</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not baptized</td>
<td>21</td>
<td>27</td>
<td>17</td>
<td>68</td>
</tr>
<tr>
<td>Baptized</td>
<td>79</td>
<td>101</td>
<td>83</td>
<td>322</td>
</tr>
<tr>
<td>Totals</td>
<td>100</td>
<td>128</td>
<td>100</td>
<td>390</td>
</tr>
</tbody>
</table>

with the very useful picture of individuals who leave the organization. Table 7 shows the gender of the sample by whether or not the individual was a baptized church member and Table 8 shows the age grouping of the sample.

It should be noted that the largest age group in the sample for both baptized and nonbaptized individuals was in the 26 to 45-year-old age bracket. In the 45-year-old-plus age group there was a higher percentage of females. The longer life span of females may have been a contributing factor to this phenomenon. In the 26 to 45-year-old age group the higher number of females was partially due to the one parent families being represented by females. Table 7 clearly indicates a tendency for more females to be baptized than males.

The 138 non-Adventist people represent individuals who were never baptized. Those who were baptized and then left the church resulting in their names being removed from the church records numbered 77.

Krejcie and Morgan (1970) recommended a sample of 384 for a 95% confidence level and a 5% sampling error for a population over 75,000. In this study the sample size of 807 individuals represented a 71.8% return rate which resulted in a sampling error of approximately 3.25%.

Description of Variables

In this study there were two dependent variables. Church membership as defined by baptism into the Seventh-day Adventist church
was one dependent variable and the second was whether or not the baptized person stayed in the church. Staying in the church is referred to as church retention.

An independent variable in this study was the number of years a person attended Seventh-day Adventist K-12 schools (0 years to 12 years). The primary concern of this study was to determine if a relationship exists between Seventh-day Adventist church membership and the number of years a person had attended Seventh-day Adventist K-12 schools.

The independent variable of SDA schooling was grouped into three specific areas. This grouping was chosen for more than one reason. The selected groupings were chosen as a form of classification in order to permit contingency table analysis. Also, the child development concepts as far as value assumption is concerned was another consideration. The early education of a child represents the foundational years of a child, not only cognitively but as far as character development is concerned, according to White (1923, p. 19). Children's values are reinforced and the child builds the base upon which to make a decision about baptism. Therefore, Grades 1-4 was Group 1 of the independent variable.

Group 2 was Grades 5-8. These years represent the decision years for baptism. In the Mid-Century Survey of Seventh-day Adventists (SDA, 1951), the age for church membership baptism was listed in the age range of 7-14. It was stated that 70.5% of all members were baptized during these years.
Group 3 of the independent variable was Grades 9-12. These years represent the time of increased peer influence, increased social activity through dating, and the years which influence the choice of a life partner.

The three groups of the independent variable schooling were investigated to determine if there was a relationship to each dependent variable, (a) baptism into the SDA church and (b) retention, staying in the church after baptism.

It was suggested by the literature that several factors, besides the number of years in Seventh-day Adventist schools, influence baptism. According to Banta (1977), influences on whether or not a person was baptized include the friends of the person and church membership of the parents, with the mother being most important.

Factors such as parents' education, income level, religiosity of the parents, television viewing practice, and size of the church were all suggested as possible factors which may or may not influence baptism, according to Lee (1980), Lewis (1974), Metcalfe (1969), and Wharton (1971).

Additional independent variables this study reviewed, when determining the relationship between the two dependent variables (baptism and church retention) and the years of Seventh-day Adventist education, were: (a) church membership of the parents, (b) education of the parents, (c) church involvement of the parents (religiosity), and (d) parents' "worker" status.

The independent variable of parental church membership, operationalized as being a baptized church member, was investigated in the
time frame of K-12 schooling. Three responses were listed concerning a parent's church membership. The parent was an SDA (a) all, (b) some, or (c) none of the years during the person's K-12 schooling.

The independent variable of parent's education in this study was operationalized as to the amount of schooling the parent had acquired at the time of the study.

The independent variable of church involvement, referred to as religiosity and operationalized as being active in church duties, was also reviewed in the time frame of a person's K-12 schooling. The parent was classified as actively involved in church duties (a) all, (b) some, or (c) none of the years during a person's years of elementary and secondary schooling.

The parent's "worker" status, the last independent variable, was operationalized as to whether or not the parent was employed by the SDA church or one of its owned and operated institutions during a person's first 12 years of schooling. The parent was classified as being employed by the church (a) all, (b) some, or (c) none of the years during K-12 schooling.

Hypotheses

The hypotheses investigated in this study are stated in the null form.

Null Hypotheses

1. There will be no relationship between the number of years in Grades 1 to 12 a person attends an SDA school and whether or not the
person is baptized into the Seventh-day Adventist church.

2. There will be no relationship between the number of years in Grades 1 to 12 a person attends an SDA school and whether or not the person leaves the church after baptism.

The number of years a person attends SDA schools was analyzed separately by three groupings of the K-12 grades: (a) Grades 1-4, (b) Grades 5-8, and (c) Grades 9-12.

3. There will be no relationship between baptism or retention and the church membership of the parents.

4. There will be no relationship between baptism or retention and the religiosity of the parents.

5. There will be no relationship between baptism or retention and the educational level of the parents.

6. There will be no relationship between baptism or retention and whether or not the parents work for the SDA church.

Research Instrument

The instrument used in this study (Appendix F) was an adaptation of an instrument used in A Study of Seventh-day Adventist Church Membership (SDA, 1962).

The original instrument was field tested in 1960 in a pilot study involving 3,200 members. The purpose of the pilot study was to validate and perfect the format of the survey instrument. The return rate for the field test exceeded 70%, according to the report of A Study of Seventh-day Adventist Church Membership (SDA, 1962). In 1984 this researcher adapted several questions of the original instrument
and once again it was field tested. The Lake Union Conference territory was used for the pilot study. The return rate was 73% from the 40 randomly selected family units. Two mailed follow-up contacts were made with the respondents to get a 73% return rate.

The questionnaire was further refined to include questions relating to the subsequently identified independent variables. The revised instrument (Appendix F) was again subjected to an additional field test for the purpose of determining if the questions were stated clearly and concisely. Twelve families were selected from the population to review the revised instrument. There were minor editorial changes made but the additional field test revealed no problems with the instrument. The instrument was printed so that directions were placed on the front with the two inner pages containing the questions to be answered (Appendix F).

Data Collection Procedures

A letter of introduction by the conference president of each subdivision of the Lake Union territory (Appendix C) was mailed to each randomly selected family on March 8, 1985. Four days after this letter of introduction, the Lake Union Conference president wrote a letter (Appendix D) to each respondent soliciting cooperation in the research. The survey instrument, along with a specially prepared sample survey reduced in size and on colored paper (Appendix G), an addressed stamped return envelope, and cover letter from this researcher (Appendix E) was sent to each family 4 days after the letter from the Lake Union president. The respondents were assured of
confidentiality.

The first follow-up letter (Appendix H) was sent 2 weeks after the initial mailing of the questionnaire. The second follow-up letter (Appendix I) was sent 2 weeks after the first follow-up letter, along with another instrument, sample instrument, and stamped addressed return envelope. The return rate 6 weeks after the first survey was sent out was 68%. Seven weeks after the first survey was mailed the return rate was 71.8%. It was decided to close the data collection and the research was considered complete.

Data Analysis

The data in this research study were computer analyzed with the use of chi square to test the null hypotheses at a .05 alpha level. The chi-square test was selected for testing each hypothesis because it could measure the statistical independence of the dependent variable of whether or not a person was baptized into the Adventist church and the selected independent variables. Also, the chi-square test could measure the statistical independence which existed between whether or not a person remained in the church (retention) after baptism and selected independent variables.

Although the chi-square test of independence is widely accepted for sociological studies, the test does not relate to the degree of association. Cramer's \( V \) was selected as the statistic to determine the strength of the relationship for those null hypotheses that were rejected as well as retained. Cramer's \( V \) was chosen as the measure of association because an assumption for its use was that both
variables in the table are measured at the nominal level. Also, Cramer's $V$, which is suitable for larger tables, is a slightly modified version of phi correlation. When phi is calculated for a table which is not $2 \times 2$, it has no upper limit. Therefore, Cramer's $V$ is used to adjust phi for either the number of rows or the number of columns in the table, depending on which of the two is smaller. The calculation of $V$ results in a correlation factor ranging from 0 to +1 when several nominal categories are involved. Thus, a large value of $V$ signifies that a high degree of association exists, without revealing the manner in which the variables are associated. According to Welkowitz, Ewen, and Cohen (1982), "Cramer's $V$ is a superior index, but not yet widely known among behavioral scientists" (p. 287).

The use of cross-classified data for inferential purposes does have limitations. The widely practiced method of analyzing various two-dimensional marginal totals has been enhanced by the availability of computer program packages. The Statistical Package for the Social Sciences (SPSS) computer software program was used in this research for calculating the cross-tabulations between the two dependent variables and the independent variables. This method of data analysis enjoys wide acceptance by social scientists and does give great insight about the relationship among variables. Yet, Fienberg (1981) holds that examining the categorical variables two at a time:

(a) confuses the marginal relationship between a pair of categorical variables with the relationship when other variables are present,

(b) does not allow for the simultaneous examination of these pairwise relationships,
(c) ignores the possibility of three-factor and higher-order interactions among the variables. (p. 2)

According to Caplovitz (1983), tabular multivariate analysis dealing with categorical variables involving four, five, or more variables are possible. However, Caplovitz suggested that:

The researcher who engages in tabular analysis as distinct from regression analysis seldom deals with more than three variables for the simple reason that additional variables reduce the base figures on which the percentaging is done to the point where the percentages become highly unstable. (p. 290).

To overcome the possibility of having a small number of base figures from which to calculate percentages, multiple regression was considered as a viable tool for data analysis in this research. According to Caplovitz (1983), a basic assumption in the use of multiple regression analysis is that the "dependent variable always be at least the interval level" (p. 324).

Because of identified limitations in the use of crosstabulations, tabular multivariant analysis, and linear multiple regression, the data in this research were further analyzed with the use of the stepwise logistic regression. Nonlinear multiple regression is best used when the dependent variable is dichotomous, according to Aldrich and Nelson (1984, p. 31). The BMDP computer software package contains the stepwise logistic regression program which was used in this study. The purpose of using stepwise logistic regression was to determine the relative influence of the independent variables on the dependent variable of choice and produce a model of variables most influential on baptism and church retention.
CHAPTER IV

FINDINGS

Introduction

The first three chapters have described the rationale and the methodology for a research study on the relationship of K-12 education in the Seventh-day Adventist church and church growth. In Chapter III the population and sample were described with the use of Tables 5 to 8. The variables were defined and the hypotheses were stated. The research instrument used for data collection was discussed and the procedures followed in data collection were outlined. In order to present and discuss the data analysis, Chapter IV will be organized into three parts. In the first part each null hypotheses will be reviewed with the use of crosstabulations of a dependent variable and an independent variable. A .05 level of significance for chi square was selected as necessary to reject the nulls of all hypotheses. In the second part the results of stepwise logistic regression on identified variables will be reported. Finally, the chapter concludes with a summation of the findings. Conclusions will be given in the discussion presented in Chapter V.

Analyses of the Hypotheses

The first part of this chapter reviews the findings of the statistical approach established as appropriate to test the six null
hypotheses. The SPSS computer program was used to calculate the
statistics reported for chi square and for Cramer's V.

The first hypothesis stated that there would be no relationship
between the number of years in Grades 1 to 12 a person attends an SDA
school and whether or not the person is baptized into the Seventh-day
Adventist church. Tables 9 to 11 deal with the three subareas of the
first hypothesis. The relationship between each subgroup of K-12
education, specifically Grades 1 to 4, Grades 5 to 8, and Grades 9 to
12, and baptism are clearly established. Therefore, the first null
hypothesis is rejected because there seems to be adequate evidence at
the alpha level of .05 to substantiate the rejection. The strength
of the relationships for each subgroup was indicated with calcula-
tions of Cramer's V. The data seem to suggest that the strongest
relationship is between baptism and a person's attendance in SDA
schools during attendance in Grades 9 to 12. The Cramer's V correla-
tion coefficient for Grades 1 to 4 was .389, for Grades 5 to 8 it
was .426, and for Grades 9 to 12 it was .454.

It should be noted that for the dependent variable, baptism,
there appears to be a curvilinear relationship as it relates to the
years of schooling. This means that for Grades 1 to 4 the data do
not support the concept that each grade increases the probability of
being baptized. For Grades 5 to 8 the data did demonstrate a tend-
ency for linearity. This phenomenon suggests that for Grades 5 to 8
each year tends to increase the probability of a person being bap-
tized. The data for Grades 9 to 12 suggests that an all or nothing
relationship exists. Baptism into the church seems to be a result of
Table 9
Church Joining and Attendance in Grades 1 to 4

Attendance in Grades 1 to 4

<table>
<thead>
<tr>
<th></th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baptized No SDA school</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>30.5</td>
<td>133</td>
<td>0.0</td>
<td>0</td>
<td>3.4</td>
</tr>
<tr>
<td>Yes</td>
<td>69.5</td>
<td>303</td>
<td>100.0</td>
<td>29</td>
<td>96.6</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>436</td>
<td>100.0</td>
<td>29</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 9.488$, $\alpha = .05$, df = 4

$\chi^2 = 122.41476$

$P = .0000$

Cramer's $V = .389$

$H_{1a}$ is rejected.
Table 10
Church Joining and Attendance in Grades 5 to 8

<table>
<thead>
<tr>
<th>Baptized</th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>No</td>
<td>33.4 131</td>
<td>11.8 2</td>
<td>9.4 3</td>
<td>7.7 1</td>
<td>0.3 1</td>
</tr>
<tr>
<td>Yes</td>
<td>66.6 261</td>
<td>88.2 15</td>
<td>90.6 29</td>
<td>92.3 12</td>
<td>99.7 352</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0 392</td>
<td>100.0 17</td>
<td>100.0 32</td>
<td>100.0 13</td>
<td>100.0 353</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 9.488$, $\alpha = .05$, $df = 4$
$\chi^2 = 146.555$
$P = .0000$
Cramer's $V = .426$
$H_{lb}$ is rejected.
### Table 11

#### Church Joining and Attendance in Grades 9 to 12

<table>
<thead>
<tr>
<th>Baptized</th>
<th>No SDA school</th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>34.4</td>
<td>137</td>
<td>0.0</td>
<td>0</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>Yes</td>
<td>65.6</td>
<td>261</td>
<td>100.0</td>
<td>21</td>
<td>97.1</td>
<td>34</td>
</tr>
</tbody>
</table>

**Totals** 100.0 398 100.0 21 100.0 35 100.0 14 100.0 339 100.0 807

**Note.** $\chi^2_{cv} = 9.488$, $\alpha = .05$, $df = 4$

$\chi^2 = 166.3946$

$P = .0000$

Cramer's $V = .454$

$H_1$ is rejected.
attending 1, 2, 3, or 4 years of schooling in Adventist school. The data seem to suggest that the real difference is between some SDA schooling and no SDA schooling.

The second hypothesis stated that there would be no relationship between the number of years in Grades 1 to 12 a person attends an SDA school and whether or not that person leaves the church after baptism (retention). Retention means that a person was a Seventh-day Adventist church member at the time of the data collection for this study. More specifically, it means that the person's name was listed on a church's books as a church member in good and regular standing. Tables 12 to 14 show contingency tables for the dependent variable, retention, and the three groupings of the independent variable.

The null hypothesis as divided into each of the subparts is rejected, which indicates that a definite positive relationship does exist between SDA schooling and church retention. The relationship magnitude was measured with the use of Cramer's V for each subgroup. Cramer's V contingency coefficient was .205 for Grades 1 to 4, .279 for Grades 5 to 8, and .318 for Grades 9 to 12. Again, the data seem to suggest that Grades 9 to 12 have the strongest positive relationship with church retention.

The data in Tables 12 to 14 offer some evidence that increased years of SDA schooling increases the probability of a person staying in the church. In other words, the more years of SDA education the more likely a person will remain a Seventh-day Adventist church member.
Table 12

Church Retention and Attendance in Grades 1 to 4

<table>
<thead>
<tr>
<th>Retained</th>
<th>No SDA school</th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>18.5</td>
<td>56</td>
<td>10.3</td>
<td>3</td>
<td>10.7</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>81.5</td>
<td>247</td>
<td>89.7</td>
<td>26</td>
<td>89.3</td>
<td>25</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>303</td>
<td>100.0</td>
<td>29</td>
<td>100.0</td>
<td>28</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 9.488$, $\alpha = .05$, $df = 4$

$\chi^2 = 28.224$

$P = .0000$

Cramer's $V = .2054$

$H_{2a}$ is rejected.
### Table 13

Church Retention and Attendance in Grades 5 to 8

<table>
<thead>
<tr>
<th>Retained</th>
<th>No SDA school</th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>19.2</td>
<td>50</td>
<td>33.3</td>
<td>5</td>
<td>27.6</td>
<td>8</td>
</tr>
<tr>
<td>Yes</td>
<td>80.8</td>
<td>211</td>
<td>66.7</td>
<td>10</td>
<td>72.4</td>
<td>21</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>261</td>
<td>100.0</td>
<td>15</td>
<td>100.0</td>
<td>29</td>
</tr>
</tbody>
</table>

**Note.** $\chi^2_{cv} = 9.488$, $\alpha = .05$, $df = 4$

$\chi^2 = 52.352$

$p = .0000$

Cramer's $V = .280$

$H_{2b}$ is rejected.
Table 14

Church Retention and Attendance in Grades 9 to 12

<table>
<thead>
<tr>
<th>Retained</th>
<th>No SDA school</th>
<th>1 year of SDA school</th>
<th>2 years of SDA school</th>
<th>3 years of SDA school</th>
<th>4 years of SDA school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>19.2</td>
<td>50</td>
<td>47.6</td>
<td>10</td>
<td>17.6</td>
<td>6</td>
</tr>
<tr>
<td>Yes</td>
<td>80.8</td>
<td>211</td>
<td>52.4</td>
<td>11</td>
<td>82.4</td>
<td>28</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>261</td>
<td>100.0</td>
<td>21</td>
<td>100.0</td>
<td>34</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 9.488$, $a = .05$, $df = 4$

$\chi^2 = 67.778$

$P = 0.0000$

Cramer's $V = .318$

$H_2C$ is rejected.
The third hypothesis dealt with an identified variable which the literature suggested may have some influence on both baptism and church retention. The null hypothesis stated that there would be no relationship between baptism or retention and the church membership of the parents. Tables 15 and 16 show the crosstabulation for baptism and church membership of each parent. Tables 17 and 18 show the crosstabulation of church retention with church membership of each parent. The data indicate that there is a relationship between the parents' church membership and baptism. The magnitude of the relationship is reflected in the Cramer's $V$ contingency coefficient of .286 for the father and .309 for the mother.

Table 15

Baptism and Church Membership of the Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Membership of father during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>No</td>
<td>3.1</td>
<td>9</td>
<td>20.9</td>
<td>24</td>
</tr>
<tr>
<td>Yes</td>
<td>96.9</td>
<td>285</td>
<td>79.1</td>
<td>91</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>294</td>
<td>100.0</td>
<td>115</td>
</tr>
</tbody>
</table>

Note. $\chi^2cv = 5.991$, $\alpha = .05$, df = 2

$\chi^2 = 66.215$

$P = .0000$

Cramer's $V = .286$

$H_{3a}$ is rejected.
Table 16
Baptism and Church Membership of the Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Baptized</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>7.3</td>
<td>34</td>
<td>25.0</td>
<td>28</td>
</tr>
<tr>
<td>Yes</td>
<td>92.7</td>
<td>430</td>
<td>75.0</td>
<td>84</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>464</td>
<td>100.0</td>
<td>112</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, df = 2
$\chi^2 = 76.870$
$P = .0000$
Cramer's $V = .309$
$H_{3b}$ is rejected.

Table 17
Church Retention and Church Membership of the Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Retained</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>10.5</td>
<td>30</td>
<td>15.4</td>
<td>14</td>
</tr>
<tr>
<td>Yes</td>
<td>89.5</td>
<td>255</td>
<td>84.6</td>
<td>77</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>285</td>
<td>100.0</td>
<td>91</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, df = 2
$\chi^2 = 1.629$
$P = .443$
Cramer's $V = .049$
$H_{3c}$ is retained.
Table 18  
Church Retention and Church Membership of the  
Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Church membership of mother during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>10.5</td>
<td>45</td>
<td>21.4</td>
<td>18</td>
</tr>
<tr>
<td>Yes</td>
<td>89.5</td>
<td>385</td>
<td>78.6</td>
<td>66</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>430</td>
<td>100.0</td>
<td>84</td>
</tr>
</tbody>
</table>

Note. \( \chi^2_{cv} = 5.991, \alpha = .05, df = 2 \)

\( \chi^2 = 9.509 \)

\( p = .0086 \)

Cramer's V = .119

\( H_3d \) is rejected.

Based on the data gathered in this study only the church membership of the mother seems to influence church retention. The null hypothesis for indicating no relationship between church retention and the church membership of the father during the K-12 schooling of an individual is retained, while the null hypothesis as it relates to the mother is rejected. The Cramer's V contingency coefficient for the mother is .119 which is rather weak and does correspond with the low Cramer's V (.049) for the retained portion of the hypothesis which relates to the father.

It should be noted that the data for baptism and church membership of the parents do demonstrate a tendency for linearity. The more years a mother or father was a member in the SDA church the more likely the children would join the church. The data for church
retention and the membership of the parents indicated a curvilinear pattern. Additional years of church membership did not increase the probability of church retention. The relationship between retention and the mother's church membership, indicated by a Cramer's $V$ of .119, was weak and may have been influenced by the curvilinear pattern.

The fourth hypothesis dealt with the concept of religiosity as operationalized by an indication of a person's activity in church duties. The null hypothesis indicates that there is no relationship between baptism or retention and the religiosity of the parents. Tables 19 and 20 present the results of the chi-square calculations of baptism with the religiosity of the parents. Tables 21 and 22 depict the results of retention and the religiosity of the parents.

**Table 19**

Church Joining and Religiosity of Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Baptized</th>
<th>Religiosity of father during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>3.4</td>
<td>11.1</td>
<td>25.0</td>
<td>17.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>16</td>
<td>115</td>
<td>138</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>96.6</td>
<td>88.9</td>
<td>75.0</td>
<td>82.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>196</td>
<td>128</td>
<td>345</td>
<td>669</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>203</td>
<td>144</td>
<td>460</td>
<td>807</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, $df = 2$

$\chi^2 = 50.582$

$p = .0000$

Cramer's $V = .250$

$H_{4a}$ is rejected.
### Table 20
Church Joining and Religiosity of Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Religiosity of mother during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>12</td>
<td>19.1</td>
<td>27.2</td>
<td>17.1</td>
</tr>
<tr>
<td>95.6</td>
<td>263</td>
<td>80.9</td>
<td>72.8</td>
<td>82.9</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991, \alpha = .05, df = 2$

$\chi^2 = 53.664$

$\beta = .0000$

Cramer's $V = .258$

$H_{4b}$ is rejected.

### Table 21
Church Retention and Religiosity of Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Religiosity of father during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1</td>
<td>12</td>
<td>14.1</td>
<td>13.6</td>
<td>11.5</td>
</tr>
<tr>
<td>93.9</td>
<td>184</td>
<td>85.9</td>
<td>86.4</td>
<td>88.5</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991, \alpha = .05, df = 2$

$\chi^2 = 7.917$

$\beta = .0191$

Cramer's $V = .109$

$H_{4c}$ is rejected.
Table 22

Church Retention and Religiosity of Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Religiosity of mother during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained % N</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>No</td>
<td>9.1 24</td>
<td>18.8 35</td>
<td>8.2 18</td>
<td>11.5 77</td>
</tr>
<tr>
<td>Yes</td>
<td>90.9 239</td>
<td>81.2 151</td>
<td>91.8 202</td>
<td>88.5 592</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0 263</td>
<td>100.0 186</td>
<td>100.0 220</td>
<td>100.0 669</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, df = 2

$\chi^2 = 13.612$

$P = .0011$

Cramer's $V = .143$

$H_{4d}$ is rejected.

The data indicate that the null hypothesis is rejected. There appears to be sufficient evidence to support the notion that the church involvement of both the mother and the father has some relationship to baptism. The strength of the relationship for the father was indicated by a Cramer's $V$ of .250, while the strength of the mother's relationship was indicated by a Cramer's $V$ of .258. As far as retention is concerned the hypothesis is also rejected. The data suggest a relationship. The magnitude, however, is low as indicated by a Cramer's $V$ of .143 for the mother and .109 for the father.

Table 22 indicates that for retention and the religiosity of the mother a curvilinear relationship exists. When the mother was not
active in the church during the child's K-12 schooling or when she was active in the church during all the years of a child's K-12 schooling more influence was demonstrated on retention than when the mother was active only some of the years during the K-12 schooling time period.

Hypothesis 5 stated in the null form that there would be no relationship found between baptism or retention and the educational level of the parents. Tables 23 and 24 provide details from the analysis of the data on baptism and Tables 25 and 26 detail the analysis of church retention as these dependent variables relate to the independent variable of parental educational level.

Table 23
Baptism and the Amount of Education of the Father

<table>
<thead>
<tr>
<th>Educational level of the father</th>
<th>Elementary or less</th>
<th>Elementary and secondary</th>
<th>Some higher education</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%  N</td>
<td>%  N</td>
<td>%  N</td>
<td>%  N</td>
</tr>
<tr>
<td>No</td>
<td>18.4 50</td>
<td>18.7 49</td>
<td>12.0 22</td>
<td>16.9 121</td>
</tr>
<tr>
<td>Yes</td>
<td>81.6 222</td>
<td>81.3 213</td>
<td>88.0 161</td>
<td>83.1 596</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0 272</td>
<td>100.0 262</td>
<td>100.0 183</td>
<td>100.0 717</td>
</tr>
</tbody>
</table>

Note.  \( \chi^2_{cv} = 5.991, \alpha = .05, df = 2 \)
\( \chi^2 = 4.137 \)
\( p = .1264 \)
Cramer's V = .076
H5a is retained.
### Table 24

Baptism and the Amount of Education of the Mother

<table>
<thead>
<tr>
<th>Educational level of the mother</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elementary or less</td>
<td>Elementary and secondary</td>
<td>Some higher education</td>
<td>Total</td>
</tr>
<tr>
<td>Baptized</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>15.4</td>
<td>36</td>
<td>23.6</td>
<td>87</td>
</tr>
<tr>
<td>Yes</td>
<td>84.6</td>
<td>198</td>
<td>76.4</td>
<td>282</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>234</td>
<td>100.0</td>
<td>369</td>
</tr>
</tbody>
</table>

**Note.** \( \chi^2_{cv} = 5.991, \, \alpha = .05, \, df = 2 \)
\( \chi^2 = 25.648 \)
\( p = .0000 \)
Cramer's \( V = .179 \)
\( H_{5b} \) is rejected.

### Table 25

Retention and the Amount of Education of the Father

<table>
<thead>
<tr>
<th>Educational level of the father</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elementary or less</td>
<td>Elementary and secondary</td>
<td>Some higher education</td>
<td>Total</td>
</tr>
<tr>
<td>Retained</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>9.0</td>
<td>20</td>
<td>11.3</td>
<td>24</td>
</tr>
<tr>
<td>Yes</td>
<td>91.0</td>
<td>202</td>
<td>88.7</td>
<td>189</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>222</td>
<td>100.0</td>
<td>213</td>
</tr>
</tbody>
</table>

**Note.** \( \chi^2_{cv} = 5.991, \, \alpha = .05, \, df = 2 \)
\( \chi^2 = 1.207 \)
\( p = .5470 \)
Cramer's \( V = .045 \)
\( H_{5c} \) is retained.
Table 26
Retention and the Amount of Education of the Mother

<table>
<thead>
<tr>
<th>Educational level of the mother</th>
<th>Retained</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elementary or less</td>
<td>Elementary and secondary</td>
<td>Some higher education</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>8.1</td>
<td>16</td>
<td>16.0</td>
<td>45</td>
<td>8.6</td>
</tr>
<tr>
<td>Yes</td>
<td>91.9</td>
<td>182</td>
<td>84.0</td>
<td>237</td>
<td>91.4</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
<td>282</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, df = 2

The analysis of the data shows that the null hypothesis is retained at the alpha level of .05 as far as the father is concerned. However, there does appear to be a slight relationship between the mother's educational level and baptism. The Cramer's $V$ for the mother is .179 which indicates a low magnitude for the relationship between baptism and the mother's educational level.

As far as retention in the church is concerned, the null hypothesis relating to the relationship between the father's educational level and retention is retained. The data do not support the notion that a relationship exists. The mother's educational level crosstabulated with church retention does show a relationship so the
null hypothesis is rejected. The magnitude of the relationship was indicated by a Cramer's $V$ of .118, which is again on the low side. The data suggest that the relationship for retention is weaker than the relationship of the mother's educational level with baptism.

The amount of education for both the mother and the father took on a curvilinear pattern in the table of crosstabulations. The data seem to suggest that the parents with both secondary and elementary school education tended to have children who left the church more readily than the children of parents with only elementary education or parents who had taken higher education.

The sixth and last hypothesis this study tested related to the "worker" status of the parents. The "worker" status of a parent was operationalized as being employed by the Adventist church or one of the church owned and operated institutions. It was the intent of the study to determine if a relationship existed between baptism or church retention and whether or not the parents worked for the Adventist church or one of its entities. The null hypothesis was rejected for both the mother and the father as far as baptism is concerned. A positive relationship was indicated by the data. The data suggest that as far as the father is concerned, a positive linear relationship exists between the number of years he worked for the church and the baptism of a person. For the mother, the data posits the notion that if she worked during none of the years or some of the years there would be the same influence on the person to be baptized. Whereas, if the mother worked all of the years while the child was in K-12 schooling a substantially higher percentage of
individuals would become baptized. Tables 27 and 28 show the cross-tabulation of the data for the dependent variable baptism and "worker" status. The Cramer's $V$ for the father was .123 and .103 for the mother.

The chi-square analyses for the data on retention and the worker status of the mother and the father are shown in Tables 29 and 30. There was insufficient support from the data to reject the null hypothesis for both the mother and the father. The sixth hypothesis is retained. There was no relationship indicated between church retention and the worker status of either the mother or the father at an alpha level of .05.

**Table 27**

Baptism and the "Worker" Status of the Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Worker status of father during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baptized</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>0.0</td>
<td>0</td>
<td>10.2</td>
<td>5</td>
</tr>
<tr>
<td>Yes</td>
<td>100.0</td>
<td>45</td>
<td>89.8</td>
<td>44</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>45</td>
<td>100.0</td>
<td>49</td>
</tr>
</tbody>
</table>

Note. $\chi^2_{cv} = 5.991$, $\alpha = .05$, $df = 2$

$X^2 = 12.140$

*p = .0023*

Cramer's $V = .123$

$H_{6a}$ is rejected.
### Table 28
Baptism and the "Worker" Status of the Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Worker status of mother during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baptized</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>2.0</td>
<td>1</td>
<td>19.0</td>
<td>11</td>
</tr>
<tr>
<td>Yes</td>
<td>98.0</td>
<td>49</td>
<td>81.0</td>
<td>47</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>50</td>
<td>100.0</td>
<td>58</td>
</tr>
</tbody>
</table>

Note. \( \chi^2_{cv} = 5.991, \alpha = .05, df = 2 \)  
\( \chi^2 = 8.607 \)  
\( \beta = .0135 \)  
Cramer's V = .103  
H6b is rejected.

### Table 29
Retention and the "Worker" Status of the Mother During K-12 Schooling

<table>
<thead>
<tr>
<th>Worker status of mother during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>No</td>
<td>4.1</td>
<td>2</td>
<td>14.9</td>
<td>7</td>
</tr>
<tr>
<td>Yes</td>
<td>95.9</td>
<td>47</td>
<td>85.1</td>
<td>40</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>49</td>
<td>100.0</td>
<td>47</td>
</tr>
</tbody>
</table>

Note. \( \chi^2_{cv} = 5.991, \alpha = .05, df = 2 \)  
\( \chi^2 = 3.255 \)  
\( \beta = .1964 \)  
Cramer's V = .0697  
H6c is retained.
Table 30

Retention and the "Worker" Status of the Father During K-12 Schooling

<table>
<thead>
<tr>
<th>Worker status of father during K-12 schooling</th>
<th>All years</th>
<th>Some years</th>
<th>No years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>No</td>
<td>4.4 2</td>
<td>6.8 3</td>
<td>12.4 72</td>
<td>11.5 77</td>
</tr>
<tr>
<td>Yes</td>
<td>95.6 43</td>
<td>93.2 41</td>
<td>87.6 508</td>
<td>88.5 592</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0 45</td>
<td>100.0 44</td>
<td>100.0 580</td>
<td>100.0 669</td>
</tr>
</tbody>
</table>

Note. \( \chi^2 \text{cv} = 5.991, \alpha = .05, \text{df} = 2 \)
\( \chi^2 = 3.6218 \)
\( p = .1635 \)
Cramer's \( V = .0736 \)
\( H_{6d} \) is retained.

Data Analysis With Logistic Regression

According to Aldrich and Nelson (1984, p. 31), nonlinear multiple regression is best used when the dependent variable is dichotomous. This study has two dependent variables, both dichotomous. The dependent variable baptism is operationalized as either baptized or not baptized. The other dependent variable, retention, refers to the condition of staying in or leaving the church after baptism. In the Seventh-day Adventist church this state of being is controlled at the church level and is reflected in a person's name being retained or dropped from the church books as a practicing Adventist.
If a person's name is on the books, that person is still considered a church member. This study operationalized retention as reflected in one's name being on the church books and reported as such by the person filling out the survey for the family.

Because this study has two qualitative measures for the dependent variables, logistic regression was chosen as the analysis tool to determine those independent variables which are most influential in affecting the dichotomous dependent variables, baptism and retention. Hence, the researcher obtains what can be referred to as a model with the best fit.

The logistic model can give information about the importance of the variables within the model, but the fit of the logistic model is not easily assessed according to Fienberg (1981, pp. 104-105). According to the manual for the BMDP Statistical Software (Dixon, 1983), the "C. C. Brown goodness-of-fit test compares the fit of data to the logistic ... model. A small p-value indicates that the logistic model is not appropriate for the data" (p. 333). The BMDP manual gives the following explanation for the goodness-of-fit tests the computer software program uses in the statistical calculations:

The goodness-of-fit chi-square can be used to test the hypothesis that the model at that step fits the data adequately. This is computed from the observed versus predicted frequencies at each cell in the data. This test can give misleading results when cell frequencies are small (e.g., less than 5).

The Hosmer goodness-of-fit test compares the observed and predicted frequencies of ten cells. Cells are defined by the predicted values. A small p-value means that the predicted values do not fit the data.
The C. C. Brown goodness-of-fit test compares the fit of data to the logistic or to some alternate member of the family of models. A small p-value indicates that the logistic model is not appropriate for the data. (p. 333)

Multiple runs on the computer resulted in a model for baptism with a goodness of fit chi-square (C. C. Brown) p value of 0.866, which indicates that the logistic model is appropriate for the data. Table 31 shows the selected logistic model with those independent variables that seem to influence baptism the most. The stepwise logistic regression procedures enter a predictor (independent) variable in a stepwise manner and estimates the coefficients for a logistic regression. The simultaneous examination of the pairwise relationships clarifies the marginal and limited categorical variables as well as reviews the possibility and degree of influence on the dependent variable by the combined affects of all the selected independent variables. The procedure, therefore, allows the researcher to investigate the interaction between the selected independent variables and the dependent variables in the study. In the model for retention the interaction (combined affects) between Grades 5 to 8 and Grades 9 to 12 were selected by the logistic multiple regression procedure as being important and subsequently as having an influence on the dependent variable of church retention in the Seventh-day Adventist church.

At each step the predictor variable with the highest F value is allowed to enter the model. When a model is produced with the best goodness-of-fit p values, the researcher can then have confidence, at the selected alpha level, that those predictor (independent)
variables selected are those that most influence the dependent variable. Since the coefficient divided by the standard error (coeff/S.E.) can be "roughly read as t statistics," according to the BMDP manual (Dixon, 1983, p. 337), a value of 1.96 is used to determine the alpha level of .05 for each selected variable.

Table 31
Logistic Model for Baptism

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Coeff/S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>-0.539</td>
<td>0.131</td>
<td>-4.115</td>
</tr>
<tr>
<td>Age</td>
<td>-0.043</td>
<td>0.008</td>
<td>-5.392</td>
</tr>
<tr>
<td>SDA father</td>
<td>(1) 0.347</td>
<td>0.231</td>
<td>1.501</td>
</tr>
<tr>
<td></td>
<td>(2) 0.750</td>
<td>0.298</td>
<td>2.514</td>
</tr>
<tr>
<td>Mother's religiosity</td>
<td>(1) 0.254</td>
<td>0.215</td>
<td>1.179</td>
</tr>
<tr>
<td></td>
<td>(2) 0.484</td>
<td>0.232</td>
<td>2.090</td>
</tr>
<tr>
<td>Grades 5 to 8</td>
<td>-0.686</td>
<td>0.236</td>
<td>-2.903</td>
</tr>
<tr>
<td>Grades 9 to 12</td>
<td>-1.590</td>
<td>0.561</td>
<td>-2.835</td>
</tr>
<tr>
<td>Constant</td>
<td>0.987</td>
<td>0.378</td>
<td>2.612</td>
</tr>
</tbody>
</table>

Note. Goodness-of-fit chi sq. \( (2\times LN(O/E) \) = 342.039, df = 674, \( p = 1.000. \)
Goodness-of-fit chi sq. (D. Hosmer) = 0.673, df = 4, \( p = 0.955. \)
Goodness-of-fit chi sq. *(C. C. Brown) = 0.288, df = 2, \( p = 0.866. \)

In the interpretation of the coefficient, it must be kept in mind that the higher the numerical coefficient factor becomes, the higher the probability of not being baptized. Hence, if a large negative number exists as a coefficient for a specific independent variable, the greater the probability for baptism.
In comparing Grades 5 to 8 (Coeff. of -0.686) with Grades 9 to 12 (Coeff. of -1.590) it can be concluded that a person's attendance in Grades 9 to 12 will be a stronger indicator that the person will be baptized or is a baptized church member.

Table 32 shows the model for those independent variables that influence church retention the most. The C. C. Brown goodness-of-fit p value was 0.944. The value suggests that the logistic model for retention is adequate for these data.

Table 32
Logistic Model for Retention

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Coeff/S.E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 5 to 8</td>
<td>-0.014</td>
<td>0.119</td>
<td>-0.114</td>
</tr>
<tr>
<td>Grades 9 to 12</td>
<td>-0.118</td>
<td>0.139</td>
<td>-0.849</td>
</tr>
<tr>
<td>Interaction of Grades 5 to 8 and</td>
<td>-0.199</td>
<td>0.061</td>
<td>-3.281</td>
</tr>
<tr>
<td>Grades 9 to 12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDA mother</td>
<td>(1) -1.084</td>
<td>0.061</td>
<td>-4.055</td>
</tr>
<tr>
<td></td>
<td>(2) 0.904</td>
<td>0.240</td>
<td>3.765</td>
</tr>
<tr>
<td>Mother worker</td>
<td>(1) -0.303</td>
<td>0.339</td>
<td>-0.894</td>
</tr>
<tr>
<td></td>
<td>(2) 0.931</td>
<td>0.428</td>
<td>2.173</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.122</td>
<td>0.367</td>
<td>-3.055</td>
</tr>
</tbody>
</table>

Note. Goodness-of-fit chi sq. \( (2\*O^*N(O/E) = 51.672, df = 54, p = 0.565. \)
Goodness-of-fit chi sq. (D. Hosmer) \( = 3.680, \frac{df}{p} = 4, p = 0.451. \)
Goodness-of-fit chi sq. *(C. C. Brown) \( = 0.115, \frac{df}{p} = 2, p = 0.944. \)

To reiterate, in the interpretation of the coefficient, it must be kept in mind that, the higher the numerical coefficient factor
becomes, the higher the probability of not staying (retention) in the church. Hence, if a large negative number exists for the coefficient the greater the probability for retention.

For example, in the model for retention the interaction coefficient factor between Grades 5 to 8 and Grades 9 to 12 (-0.199) is stronger than the individual Grades 5 to 8 coefficient factor (-0.014) or the Grades 9 to 12 coefficient factor (-0.118). Additionally, the coeff/S.E. (-3.281) is substantially beyond the -1.96 "t" statistic factor, which was used to evaluate the data at a .05 alpha level.

Summary

This chapter has presented the research findings of the study. Each hypothesis was tested with the use of chi square with an alpha level of .05. Portions of Null Hypothesis 3, 5, and 6 were retained. They are as follows:

3. There will be no relationship between retention and the church membership of the father (Table 17).

5. There will be no relationship between baptism or retention and the educational level of the father (Table 23 and Table 25).

6. There will be no relationship between retention and whether or not the parents work for the church (Table 29 and Table 30).

The analysis of the data supported the rejection of all other aspects of the six hypotheses at the .05 alpha level. Cramer's $V$ was reported for each hypothesis as an indicator of the relationship strength.
The data were further analyzed by logistic multiple regression which allowed the researcher to select a baptism and retention model of influential independent variables. These models were reported and explained.

The next, and final, chapter will provide a summary of the entire investigation, statements and discussion of conclusions, and recommendations for further research.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter contains a brief summary of this study from its inception through the statistical analysis of the data, the statement of conclusions drawn as a result of the data analyses, discussions about these conclusions, and recommendations for further research.

Summary

Purpose of the Study

The major purpose of this study was to answer the following two research questions:

1. Does attendance at a Seventh-day Adventist K-12 school substantially increase the probability of a person being baptized into the Seventh-day Adventist church?

2. Does attendance at Seventh-day Adventist K-12 schools substantially increase the probability that those who join the church will remain in the church?

The literature supplied mixed opinions about the effectiveness of parochial education as it relates to church growth. Johnstone (1966) found that Lutheran schools were not very effective. Brehhe (1974) concluded that the only difference between Lutheran students in public schools and Lutheran schools was in the area of beliefs not
attitudes or behavior. Luebbe (1983) claimed that Lutheran schools are an extension of the Lutheran church. In a written response to an inquiry by this researcher from the executive secretary of the K-12 Lutheran school system (Appendix B), it was concluded that recent data and information about school effectiveness in church growth was nonexistent.

The effectiveness of Catholic schools for church retention was reported by Ferguson (1983) in her study which examined the influence of parochial religious education on the religious commitment of college students. Ferguson found that those students who had attended Catholic K-12 schools were more religious as college students. Her study did not go beyond the college setting. As a result of the limitations of her study, generalization capabilities to an adult's commitment to the Catholic church were minimal or nonexistent.

Seventh-day Adventist church school effectiveness for church growth was investigated and reported in A Study of Seventh-day Adventist Church Membership (SDA, 1962). This outdated study did report a positive relationship between Adventist K-12 education and church growth. Sampling techniques used for the study cast serious doubt on the generalizability of the findings. Individuals who were in a church on a particular Sabbath were asked to fill out a questionnaire for their family. The obvious bias resulting from this sampling technique cast doubt on the possibility of generalizing from the finding. Several studies were found that related to opinions about Adventist K-12 education, but no recent studies were found that provided a carefully controlled investigation that would supply
recent data from which conclusions could be drawn. This study was initiated to investigate the effect of SDA K-12 education on church growth in the Seventh-day Adventist church.

**Design of the Study**

This study analyzed data collected from the population of families within the Lake Union Conference that had at least one member of the family as a Seventh-day Adventist. The sample was composed of 400 randomly selected families from the Lake Union Conference mailing list. This list is continually updated and maintained with current information supplied by church clerks through local conference offices.

Data were gathered on each person of the family unit whether or not they were living at home. Although individuals were not selected randomly, it was determined that the study would not be biased unduly because the data were of a demographic nature and not opinions. The final usable sample contained 17.1% non-Seventh-day Adventists in the study.

The instrument used was a revised form of an instrument developed for use in the 1962 Adventist study in the Pacific Union Conference (Seventh-day Adventists, 1962). The relationship between the dependent variables, baptism and retention, and the selected independent variables, K-12 schooling in an SDA school, parents' church, parents' religiosity (amount of activity in the church), parents' educational level, and parents' "worker" status (whether or not a parent worked for the church or one of its entities), was
investigated. The use of chi square assisted in the determination of statistical independence of the variables and Cramer's V was used to indicate the strength of the relationship. The data were further analyzed with the use of logistic regression to determine a model of influential independent variables on the dependent variable.

Conclusions

The two primary research questions of this study were decisively answered. The first question was: Does attendance at a Seventh-day Adventist K-12 school substantially increase the probability of a person being baptized into the Seventh-day Adventist church? The answer is a resounding yes, by approximately a 40% probability. The second question was: Does attendance at Seventh-day Adventist schools substantially increase the probability that those who join the church will remain in the church? Again, the answer is a definite yes, by approximately a 50% probability.

Church leaders of several denominations hold that K-12 church school education has as a basic purpose the inculcation of the church's doctrines, beliefs, and values. This basic purpose and belief seem to be supported by this study. It would be inappropriate to generalize the findings of this study, which involves one religious denomination, to other denominations. Yet, one cannot ignore the implications this study suggests. Other parochial school systems, due to their stated purposes and the results of this study, may want to investigate their schools' effectiveness on church growth in their denomination. The evidence from this study would support the
notion that a parochial K-12 school system does "train up a child in the way he should go" (Proverbs 22:6).

Each of the six hypotheses will be reviewed and additional conclusions made.

**Hypothesis 1**

1. There will be no relationship between the number of years in Grades 1 to 12 a person attends an SDA school and whether or not s/he is baptized into the Seventh-day Adventist church.

This hypothesis was rejected. The results of data analysis did not support the notion that there was no relationship between K-12 education and baptism into the SDA church. The analysis included a look at three segments of the K-12 schooling: (a) Grades 1 to 4, (b) Grades 5 to 8, and (c) Grades 9 to 12.

There seemed to be no indication that cumulative years increased the probability of baptism. The data seemed to support the notion that an all or nothing relationship exists. In fact, when the data were analyzed for Grades 1 to 4 there seemed to be support for the notion that 1 year of attendance in the lower grades would provide a higher probability of baptism than 2, 3, or 4 years of SDA schooling. The data for Grades 5 to 8 did demonstrate a linear relationship and Grades 9 to 12 appeared to support the concept of an all or nothing proposition.

The strength of the relationship for all K-12 grades was indicated by a Cramer's $V$ of 0.423. It appears that Grades 1 to 4 and 5 to 8 were equally contributive in influencing a person for baptism,
while a person attending all four grades of academy had been or were
baptized before graduation from academy. In fact, the data indicated
that all individuals who attended all 12 grades in an SDA school were
baptized church members.

Several reasons for this phenomenon may be posited. First of
all, if a child attends all 12 grades of church school there is a
strong indication of family commitment to the church value system.
One cannot minimize the family influence. Logic forces one to con­
clude that no one factor by itself motivates a child to make a
decision to join the church. Family commitment as evidenced by the
high priority of church school attendance coupled with other contrib­
uting factors, some of which this study investigated, no doubt have
varying degrees of influence on a child's affective learning.

When a child is exposed to affective learning at home, at
church, and at school which emphasizes close to the same value sys­
tem, the harmonious influence is obviously strong. When a child is
exposed to a family value system compatible with the church they
attend and a varied value system at a nonparochial school, affective
learning may be hampered by the obvious dissonance. Also, a cogni­
tive dissonance may result from varied teachings in the home and
school, about such major issues as the origin, purpose, and destiny
of mankind.

When a child is exposed to both affective and cognitive disso­
nance as a result of attending some years in parochial school and
some years in nonparochial school, the all or nothing phenomenon
found in this study, as it relates to K-12 schooling and baptism, is understandable.

Hypothesis 2

2. There will be no relationship between the number of years in Grades 1 to 12 a person attends an SDA school and whether or not s/he leaves the church after baptism.

Hypothesis 2 was rejected. The data suggested that a relationship did exist. However, the strength of the relationship was not as strong as the relationship for baptism. The Cramer's $V$ for the K-12 grades was 0.268.

Again, this hypothesis was looked at in three segments. One distinct factor showed up in the analysis of the data on church retention and K-12 education that was different from the data on baptism. The data took on a positive linear pattern for each segment of K-12 education (Tables 12-14). This suggests that a cumulative effect is taking place and the probability that a person remains in the church increases with each additional year a person stays in the SDA school system. For Grades 1 to 4 the linearity of the data was not as pronounced as it was for Grades 5 to 8 and Grades 9 to 12. In other words, for each additional grade a person attends in SDA schools during K-12 schooling the greater the probability of staying in the church. The most significant years of schooling for retention were the academy years, with Grades 5 to 8 second in importance and Grades 1 to 4 the least important for influencing retention.
Figure 1 compares persons with all, Grades 1 to 12, of Seventh-day Adventist education, persons having some Seventh-day Adventist education, and those having none. When one compares this evidence, it is apparent that one can conclude that denominational education substantially increases the probability that children will join the Adventist church and remain in the church.

Figure 2 graphically demonstrates the percentage of individuals baptized into the Seventh-day Adventist church by the amount of Adventist education in the three grade groupings this study investigated. It is obvious from the data that baptism represents an all or nothing situation in this study. Grades 5 to 8 show the lowest percentage (90%) of students baptized of the three groupings for those who have had some SDA education. Grades 5 to 8 represent the age span when most youth are baptized. It can be posited that the youth who had some SDA education may have missed the environment and social climate of an SDA school during the crucial decision years when one decides to be baptized.

Figure 3 is a graph showing the percentages of individuals who dropped from the church once they were baptized. The three grade groupings were again used for the graph.

One clear notion is supported by the data. For Grades 5 to 12 it appears that it is more advantageous to have no SDA church schooling than to have only some Adventist schooling, as far as staying in the church is concerned. When one considers the value systems a child is exposed to when that person is under the care of Christian teachers in a parochial system and those teachers, whether they be
Figure 1. Comparison of Church Joining and Dropping for Persons With and Without K-12 Seventh-day Adventist Education.
Figure 2. Percentage of Individuals Baptized Into the SDA Church by Amount of SDA Education in Grade Groupings.
Figure 3. Percentages of Individuals Dropped From the SDA Church by Amount of SDA Education in Grade Groupings.

Christian or not, in a non-Christian-oriented system, it is understandable that a child can and does internalize and strengthen his religious conviction. When the home, the school, and the church all espouse the same spiritual values, the child is less prone to leave the church when that person establishes her or his own life style and family setting. The concept of affective and cognitive dissonance, previously discussed, is again posited as a reason for the higher dropout rate for those persons who have mixed schooling experiences (parochial and nonparochial schooling).

In studies previously cited (Seventh-day Adventists, 1951; Wharton, 1971), it was pointed out that the ages of 7 to 14 were the
most critical ages for baptism. This finding was substantiated by the data from this study. Table 33 shows the percentage of various age groups that were baptized and then left the church. It was found that 72.8% of the baptized individuals were baptized during the K-12 schooling years (ages 9 to 18).

Table 33

Ages of Baptism and of Those That Left the Church

<table>
<thead>
<tr>
<th>Baptism by age groups</th>
<th>Baptized</th>
<th></th>
<th>Dropped</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>9-18</td>
<td>72.8</td>
<td>487</td>
<td>9.3</td>
</tr>
<tr>
<td>19-25</td>
<td>8.8</td>
<td>59</td>
<td>0.6</td>
</tr>
<tr>
<td>26-35</td>
<td>9.7</td>
<td>65</td>
<td>0.9</td>
</tr>
<tr>
<td>36-45</td>
<td>5.3</td>
<td>35</td>
<td>0.7</td>
</tr>
<tr>
<td>46-55</td>
<td>1.5</td>
<td>10</td>
<td>0.0</td>
</tr>
<tr>
<td>56-65</td>
<td>1.0</td>
<td>7</td>
<td>0.0</td>
</tr>
<tr>
<td>66 and older</td>
<td>0.9</td>
<td>6</td>
<td>0.0</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>669</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Table 34 presents each age during K-12 schooling and shows the percentage of all those baptized at each specific age. The calculations presented on those that dropped represent the percentage of that specific age that dropped and not the percentage of the total that dropped from the church. The data indicate that ages 11, 12,
and 13 are the most crucial years for baptism. It also appears from the data that the younger a person is when baptism is experienced the more likely the person will leave the church at a later time. Ages 9 and 10 showed a 15.8% and 19.2% dropout rate.

Table 34

Age of Baptism During K-12 Schooling and Beyond With Percentage of That Age That Dropped After Baptism

<table>
<thead>
<tr>
<th>Age</th>
<th>Baptized</th>
<th>Dropped</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>9</td>
<td>2.8</td>
<td>19</td>
</tr>
<tr>
<td>10</td>
<td>7.8</td>
<td>52</td>
</tr>
<tr>
<td>11</td>
<td>10.6</td>
<td>71</td>
</tr>
<tr>
<td>12</td>
<td>19.4</td>
<td>130</td>
</tr>
<tr>
<td>13</td>
<td>12.7</td>
<td>85</td>
</tr>
<tr>
<td>14</td>
<td>7.3</td>
<td>49</td>
</tr>
<tr>
<td>15</td>
<td>3.9</td>
<td>26</td>
</tr>
<tr>
<td>16</td>
<td>3.0</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>2.4</td>
<td>16</td>
</tr>
<tr>
<td>18</td>
<td>3.2</td>
<td>19</td>
</tr>
<tr>
<td>Subtotal</td>
<td>72.8</td>
<td>487</td>
</tr>
<tr>
<td>19-84</td>
<td>27.2</td>
<td>182</td>
</tr>
<tr>
<td>Sample totals</td>
<td>100.0</td>
<td>669</td>
</tr>
</tbody>
</table>
Hypothesis 3

3. There will be no relationship between baptism or retention and the church membership of the parents.

There are four aspects to Hypothesis 3: (a) baptism and church membership of the father, (b) baptism and church membership of the mother, (c) retention and church membership of father, and (d) retention and church membership of the mother.

Only the "c" portion of the hypothesis was retained. There was insufficient evidence from the data at the .05 alpha level to reject that portion of the hypothesis. The other three sections of the hypothesis were rejected. It appears from the data that baptism is influenced by the church membership of the parents. Yet, it can be concluded from the data that even with SDA parents only half as many join and stay in the church when the children do not attend all 12 grades in an SDA school. One can conclude that the influence of the mother's church membership is stronger than the father's membership. The mother's influence on a child in other school effectiveness studies will be mentioned under the discussion of Hypothesis 5.

Hypothesis 4

4. There will be no relationship between baptism or retention and the religiosity of the parents.

Religiosity was operationalized in this study as the amount of church activity a parent became involved with during the child's K-12 schooling years. Hypothesis 4 dealt with the religiosity variable in
this study and was rejected. The influence of the parents' church involvement on whether or not the child was baptized was stronger for the mother than it was for the father. Also, it appears from the data that baptism was influenced more by the parents religiosity than was retention. The data tends to support the notion that the mother had the greater influence on retention as well as for baptism.

Hypothesis 5

5. There will be no relationship between baptism or retention and the educational level of the parents.

The portion of the hypothesis that pertains to the father's educational level and baptism and retention was retained. There was insufficient evidence from the data to be able to conclude that a relationship existed between the variables involving the father. The portion of the hypothesis that related to the mother was rejected. It appears that the amount of education a mother has does have an influence, although weak, as to whether or not a person is baptized into the Adventist church and then stay in the church.

It is interesting to note that recent school effectiveness studies (Edmonds, 1981; Lezotte et al., 1974) use the mother's (not the father's) amount of schooling as an indicator of a child's success potential in school. One can conclude that the mother's influence on the child is quite substantial and certainly involves influencing the values accepted by a child in multiple areas.
Hypothesis 6

6. There will be no relationship between baptism or retention and whether or not the parents work for the SDA church.

Hypothesis 6, as far as baptism is concerned, was rejected. The portion of the hypothesis concerning church retention was retained. The data support the notion that the "worker" status of both the mother and the father influences whether or not a person is baptized. Admittedly the relationship is weak; yet if a parent is a worker, that church connection seems to be a part of the constellation of factors that influences a child to be baptized. At the .05 alpha level the data supported retention of that portion of the null hypothesis that refers to the "worker" status of the parents and whether or not a person stays in the church after they were once baptized.

An interesting conclusion one can draw from the data of this study is that college graduates tended not to leave the church as readily as those who only had a lower level of education. The analysis of the data in this study did not investigate whether or not the higher education was from an Adventist school. A future study may well include this aspect of parochial education in a study in order to determine the extent of influence higher education in a SDA school may have on church retention. Because 72.8% of all baptisms in this study came during K-12 schooling, it seems safe to conclude that higher education would not have a significant influence on the baptism of the majority of individuals.
Table 35 shows the amount of education of individuals in this study and compares the amount of education for individuals in general in the United States, as reported by the U.S. Department of Commerce, Bureau of Census (1983). The data supports the conclusion that Seventh-day Adventists in general hold education in high esteem as evidenced by the higher percentages of individuals who go to college and/or graduate from college. The results of previous studies (Abbey & Lee, 1981; Lewis, 1974; Seventh-day Adventists, 1951) are buttressed by the findings of this study. These cited studies all provided evidence that indicated Seventh-day Adventists in general had a higher amount of education than the general population in the United States.

Table 35
Amount of Education for the General Population and of Those Who Stayed in the Church Versus Those Who Never Joined or Dropped From the Church

<table>
<thead>
<tr>
<th>Amount of education</th>
<th>Church members</th>
<th>Non-church members</th>
<th>Total sample</th>
<th>National average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Less than 12 grades</td>
<td>10.8</td>
<td>64</td>
<td>15.4</td>
<td>33</td>
</tr>
<tr>
<td>High school graduates</td>
<td>34.0</td>
<td>201</td>
<td>55.8</td>
<td>120</td>
</tr>
<tr>
<td>Some college</td>
<td>23.4</td>
<td>139</td>
<td>17.6</td>
<td>38</td>
</tr>
<tr>
<td>College graduates</td>
<td>31.8</td>
<td>188</td>
<td>11.2</td>
<td>24</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
<td>592</td>
<td>100.0</td>
<td>215</td>
</tr>
</tbody>
</table>
In addition to subjecting the data to statistical analysis by chi square, it was decided that the data would be analyzed with the use of logistic multiple regression. The purpose for this analysis was to examine the data and produce a model from the independent variables used in this study that would be most influential on whether or not individuals were baptized and whether or not they would stay in the church once they were baptized. Logistic regression investigates the pairwise relationships of variables and the interactions of variables on the selected dependent variable. When this is accomplished the marginal and limited relationships between categorical variables are investigated and the interactions are clarified. Even though data analysis by chi square did not yield adequate support for the rejection of the notion that a mother's "worker" status influenced church retention, the use of multiple regression was able to investigate statistically the combined influences of all the various independent variables on the selected dependent variable.

Two models were produced that included the selected independent variables from those identified and investigated in this study. These identified independent variables were suggested by this study as belonging to the constellation of factors that are most influential on the dependent variable of baptism and church retention. Those independent variables identified in this study that most influence baptism and retention are listed in the order of strength as follows:
Baptism

1. Grades 5 to 8 in an SDA school
2. Grades 9 to 12 in an SDA school
3. Mother's religiosity
4. Father's membership in the SDA church

Retention

1. Interaction of Grades 5 to 8 and Grades 9 to 12
2. Mother's membership in the SDA church
3. Mother's "worker" status
4. Grades 9 to 12 in an SDA school
5. Grades 5 to 8 in an SDA school

Other factors were identified as having minimal influence on both baptism and retention, but the .05 alpha level screened those variables from the selected models. Grades 1 to 4 were not sufficiently influential to be included in either model. The data suggest the conclusion that Grades 1 to 4 only, without the exposure to the upper grades, cannot supply the needed value base for influencing baptism or retention. For retention, the interaction of Grades 5 to 8 and Grades 9 to 12 was much stronger in influencing baptism than either grade span all by itself. Also, the model for retention identified the marginal variable of the mother's "worker" status as part of the group of factors that when combined with other related conditions did influence a person to stay in the church.

When the mother's worker status was statistically investigated as an isolated independent variable with retention, the relationship was not identified to be sufficiently strong at the .05 alpha level to be identified as influential. The value of the logistic regression procedure is demonstrated in this study because the procedure
gives simultaneous examination of pairwise relationship as well as clarify marginal and limited relationships between categorical variables.

Recommendations

There is much to be accomplished in church growth research as it relates to the various ministries of the church. Speculation and guessing about the effectiveness of various programs for church growth provide a setting where decisions are made without adequate empirical information. The Seventh-day Adventist church spends many millions of dollars on education. The basic reason for these expenditures is the belief that the dollars spent are cost productive in assisting to guide youth through the decision years in an environment permeated with spiritual values. This study establishes the fact that Adventist education does substantially influence individuals to become practicing Adventist church members. Also, this study supports the notion that K-12 education increases the probability that the more SDA education one experiences the more likely that person is to remain in the church. It is recommended that this study be replicated in other sections of the United States to provide a base of data that will enhance inferential capabilities of similar studies in the Adventist population of the United States in general.

The generalizability of the findings from this study extend only to the Seventh-day Adventist denomination and more specifically to the Lake Union Conference. There is reason to believe that other church denominations that support parochial education as one of their
church ministries may find this study encouraging enough to replicate. There is also reason to believe that other Union Conferences in the Seventh-day Adventist church would not be much different in nature so the generalizability of the findings about the influence of Adventist education in the total United States would not be a misuse of this study.

An obvious limitation of this study is that it was cross-sectional in reference to time. The data provide a picture of reality at one moment in time. Because cross-sectional data are collected at one point in time, individual characteristics cannot be examined over time to see if changes in one produce changes in another. It is recommended that the North American Division of the Seventh-day Adventist church provide the leadership and finances for a longitudinal study which does not experience such limitations. The use of longitudinal data would allow researchers to more adequately investigate the cause and effect relationship between K-12 education and church growth.

Another recommendation is that research be accomplished to determine the contribution of higher education to church baptism and church retention. Continued effort and research is necessary to identify and select additional independent variables that can be measured and tested as to their influence on baptism and church retention. It has been said many times that the church is losing over half of the youth of the church. This study supports that statement only for those youth that never go to an Adventist school.
One factor that has come to light in this study is the apparent imbalance between males and females that join and stay in the church. More females (88.6%) than males (76.5%) join the church. The difference is greater than one could expect by chance. It is recommended that additional research be accomplished to determine why this phenomenon is taking place. Also, more males (15.2%) leave the church than females (8.9%).

A final recommendation involves the investigation of the possibility of using the Adventist school system as an outreach ministry to youth that are from families not of the Seventh-day Adventist church. The education is superior in many respects as measured by student achievement. The effects of SDA schooling on church growth, if one attends all 12 years, is clearly established. With declining enrollments it seems prudent to investigate this possibility. No doubt changes would be needed in teacher preparation. Also, Adventist families would have to be oriented to the potential school environment changes. The Adventist church spends millions in mission outreach in other countries and evangelistic outreach in the United States. With 98% retention for those who attend all 12 years in an Adventist school, it would seem that the schools provide one of the strongest evangelistic tools the Adventist church possesses.
APPENDICES
Appendix A

Letter to Lutherans
May 21, 1984

Lutheran Church - Missouri Synod
Board for Parish Services
1333 South Kirkwood Road
St. Louis, MO 63222

ATTENTION: Dianne Dickmann and Linda Luebbe

Dear Friends:

Recently, your Information Bulletin #33883 came across my desk. Since my ministry involves Christian K-12 Education for the Seventh-day Adventist Church, I read the bulletin with keen interest.

At the present time, I am involved in developing a research design for the purpose of determining the relationship of K-12 Education and church growth in the Seventh-day Adventist Church.

Do you know of any such studies accomplished for the Lutherans, or for that matter, for any denomination? I would greatly appreciate knowing about any such studies completed within the last 20 years or writings by individuals giving opinions and/or expectations of the Lutheran church school system.

I will greatly appreciate your help and will be happy to pay for any information you may be able to send me.

Sincerely,

W. E. Minder
Director
OFFICE OF EDUCATION

aa
Appendix B

Letter From Lutherans
June 6, 1984

Mr. W. E. Minder
Director
Office of Education
Seventh-day Adventists
Box C
Berrien Springs, MI 49103

Dear Mr. Minder:

Your May 21, 1984 letter asked whether or not our church body has studied or researched the relationship of Lutheran education to church growth. The answer is, "No."

We have discussed this on several occasions and feel it would be a worthwhile study, however, funds have not been available to do it well. We have definite opinions with regard to the relationship even though this is not why Lutheran schools have been established.

Should you pursue such research in your church body, we would be most pleased to receive a report of its findings. We certainly would do the same through distribution through the Council for American Private Education. We wish we could be of more help at this point.

Sincerely,

H. James Boldt, Secretary
Elementary and Secondary Schools

HJB:11
Appendix C

Conference Presidents' Letters of Introduction
March, 1985

ADVENTIST FAMILY
Illinois Conference

Dear Friends:

This letter has two purposes: (1) I want to inform you of a special study our Lake Union Education Department is conducting, and (2) I am requesting that you kindly assist Elder Warren Minder, the Education Director, by filling in a Lake Union Family Survey he will be sending to you within a few days.

At the present time, our information about individuals and their school attendance is very limited. This has led us to request that the Lake Union Education Department initiate a Family Survey that would help in our long-range planning.

Because this information is vital for our continued effectiveness, I am appealing to you to take the 10 - 15 minutes needed to fill out the survey.

Your family was selected to represent our Conference in this Union-wide study. That is why this letter is being sent to you from the Union Office.

Most sincerely,

Everett E. Cumbo
President
March, 1985

ADVENTIST FAMILY
Indiana Conference

Dear Friends:

This letter has two purposes: (1) I want to inform you of a special study our Lake Union Education Department is conducting, and (2) I am requesting that you kindly assist Elder Warren Minder, the Education Director, by filling in a Lake Union Family Survey he will be sending to you within a few days.

At the present time, our information about the individuals and their school attendance is very limited. This has led us to request that the Lake Union Education Department initiate a Family Survey that would help in our long-range planning.

Because this information is vital for our continued effectiveness, I am appealing to you to take the 10 - 15 minutes needed to fill out the survey.

Your family was selected to represent our Conference in this Union-wide study. That is why this letter is being sent to you from the Union Office.

Most sincerely,

R. A. Thompson
President
March, 1985

ADVENTIST FAMILY
Lake Region Conference

Dear Friends:

This letter has two purposes: (1) I want to inform you of a special study our Lake Union Education Department is conducting, and (2) I am requesting that you kindly assist Elder Warren Minder, the Education Director, by filling in a Lake Union Family Survey he will be sending to you within a few days.

At the present time, our information about the individuals and their school attendance is very limited. This has led us to request that the Lake Union Education Department initiate a Family Survey that would help in our long-range planning.

Because this information is vital for our continued effectiveness, I am appealing to you to take the 10 - 15 minutes needed to fill out the survey.

Your family was selected to represent our Conference in this Union-wide study. That is why this letter is being sent to you from the Union Office.

Most sincerely,

Charles D. Joseph, D.Min.
PRESIDENT
CDJ

ama
March, 1985

ADVENTIST FAMILY
Michigan Conference

Dear Friends:

This letter has two purposes: (1) I want to inform you of a special study our Lake Union Education Department is conducting, and (2) I am requesting that you kindly assist Elder Warren Minder, the Education Director, by filling in a Lake Union Family Survey he will be sending to you within the next few days.

At the present time, our information about individuals and their school attendance is very limited. This has led us to request that the Lake Union Education Department initiate a Family Survey that would help in our long-range planning.

Because this information is vital for our continued effectiveness, I am appealing to you to take the 10 - 15 minutes needed to fill out the survey.

Your family was selected to represent our Conference in this Union-wide study. That is why this letter is being sent to you from the Union Office.

Most Sincerely,

Arnold Swanson
Secretary

AS/wm
March, 1985

ADVENTIST FAMILY
Wisconsin Conference

Dear Friends:

This letter has two purposes: (1) I want to inform you of a special study our Lake Union Education Department is conducting, and (2) I am requesting that you kindly assist Elder Warren Minder, the Education Director, by filling in a Lake Union Family Survey he will be sending to you within a few days.

At the present time, our information about the individuals and their school attendance is very limited. This has led us to request that the Lake Union Education Department initiate a Family Survey that would help in our long-range planning.

Because this information is vital for our continued effectiveness, I am appealing to you to take the 10 - 15 minutes needed to fill out the survey.

Your family was selected to represent our Conference in this Union-wide study. That is why this letter is being sent to you from the Union Office.

Most sincerely,

James L. Hayward
President

aa
Appendix D

Union President's Letter of Introduction
March, 1985

ADVENTIST CHURCH MEMBER
Lake Union Conference

Dear Church Family Member:

Our Lake Union Conference Education Director, Elder Warren Minder, is conducting a carefully-thought-out study which will assist in determining the relationship of Education to our Adventist Church.

Individuals selected for this study were chosen randomly from our Lake Union Seventh-day Adventist family. Random selection of names ensures objectivity and scientific control of the study. Elder Minder will be contacting you, requesting that you complete a short questionnaire. Your response is very vital to this project.

Your conference president has already written to you requesting your cooperation. I join with him in supporting this study. Please assist us by taking the time to fill out the survey Elder Minder will be sending to you in the next few days.

In His service,

Robert H. Carter
President
Appendix E

Researcher's Letter of Introduction
LAKE UNION FAMILY

Dear Friend:

Over twenty years ago a study was conducted in one of our Unions which provided valuable input for our church growth concerns. We now need to update this information with a carefully-conducted research project.

Your conference president and Elder Carter, our Union Conference President, have written to you about this project. This study is important to our Union and to the Church in general.

Your name was randomly selected from among our Seventh-day Adventist Lake Union families to assist in updating our data. Please be assured that once the survey has been returned, your name will be disassociated from the information you send us. We need your response to ensure scientific accuracy of this survey.

Enclosed you will find two questionnaires:

1. The yellow sheet is a SAMPLE only. Use it as a guide for your responses, then throw it away.

2. The white sheet is the questionnaire for you to fill out and send back.

Please take the 10-15 minutes needed to fill out the survey and MAIL it back in the addressed, stamped envelope.

Your cooperation and promptness will be greatly appreciated.

Most sincerely,

W. E. Minder
Director
OFFICE OF EDUCATION
Appendix F

Survey Instrument

Note. Instrument has been reduced to 74% of the original.
LAKE UNION CONFERENCE
FAMILY SURVEY

Please read these special instructions carefully before you fill out your survey blank:

Every column for each person listed should have a response. If you do not know the exact information, use the best guess possible.

A-0 Note that a blank should be turned in for every home where there is a Seventh-day Adventist, whether this person is head of household or not. If a single person lives alone, he will report as head of household. Persons living outside the home are reported only if they are children of the family.

A-3 Each year should be marked in some way—underlined, circled, or crossed out.

A-4 Baptized also includes "Acceptance on profession of faith." It means "date of joining."

A-6, 7 Elementary and secondary school refers to grades 1-12.

A-8, 9 Active participation includes times when a Father or Mother took a temporary rest from a heavy duty in the church.

A-10, 11 "Worker" means employed by the Seventh-day Adventist church or one of its institutions which provides sustentation credit and educational allowance to the employee.

A-12, 13 This blank should be filled out only for the parents of the head of household and spouse. Give the exact or best information you have. This should not be left blank.

PUT THIS FORM IN THE ENCLOSED ENVELOPE AND MAIL.
SECTION A: FAMILY SURVEY. This is a record of everyone living in this home PLUS any children who do not live here.

IN THIS SECTION, LIST:
1. Head of household and all living children of any age whether they now live at home or not and whether they are members of the Seventh-day Adventist Church or not. Include babies.
2. All other relatives of your household who now live with you in your home.
3. Any non-relatives living in your household, if they are or have been Seventh-day Adventists.

A-0  A-1  A-2  A-3  A-4  A-5  A-6

<table>
<thead>
<tr>
<th>Line No.</th>
<th>(M or F)</th>
<th>Year</th>
<th>Year</th>
<th>All</th>
<th>Some</th>
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<tr>
<td>1</td>
<td>Head of Household</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>9 10 11 12 13 14 15 16+</td>
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<td></td>
<td>1 2 3 4 5 6 7 8</td>
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</table>

BE SURE TO INCLUDE:
1. Stepchildren and legally adopted children.
2. All children away from home, married or unmarried.

How many years during elementary and secondary school did this person live with a FATHER who was a Seventh-day Adventist?
who do not live at home.

DO NOT INCLUDE:

- Persons who have died.
- Other relatives not living in your home.
- Any non-relatives in your home unless they are or have been Seventh-day Adventists.

AS YOU FILL OUT THIS FORM, BE SURE TO READ THE SPECIAL COLUMN-BY-COLUMN INSTRUCTIONS ON THE FRONT PAGE.

<table>
<thead>
<tr>
<th>Column</th>
<th>Instructions</th>
</tr>
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<tbody>
<tr>
<td>A-7</td>
<td>How many years during elementary and secondary school did the FATHER of this person participate actively in the church program (i.e., SS teacher/supt, deacon, elder, usher, dept teacher/leader, etc.)?</td>
</tr>
<tr>
<td>A-8</td>
<td>How many years during elementary and secondary school did the MOTHER of this person participate actively in the church program (i.e., SS teacher/supt, deaconess, receptionist, organist, pianist, dept teacher/leader, etc.)?</td>
</tr>
<tr>
<td>A-9</td>
<td>How many years during elementary and secondary school did this person live with a FATHER who was a “worker” for the Seventh-day Adventist Church?</td>
</tr>
<tr>
<td>A-10</td>
<td>How many years during elementary and secondary school did this person live with a MOTHER who was a “worker” for the Seventh-day Adventist Church?</td>
</tr>
<tr>
<td>A-11</td>
<td>Head of Household ONLY: Show the school grade taken by your Mother and Father.</td>
</tr>
<tr>
<td>A-12</td>
<td>Spouse ONLY: Show the school grade taken by your Mother and Father.</td>
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</tbody>
</table>

Circle: all grades taken in an Adventist school.

Underline: all grades taken in other schools.

Cross out: with a vertical line, all grades not taken.
Appendix G

Sample Survey
LAKE UNION CONFERENCE
FAMILY SURVEY

Please read these special instructions carefully before you fill out your survey blank:

Every column for each person listed should have a response. If you do not know the exact information, use the best guess possible.

A-0  Note that a blank should be turned in for every name where there is a Seventh-day Adventist, whether this person is head of household or not. If a single person lives alone, he will report as head of household. Persons living outside the home are reported only if they are children of the family.

A-3  Each year should be marked in some way—underlined, circled or crossed out.

A-4  Baptized also includes "Acceptance on profession of faith." It means "date of joining."

A-6, 7  Elementary and secondary school refers to grades 1-12.

A-8, 9  Active participation includes times when a Father or Mother took a temporary rest from a heavy duty in the church.

A-10, 11  "Worker" means employed by the Seventh-day Adventist church or one of its institutions which provides sustenance, credit and educational allowance to the employee.

A-12, 13  This blank should be filled out only for the parents of the head of household and spouse. Give the exact or best information you have. This should not be left blank.

PUT THIS FORM IN THE ENCLOSED ENVELOPE AND MAIL.
**SECTION A: FAMILY SURVEY.** This is a record of everyone living in this home PLUS any children who

**IN THIS SECTION, LIST:**

1. Head of household and all living children of any age whether they now live at home or not and whether they are members of the Seventh-day Adventist Church or not. Include babies.
2. All other relatives of your household who now live with you in your home.
3. Any non-relatives living in your household, if they are or have been Seventh-day Adventists.

**BE SURE TO INCLUDE:**

1. Stepchildren and legally adopted children
2. All children away from home, married or

<table>
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<th>Line No.</th>
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<th>Year</th>
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do not live at home.
DO NOT INCLUDE:
- Persons who have died.
- Other relatives not living in your home.
- Any non-relatives in your home unless they are or have been Seventh-day Adventists.

AS YOU FILL OUT THIS FORM, BE SURE TO READ THE SPECIAL COLUMN-BY-COLUMN INSTRUCTIONS ON THE FRONT PAGE.

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<tbody>
<tr>
<td>How many years during elementary and secondary school did this person live with a MOTHER who was a Seventh-day Adventist?</td>
<td>How many years during elementary and secondary school did the FATHER of this person participate actively in the church program (i.e., SS teacher, deacon, elder, usher, dept leader, etc.)?</td>
<td>How many years during elementary and secondary school did the MOTHER of this person participate actively in the church program (i.e., SS teacher, deaconess, receptionist, organist, dept. teacher, leader, etc.)?</td>
<td>How many years during elementary and secondary school did this person live with a FATHER who was a &quot;worker&quot; for the Seventh-day Adventist Church?</td>
<td>How many years during elementary and secondary school did this person live with a MOTHER who was a &quot;worker&quot; for the Seventh-day Adventist Church?</td>
<td>Head of Household ONLY: Show the school grade taken by your Mother and Father.</td>
</tr>
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</table>

All | Some | None | All | Some | None | All | Some | None | All | Some | None | All | Some | None |
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</tbody>
</table>

Head of Household ONLY: Show the school grade taken by your Mother and Father.

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<tr>
<th>A-13</th>
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<tbody>
<tr>
<td>Spouse ONLY: Show the school grade taken by your Mother and Father.</td>
</tr>
<tr>
<td>Circle: all grades taken in an Adventist school.</td>
</tr>
<tr>
<td>Underline: all grades taken in other schools.</td>
</tr>
<tr>
<td>Cross out: with a vertical line, all grades not taken.</td>
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</tbody>
</table>

<table>
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<tr>
<th>Mother</th>
<th>Father</th>
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Appendix H

First Follow-up Letter
March 28, 1985

LAKE UNION FAMILY

Dear Friend:

On March 14 I sent a survey form asking that you please take 10-15 minutes to fill out the questionnaire for members of your family. You were to mail it back in the addressed, stamped return envelope. Perhaps in the rush of daily matters the survey was set aside.

PLEASE, would you take the time to fill in the form and send it back? If you have already returned the survey, please disregard this reminder.

Your help is of vital importance to the Lake Union church growth studies.

Thanks so much for your assistance.

Sincerely,

W. E. Minder
Director
OFFICE OF EDUCATION
Appendix I

Second Follow-up Letter
April 12, 1985

Dear Friend:

Your help is desperately needed! No doubt, your busy schedule, family demands, lost mail or other very valid reasons have kept you from filling out the survey I sent you some time ago.

In order to assist you, I am enclosing another survey and stamped return envelope.

Won't you please take 10 - 15 minutes of your time and answer the questions on the enclosed survey.

I really need your information. Please send the survey back by return mail.

Most sincerely,

W. E. Minder
Director
OFFICE OF EDUCATION

Box C
Berrien Springs, Michigan  49103
(616) 473-4541


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