

AN EVALUATION OF EDUCATIONAL LITERATURE
DISTRIBUTED BY
THE CHILD HEALTH INVESTMENT PARTNERSHIP

by

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Virginia Polytechnic Institute and State University

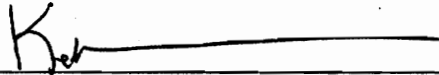
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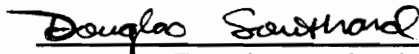
IN

Community Health Education

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Committee Chairman: Kerry Redican
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(ABSTRACT)

Educational literature distributed by the Child Health Investment Partnership (CHIP) staff to CHIP parents was identified and evaluated in terms of readability level and availability of information to assist with meeting the identified needs of CHIP parents. One-hundred percent (n=137) of the educational material available to CHIP staff through their library was analyzed. Readability levels were calculated by using the SMOG Readability Formula and the FRY Graph Reading Level Index.

A previous study (Brindle, 1992) was used to determine whether CHIP had adequate material to meet the educational needs of CHIP families. Forty-eight percent of CHIP parents cited health as their primary concern. Almost one-half of all educational literature stocked in CHIP's library relates to health. Thus, results indicate that CHIP has a more than adequate amount of educational literature relating to topics CHIP parents believed they needed assistance with the most. It was found, however, that other areas such as financial and job assistance were underrepresented in CHIP's library. While 36 percent and 35 percent of CHIP parents believed they needed assistance with finances and jobs, respectively, only 6 percent of CHIP's library was devoted to financial assistance and two percent was devoted to job assistance. The apparent need for assistance in these areas greatly outweighs CHIP's educational resources. Results also indicate that the average

CHIP parents (one who has completed high school) has the education equivalent to or more than was required for reading the majority of CHIP's educational literature. While the mean Reading Level of educational materials was at the tenth grade level, sixty percent of CHIP families surveyed had completed high school. Results and conclusions are discussed in detail.

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INTRODUCTION

A generation after President Lyndon Johnson declared a "War on Poverty," nearly one-fifth of our nation's children still grow up poor. More often than not, they are sick, hungry, illiterate, and lack safe and adequate housing (Reed and Sautter, 1990). In our nation, there are over five million children under the age of six living in poverty. Another six million children live in families considered as "near-poor," with incomes no greater than 100-185% of the poverty level. Overall, 20% of our nation's children live in poverty and as an age group, children have become the poorest of all. Startling as it may be, the number of poor children in our nation is on a rise. The multiple effects of growing up in poverty can last a lifetime.

The results of poverty are evident in the ever declining health status of poor children (Callahan, 1992). Children are especially vulnerable economically because they must rely on their parents to supply them with their basic needs. Unfortunately, many low-income parents can not afford to meet their children's basic needs, let alone health care. Thus, children are in no position to pull themselves out of poverty. Poverty can be episodic (occur in spells), or persistent (last many years). One-third of all children in this country experience poverty for at least one year of their lives. Another one child in twenty lives in poverty for at least two-thirds of their life, before they are fifteen years of age (Korbin, 1992), The multiple effects of growing up in poverty can last a lifetime.

ASSISTANCE CURRENTLY OFFERED FOR THE POOR

From the moment the War on Poverty began, a variety of programs have been designed and implemented in an effort to abolish poverty and pauperism in our nation. Decades later, it is clear that anti-poverty programs and policies can not completely eliminate poverty. Individually and in aggregate, most programs reach only a small proportion of those eligible. Those that are reached are only provided with immediate, temporary relief to the problem. Some of the major programs currently offered to aid poor children and families include: Aid to Families with Dependent Children; Medicaid; Early and Periodic Screening, Diagnosis, and Treatment; Head Start; Women, Infants, and Children; and Free Clinics.

AID TO FAMILIES WITH DEPENDENT CHILDREN

Aid to Families with Dependent Children (AFDC) is a program which entitles all individuals eligible to receive cash payments from the Federal government. AFDC benefits can improve the ability of families to meet the basic needs of their children such as food, clothing, and shelter. To be eligible for AFDC assistance, a child must live without the support of one or both parents. The child must have a parent who is either continuously absent from home, dead, or physically or mentally incapacitated (Beeghley, 1983). Seemingly anti-family in orientation, AFDC, is aimed primarily at broken and unstable families. There is great variation in the extent to which assistance is provided from one state to another. Even though the Federal government pays for the majority of the

program, it is left up to individual states to determine the levels of need and additional eligibility criteria (Beeghley, 1983).

AFDC has helped to relieve some consequences of poverty for some families, however, it is not without its shortcomings. Critics have blamed the program for being anti-family in orientation; administratively inefficient; distributed inequitably; and containing work disincentives.

MEDICAID

Enacted in 1965, Medicaid is the major source of health care funding for the poor. A state administered program jointly financed by Federal and State governments, Medicaid is the closest our nation has come to providing public financed care to those lacking it (Yudkowsky, & Fleming, 1990). Medicaid coverage of low-income families includes those receiving assistance through AFDC as well as those who do not, but whose income is too low to pay for medical care. Eligibility criteria for Medicaid assistance is based primarily on the income of the family, however, the age of the child is also taken into account when looking at the child's eligibility. States are required to cover all children born before September 30, 1983 in families with incomes below state welfare standards, up to age seven. It is left up to each state to decide whether or not they will cover children born after that date. Also, beginning July 1990, states were required to cover all pregnant women and infants up to age one, with incomes below the federal poverty level.

Medicaid has fallen short of its efforts to meet the health care needs of all children living in poverty. Despite its efforts, nearly one-half of all poor children do not receive Medicaid benefits (Yudkowsky & Fleming, 1990). Even those receiving its benefits may not have adequate access to care due to lack of transportation, as well as a lack of providers. For example, an estimated 52 of 136 localities in Virginia do not have enough primary care physicians due to a large concentration of physicians in urban areas (Baliles, 1990). Thus, children on Medicaid are not likely to have a regular source of medical care in which they receive care at one facility from a regular physician who is aware of the child's medical history. Physician participation, including malpractice costs, fees, and the high risk nature of the Medicaid population all contribute to a decrease in the availability of continuous care for Medicaid recipients (Waxman, 1989). An important component of the Medicaid program, Early and Periodic Screening, Diagnosis, and Treatment (EPSDT), was created in an attempt to improve Medicaid's effectiveness.

EARLY AND PERIODIC SCREENING, DIAGNOSIS AND TREATMENT

EPSDT, which offers the nation's largest preventive health care program, was enacted in 1967 as a mandatory service under Medicaid (Altman & Beatrice, 1990). Under the EPSDT program, Medicaid-eligible individuals from birth to age twenty-one are provided with preventive health care. Concerns of the program include: early identification of health problems through periodic well-child assessments; immunizations; and follow-up care to correct any problems identified in the screening (Commonwealth of Virginia, 1992).

The overall goal of EPSDT is to promote a medical home for Medicaid-eligible children less than twenty-one years of age. Screening services include medical, dental, hearing and vision components. It should be noted that participation for Medicaid-eligible individuals is strictly voluntary. EPSDT attempts to: 1) reach all Medicaid-eligible children and encourage and assist with parental participation; 2) determine the health care needs of each child based on observation and tests; 3) provide diagnostic services for each child at risk to assess possible problems or needs and their extent; 4) provide preventive and treatment services to all children in need of them; 5) plan and arrange for early identification and treatment of any needs which may possibly arise in the future; 6) provide educational assistance to promote use of preventive services (U.S. Department of Health, Education, and Welfare, 1975).

EPSDT regulations mandate outreach (seeking out eligible families and informing them about benefits of preventive health services); health education (counseling families how to protect their children's health); screenings (arranging periodic checkups with a developmental assessment component); and case management (ensuring health problems are identified and treated early) (Virginia Division for Children, 1985). Estimates of participation rates in 1989 ranged from, 75% of those eligible in some states to 10% in others. EPSDT's limited success in reaching those eligible can be attributed to restrictive state policies, a lack of enthusiasm for the program in some states and low rates of quality provider participation due to low reimbursement levels (Klerman, 1990). In order to increase EPSDT effectiveness, some believe the public outreach strategies need to include more personal contact. Reaching out to families on an individual basis seems to be most effective (Jones and Nickerson, 1986).

HEAD START

Head Start is the most successful and enduring program from President Johnson's War on Poverty (Washington & Oyemade, 1985). Initially a six-week summer program designed to provide child development services to low-income families, Head Start was soon expanded to a full-year term. Today, it continues to be the only Federally funded comprehensive childhood program for low-income preschool children (National Research Council, 1990). The primary goal of Head Start, as stated in the Head Start performance standards, is "to bring about a greater degree of social competence in children of low-income families, and to improve the child's ability to deal with both present environment and later responsibilities in school and life (U.S. Department of Health and Human Services, 1985). It was thought that providing quality early childhood education programs to children in low-income families would help break the cycle of poverty.

Approximately 1300 local programs across the nation serve children between three and five years of age, with the majority of emphasis placed on three and four year olds (Washington & Oyemade, 1985). Children must live in families below the poverty line or have disabilities to be eligible to participate in Head Start. The program serves approximately 450,000 children across the nation, which represents a mere 15% of all qualified children. More than 90% of Head Start families have incomes below the poverty line (Washington & Oyemade, 1985).

Head Start is a comprehensive program with four major components: education, health, social services, and parent involvement (National Research Council, 1990). These components address a variety of issues ranging from housing to child development. Head Start performance standards require that parents have the opportunity to be involved as classroom participants as well as decision makers. Staff at Head Start run parent education programs and conduct home visits to help strengthen the ties between families and the program (National Research Council, 1990). Head Start also provides a variety of services to low-income families including: social services; health care and medical service (i.e. Health education, primary care services, dental care, visual and auditory screenings, immunizations, and physical therapy services for the handicapped); pre-school and parental education (Williams, 1990). Head Start has proven successful in improving the overall health and development of the children it serves. Notably, participants in Head Start are more likely to graduate from high school, be self-supporting adults, and are less likely to need public assistance or to become teenage parents (Kliegman, 1992). Head Start appears less successful, however, in its efforts to promote better health practices in the home. Also, attempts to change parental attitudes concerning the value of education have not been successful (Department of Health and Human Services, 1985).

WIC

WIC (Women, Infants, and Children) is a Supplementary Food Program designed to improve the nutritional health of pregnant, postpartum, and lactating women, infants and children under age five. Eligibility criteria are twofold: nutritional risk and income. Income must be less than 185% of the poverty level; within this group, nutritional risk is

served first. The program supplies limited, yet highly important, dietary supplements to the needy who are likely to benefit immediately as well as in the long term (Beeghley, 1983). WIC pays for certain nutritional items at any grocery store. Items such as dairy products, eggs, diapers, fruit and juices, and unsweetened cereal, can be purchased through WIC (Brindle, 1992). Despite WIC's substantial accomplishments in improving the nutritional status of its participants, WIC serves only 40% of its eligible population (Edelmam, 1988). WIC has failed to reach all of its eligible population due to inadequate public outreach coupled with limited funding. Thus, as in many government programs for low income children, the need is greater than the supply of funds and resources.

FREE CLINICS

Free clinics deliver free medical, dental, and psychological care to anyone regardless of income. Staffed primarily by volunteers, free clinics have enjoyed some success in improving access to health care for low-income families (Ginzberg, 1985). Free clinics have proven beneficial to the poor in that they have no or very little hassle of "red tape", and have less stringent eligibility requirements (Brindle, 1992). Additionally, free clinics are generally located in the center of a community, thus making access to care easier to obtain. Drawbacks to the free clinic include: a very limited range of health care services; poor quality or little quantity of available physicians; and not enough staff to care for an overwhelming number of patients (Ginzberg, 1985).

EFFECT OF POVERTY ON CHILD HEALTH

Poverty is a well known risk factor for poor health in children. Studies have continually shown that poor children are more likely than non-poor children to be born prematurely; to die in the first few years of life; to experience acute and chronic illnesses, injuries, lead poisonings, or child abuse or neglect; and to suffer from nutritional deficits and handicapping conditions (Klerman, 1991). Frightening as it may be, many of these debilitating and even sometimes fatal conditions could be prevented.

Factors that influence access to health services for poor families include: lack of money or insurance to purchase medical care; distance to facilities; and availability of health care providers. Lack of finances tends to be the primary reason for a lack of access to health care. Twenty-seven to twenty-eight million infants and children live in families who are unable to afford medical insurance coverage. In Virginia alone, children under age 18 represent 270,000 or 30% of the uninsured population (Baliles, 1990). Uninsured children are less likely to visit a physician for preventive health care and even acute conditions. Instead, they are likely to go to various free clinics and emergency rooms for treatment when they are ill. Thus no single physician is aware of the individual's medical history or treatments (Brindle, 1992).

Over 12.6 million U.S. children under the age of 18 are poor. One out of every five of these children will go to bed hungry, sick or cold. Among industrialized nations, the U.S. has the highest rate of child poverty (Reed & Sautter, 1990). Thus, it should not be surprising that more than 10,000 children in the U.S. die each year as a direct result of

living in poverty. Mortality often occurs in the first few weeks of life as a direct result of lack of prenatal care (Reed and Sautter, 1990).

The opportunity for many of our nation's children to become productive citizens in society is being severely threatened before they even begin school. The many negative consequences of growing up poor progressively take toll on the health of poor children (Danzinger, 1990). The multiple problems experienced by poor children can greatly influence the future of our society. As the number of children living in poverty rises, the number of possible future, productive members of society declines. Poor children, compared to non-poor children, are less likely to do well in school, thus increasing the likelihood of intergenerational perpetuation of poverty.

Nearly one-fourth of U.S. children lack medical, nutritional, and educational assistance that is vital to development in the early stages of life. Thus, many poor children are needlessly sentenced to psychological and physical deficiencies for the rest of their lives (Reed & Sautter, 1990). The major acute conditions reported for children under the age of five include: respiratory conditions; ear infections; infectious and parasitic diseases; and injuries, many of which are preventable (National Center for Children in Poverty, 1991). Some other frequently reported conditions are low birth-weight, HIV infection and AIDS, nutritional problems, lead poisoning, and child abuse and neglect.

Infant mortality rates have proven to be a useful indicator of the health of the population because the health of a newborn infant is influenced by its immediate environment as well as by the health of its mother (Beeghley, 1983). Infant mortality is greatly influenced by prenatal care or lack of it. During the critical first trimester of

pregnancy, one in four pregnant women receives no prenatal care. Thus, such a woman is three to six times more likely to deliver a low-birth-weight, premature infant (Reed & Sautter, 1990). Low-birth-weight babies play host to a variety of developmental problems during their life.

Children living in poverty are more likely to have nutritionally inadequate diets possibly leading to a lag in growth, and longer lasting, more severe infectious diseases. Iron deficiency may also affect cognitive development and social behavior (Klerman, 1991).

High blood lead concentrations have been repeatedly found in poor children. Exposure to lead for a young child can lead to such detrimental affects as growth and neurological disturbances or even convulsions and death. The type of reaction depends on the length and level of exposure (Klerman, 1991). Children can be exposed through several routes: air, water from old pipes, soil, paint, and toys.

AIDS in children is largely acquired through perinatal transmission by an HIV-infected mother. Many times, the mother was infected through intravenous drug use or intercourse with someone involved in drug use. A serious lack of resources impedes the care of children and their families who are in great need of medical care (Heagarty, 1991).

Many of the health problems experienced by poor children are a direct result of their families living in poverty. Underclass families experience a variety of adverse conditions such as poor housing, homelessness, limited education (with a 50% high school dropout rate), single-parent families, physical and sexual abuse, unemployment,

social stress, welfare dependence, and ineffective utilization of health care resources (Kliegman, 1992). The synergistic effects of these adverse conditions make it difficult for a young child growing up in poverty to live a healthy, productive life.

EFFECT OF PARENTAL EDUCATION ON POOR CHILDREN

Formal parental education has a positive influence on child health. Mothers with less than a high school diploma are less likely than better educated parents to take action to prevent injuries or poisonings, to receive adequate prenatal care, or to seek appropriate care for their children (Klerman, 1991). Educated mothers also have greater knowledge of preventing, recognizing, and treating childhood illnesses. Studies of child mortality have shown maternal education, or literacy, to be one of the most important factors in explaining different mortality levels within and between societies (Streafield, Singarimbun, & Diamond, 1990).

Parental education, or lack thereof, also plays a role in the education of children. Educationally deprived children, more often than not, come from homes in which one or both parents have little education. Several studies have shown that parents', particularly mothers', educational levels are related to children's school achievement (Nickse, 1990). Under-educated parents who are also poor, have more difficulty in helping their children do homework. Parents who may need improvement themselves, may not have the technical skills to read to their children. Unfortunately, these parents may not be aware of the importance of reading to and with their children. They do not realize that it helps build

skills and positive attitudes about reading (Nickse, 1990). Parental involvement in their child's education has, in many cases, increased school attendance as well as had positive effects on child attitudes and behaviors (Nickse, 1990).

Based on the premise that parents who become more literate positively influence their children's literacy interests and skills, a plethora of family literacy programs have evolved. To some child advocates, family literacy is the key to improving student achievement while involving parents (Reed and Sautter, 1990). These programs focus on teaching parents to read so they can teach their children to read. Literate parents create literate home environments, act as literate models and demonstrate positive attitudes towards education (Nickse, 1990). Notably, in Virginia, one in five adults over the age of 25 have completed 8 years of school or less, thus 670,000 of Virginia's adults may be functionally illiterate. Over 75% of Virginia's unemployed have inadequate reading skills (Baliles, 1990).

CHILD HEALTH INVESTMENT PARTNERSHIP

The Child Health Investment Partnership (CHIP) is a joint public and private venture currently serving approximately 1100 children ages birth to six living in the Roanoke Standard Metropolitan Area. This area includes the cities of Roanoke and Salem as well as the counties of Roanoke, Craig, and Botetourt.

CHIP was established in 1988 as a result of the efforts of Cabell Brand, founder of Total Action Against Poverty, and Douglas Pierce, M.D., a Roanoke physician. CHIP's

intention is "to make available community-based continuous, quality medical care to children and to maximize the appropriate use of community health resources by: 1) providing primary care to children within their communities; 2) increasing the use of the Health Department by those who are eligible; 3) improving immunization levels; 4) decreasing inappropriate use of hospital emergency rooms" (CHIP, 1988). The children served by CHIP are at or below 150% of the poverty level, are not covered by private insurance, and have no routine health care. Program participants include public and private physicians and dentists; Total Action Against Poverty; social service agencies; and the Roanoke City and Allegheny Health Districts. Health Care providers are provided reimbursement at the Medicaid rate.

In an effort to meet the various needs of its participants, CHIP offers a variety of services which include: care coordination, immunizations, WIC enrollment, children's specialty services, nutrition education, patient education, pharmacy and laboratory services, dental services, and outreach (Williams, 1990). Primary health care services offered by CHIP include three components: public/private provider network; care coordination; and parental involvement (Balla, 1992).

To become enrolled in CHIP, participants must complete two phases. The family must first complete a family intake profile form, eligibility forms, and a self-administered health history questionnaire at the CHIP offices with the assistance of CHIP staff. The second step to becoming enrolled is to go to an orientation describing the services provided by CHIP. During this time, the nurse coordinator explains CHIP's range of services, as well as its goals, to the parents. Families must then sign a medical record release form and a patient provider contract outlining CHIP's services and goals. The parents and nurse

coordinator work together to decide any immediate needs of the child. Once this is done the child can then be referred to the appropriate services. The child may then be assigned to a participating physician of choice upon development of a plan of action, completed by the nurse coordinator. The nurse coordinator is also responsible for making sure the child is making and keeping appointments with his physician. She then reviews the outcome of all physician appointments and schedules any necessary follow-up visits. Care coordination is integral to CHIP in that it helps promote efficient and effective utilization of health care resources by CHIP participants (Williams, 1990).

In its first year, CHIP received a \$118,000 grant from the Virginia Division of Maternal and Child Health. It allowed for coverage of children aged one and older. CHIP was then tested on 100 children who were all treated by one of the six participating physicians. In 1989, CHIP received a grant for \$157,000 and was able to expand the program to include 300 children. In 1990, CHIP received a \$200,000 grant, plus a four year Kellogg Foundation grant for \$1.5 Million. This money helped CHIP to continue to grow in terms of staff well as enrollees (Pierce, 1990).

Overall, CHIP appears to have attained great success in meeting its goals. Currently, CHIP has over 30 participating physicians who provide primary care for all enrolled children. Thus, 100% of CHIP children have a medical home. CHIP providers hope to one day fulfill its ultimate goal of actively enrolling 5000 children. Unfortunately, this is currently not a possibility due to limited staffing. Currently, CHIP is only able to meet approximately 22% of those in need of its service (CHIP, 1992).

A 1991 study of the perceived needs of CHIP families and interventions provided to them, found that 55% of those studied had finished high school and had gone on to college, forty-eight percent of this group had completed one year of college, while another seven percent had completed two or more years of college. Another five percent had completed their General Education Diploma (See Appendix A). According to the U.S. Department of Health and Human Services, only 10 percent of household heads living in poverty finish high school, while only five percent complete one or more years of college. Thus, it was concluded that CHIP heads of household are more educated than the average indigent household head (Brindle, 1992). It should also be noted, however, that a study done by Williams (1990) concluded that 2.1% of CHIP family heads studied had completed 5-6 years of school; 3.5% had completed 7-8 years of school; 17.8% had completed 9-10 years of school; 66.5% had completed 11-12 years of school; 6.4% had completed 1-2 years of college; and 3.6% had completed 3 or more years of college. Thus, there is a small percent of CHIP heads of household who did not finish high school and are lacking an education.

Brindle (1992) also looked at the Family Needs Assessment to determine in what areas the family needed assistance. She found health and nutrition, financial assistance, and employment to be the major concerns of CHIP families. This is an important finding since Family Needs Assessments are used to help determine the targets of the educational home visits.

PURPOSE

The purpose of this study was to analyze the literature used as a part of the current CHIP educational component. More specifically, educational literature was evaluated in terms of readability level and availability of different topics to meet the needs of CHIP families.

SIGNIFICANCE OF STUDY

Educational literature is often used as a supplemental tool to educational home visits. Literature containing information on parenting, health and safety, and local social service resources is given to parents in the form of pamphlets, booklets, and brochures. Educational literature is important in that it provides parents with information on a variety of subjects. It is imperative that educational literature is available on a variety of educational topics as well as on a variety of reading levels. Materials available should be matched with the parent's reading level to improve comprehension, learning, and retention.

It is also important to know that CHIP has educational literature to meet the various needs of CHIP parents. Parents relate their educational needs to Family Intervention Specialists through a Family Profile Grid, which is completed during enrollment into CHIP. The normal range of needs include: (1) health and nutritional needs which may consist of child and/or adult health education, assistance with physician visits, activities relating to health promotion and lifestyle changes, and issues dealing with food and the family ; (2)

mental assistance which may involve counseling and talking about different issues such as stress and depression; (3) transportation needs which includes everything designed to assist with transportation such as arranging for services provided by the CHIP van; (4) technical training which may involve assisting parents in obtaining training or an education to be able to practice a skill or trade; (5) assistance in parenting and family relations may include activities aimed directly at improving some aspect of parenting skills or at education focused on child growth and development; (6) job assistance includes information and referrals for help in finding employment; (7) financial assistance which may include information on government programs designed to assist the indigent, as well as monetary assistance and help in developing a sound budget framework; (8) housing needs may include a need for shelter; and (9) other needs may consist of anything not listed in the Family Profile Grid that may be of importance to CHIP families.

It is necessary to know that CHIP has literature on topics in which parents believe they need help with the most. CHIP should have an abundance of information available to help meet parental educational needs. A previous study of family perceived needs (Brindle, 1992), will be used to determine whether educational material is available to meet the needs of CHIP parents as determined by this study.

LIMITATIONS

Two readability scales were applied to the literature distributed to CHIP parents. The reading scales were useful tools, yet they were not without their limitations. First, the tests did not take into account the characteristics of the readers skill. Everyone's reading ability varies according to individual interest, prior knowledge of the subject, and quality of educational experience. Also, the tests did not measure the complexity of the written materials that result from the writer's style and presentation of the material. An additional limitation that must not be overlooked is the fact that readability formula's provided only an estimate of reading levels, they did not assess comprehension of the material. Also, even though readability scores were reported in grade levels, it did not indicate an individual with the same number of years of formal education would be able to read a piece without difficulty.

The FRY Graph has been found to be reliable, yet its validity has been questioned because it deals with only two variables affecting readability. It has been found, however, as reliable and as valid as other formulas (Dupuis, Lee, Bsfiali, & Askov, 1989) A 1988 study by Fusaro, found the FRY to have comparative validity with other formulas such as the Dale-Chall and Flesh formulas. A study by Vaughan (1976) found high correlations between the FRY and the SMOG scales, differing by only one or two levels. It should be noted that readability formulas have been around so long that most reading material is not generated without guidance from them (Pearson, 1984).

In terms of readability, there are other components that should be taken into account, rather than just reading scores alone, When looking at the readability of material, the

background information the reader has on the subject; the reader's interest in the subject; and the aids to reading that can be found in the text are also important indicators of readability. Unfortunately, these factors were beyond the scope of the paper.

DEFINITION OF TERMS

Family Needs Assessment (FNA): a questionnaire designed to assess the needs of a family. The results are used as the basis for interventions.

Family Intervention Specialist (FIS): person trained to provide support and help in meeting basic family needs of food, clothing, and shelter. Also she completes FNA and provides educational home visits.

Readability Level: Reading level of material influenced by vocabulary, sentence structure, and word density.

Family Profile Grid: a self-administered questionnaire of perceived needs and family history.

FRY Graph Reading Level Index: Method for determining the reading level of long, written materials based on three 100-word passages.

SMOG: Method for determining the reading level of shorter written materials based on 30 sentences, (ten from the beginning, ten from the middle, and ten from the end).

METHODOLOGY

INSTRUMENTATION

Educational material given to CHIP parents was evaluated on the basis of readability level. One-hundred percent of educational materials distributed to CHIP parents from the CHIP office were analyzed for the grade level of reading. Two bookmarks and one resource directory were completely excluded from this study due to their use of phrases, rather than complete sentences. The FRY Graph Reading Level was used to analyze long material because it has been found to be accurate within one grade level; because it is a relatively uncomplicated tool when looking at a large number of materials; and it is one of the most widely used formulas in education (Pearson, 1984). The SMOG Readability formula was applied to shorter materials because of its accuracy and efficiency in analyzing shorter material, such as pamphlets, and flyers. Studies have shown that levels derived by FRY and SMOG tend to differ by one or two grade levels, SMOG estimates being higher. The reason for this difference is the SMOG tends to indicate the reading ability required for 90-100 percent comprehension while FRY indicates the reading ability required for 50-75 percent comprehension (Vaughn & Estes, 1986). In order to draw more accurate conclusions from this study, the researcher adjusted the SMOG readability scores to the Fry scale. One grade level was subtracted from each SMOG score to give a range that fit more closely with the FRY scores.

The SMOG Readability Formula is a mathematically obtained rating of the grade reading level of written materials based on the interrelationship of sentence length and vocabulary difficulty (Vaughn & Estes, 1986). In calculating the reading level, the researcher counted off 10 consecutive sentences near the beginning, middle, and end of each piece of literature. The number of words containing three or more syllables (polysyllabic) were then counted and compared to a SMOG conversion table to find the approximate grade level (See Appendix B).

The FRY Graph Reading Level Index was found by selecting three 100-word passages, one each from the beginning, middle, and end of the material. The total number of sentences in each 100-word passage were counted. The average of the three numbers was then taken. The total number of syllables in the three samples were then averaged. The average number of sentences per 100-words and the average number of syllables per 100 words was then plotted on a FRY graph to determine the reading grade level (See Appendix C).

DATA COLLECTION

Educational material was collected from CHIP's library of educational literature located at the CHIP office. All of the educational materials kept in CHIP's library was obtained on January 19, 1993. Additional educational literature was obtained by the researcher on February 11, 1993. This additional material consisted of CHIP's Quarterly newsletter

entitled, "CHIP CHAT" newsletters available from 1992. Comparisons were made through the use of means, ranges, and frequency distributions.

PROBLEMS WITH DATA COLLECTION

The researcher encountered two problems in collecting data. Some of the educational resources and materials could not be tested for readability level. This occurred because both readability scales used required analyzing sentences; while not all materials were written in sentence structure. Two pieces of literature were small bookmarks consisting of only phrases and incomplete sentences. Another piece of literature was a resource telephone directory consisting of only telephone numbers. Thus, this material had to be excluded from the study. The second problem occurred when the researcher collected data on the educational levels of CHIP parents. These data were collected from a 1992 study in which grade levels completed were categorized with three grade levels in each category. Readability Formulas gave exact grade levels rather than only categories.

CHAPTER II

RESULTS AND DISCUSSION

This chapter presents the results of this study divided into three categories: (1) profile of CHIP enrollment and discharge; (2) scope of educational literature; (3) readability of educational material; and (4) availability of educational material for interventions.

PROFILE OF CHIP ENROLLMENT AND DISCHARGE

The number of children enrolled in CHIP reached a total of 1117 by the end of 1992. Figure 1 provides a profile of all CHIP admits, discharges, and readmits for the years 1988 through 1992. Since educational materials are targeted toward families, it is important to look at the number of families enrolled in CHIP. By the end of 1992, 793 families were enrolled in CHIP. Figure 2 provides a family enrollment profile.

SCOPE OF EDUCATIONAL LITERATURE

Educational literature in CHIP's library is selected by Barbara Putney, CHIP's Parent Involvement Specialist. Barbara has her Masters Degree in Home Economics with an emphasis in Child Development. She selects literature that she considers practical for parents of infants birth to three years old. She looks for materials that are easily

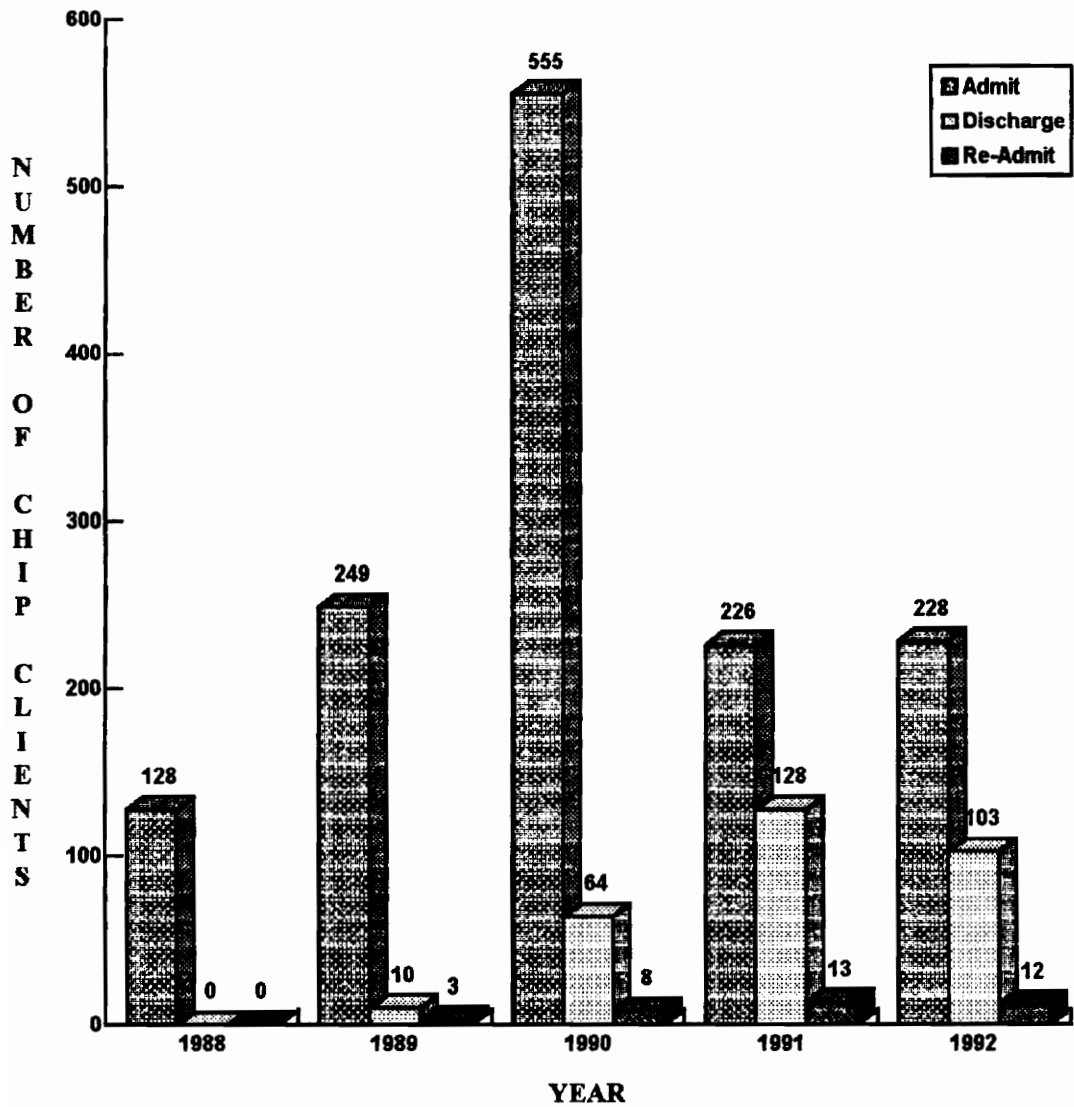


FIGURE 1 : CHIP CHILDREN ENROLLED AND DISCHARGED

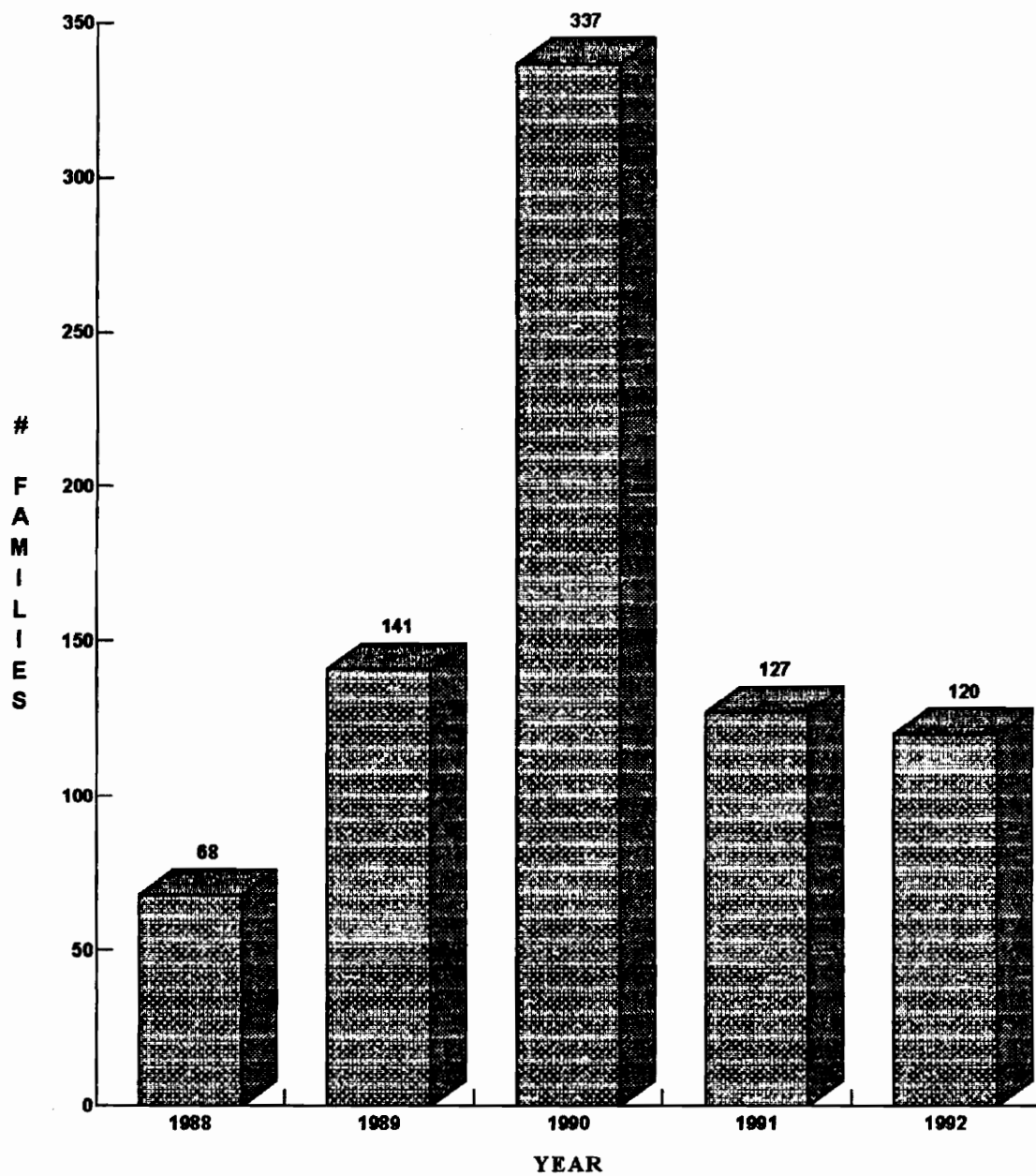


FIGURE 2: NUMBER OF FAMILIES ENROLLED IN CHIP

reproducible, contain many graphic illustrations, and are easy to read. Although the actual reading level of the literature is unknown, she selects literature that she subjectively interprets to read at the fifth grade level.

Educational literature was grouped into different categories as defined by family perceived needs obtained from Family Profile Grids. Forty-nine percent (n=67) of the 137 materials analyzed contained information relating to health. Topics included in materials relating to health included first aid and safety, child health, and parental health. Thirteen percent (n=18) contained issues relating to parenting skills and family relations. Eleven percent (n=15) of the materials dealt with nutrition for both parents and children. Information on housing and transportation only accounted for 1.5 percent (n=2) of the materials. While there were no materials relating to technical training, there were three brochures (2%) on job assistance. Six percent (n=8) and three percent (n=4) of the educational materials related to mental health and crisis intervention, respectively. Another six percent (n=9) of the literature dealt with financial assistance available. Finally, another eight percent (n=11) consisted of general educational information that fell outside of the above categories. The newsletter "CHIP CHAT" was included in this category since it contained information on a variety of topics (see figure 3).

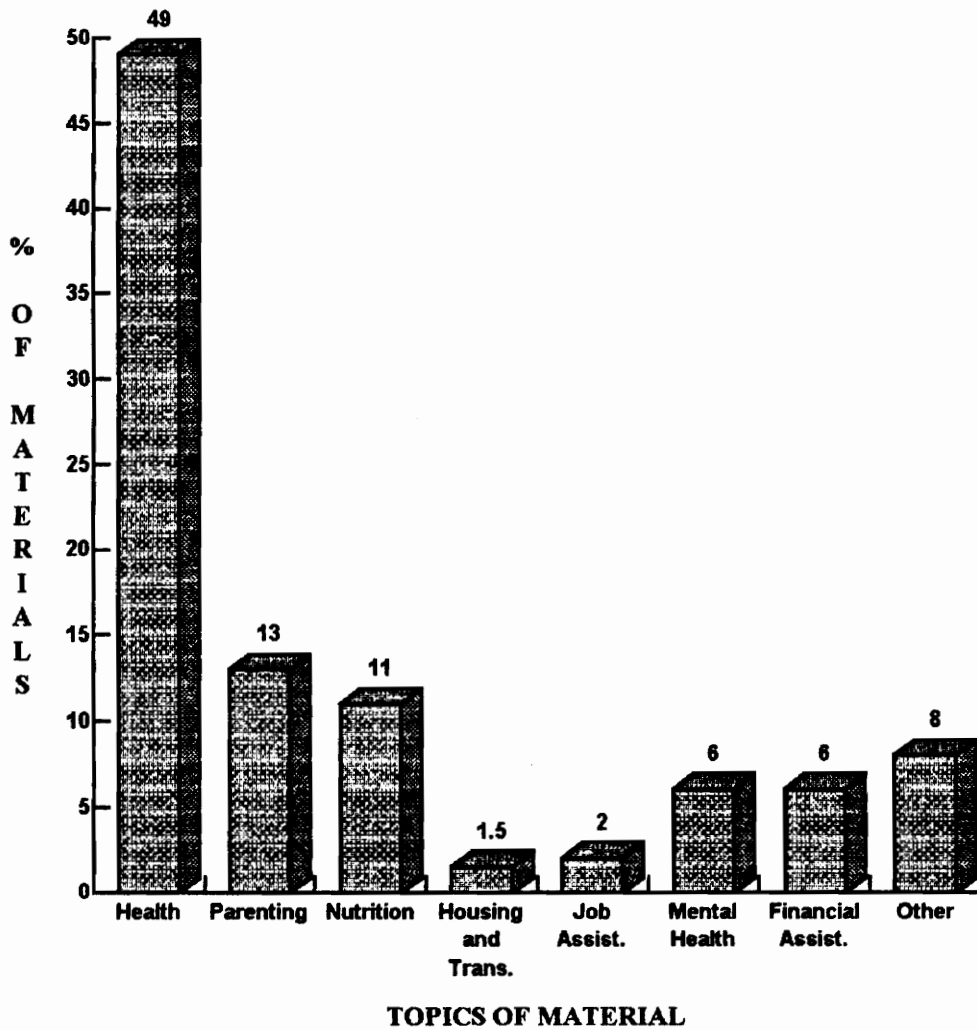


FIGURE 3: SCOPE OF EDUCATIONAL MATERIALS

READABILITY OF EDUCATIONAL LITERATURE

The majority of educational materials analyzed were short in nature and were in the form of pamphlets. Ninety-three percent (n=127) were short enough to be analyzed by the SMOG Readability Formula, while the remaining seven percent (n=10) were in a longer, booklet format and were thus analyzed by the FRY Reading Graph. Materials analyzed by the SMOG were adjusted to a range of grade levels to meet the FRY scale by subtracting one grade level from each SMOG score. Of the 137 materials analyzed, two percent (n=3) were at the 4th - 6th grade reading level. Five percent (n=6) and 17 percent (n=21) were at the 6th - 7th and the 7th - 8th grade levels respectively. Thirteen percent (n=17) were at the 8th - 9th grade levels. The majority of educational literature, 31 percent (n=39) was found to be at the 9th - 10th grade reading level. Another 12 percent (n=15) were at the 10th - 11th grade reading level. Ten percent (n=13) of the materials analyzed were at the 11th - 12th grade reading level. Another ten percent (n=13) was at the 12th to 13th (college) reading level (see figure 4).

Table 1 lists, by category, all educational literature analyzed in this study. Following the title of each piece of literature, the reading grade level assigned for the piece can be found as well as the range of grade levels for SMOG scores converted into FRY levels(See Appendix D for a list of publishers).

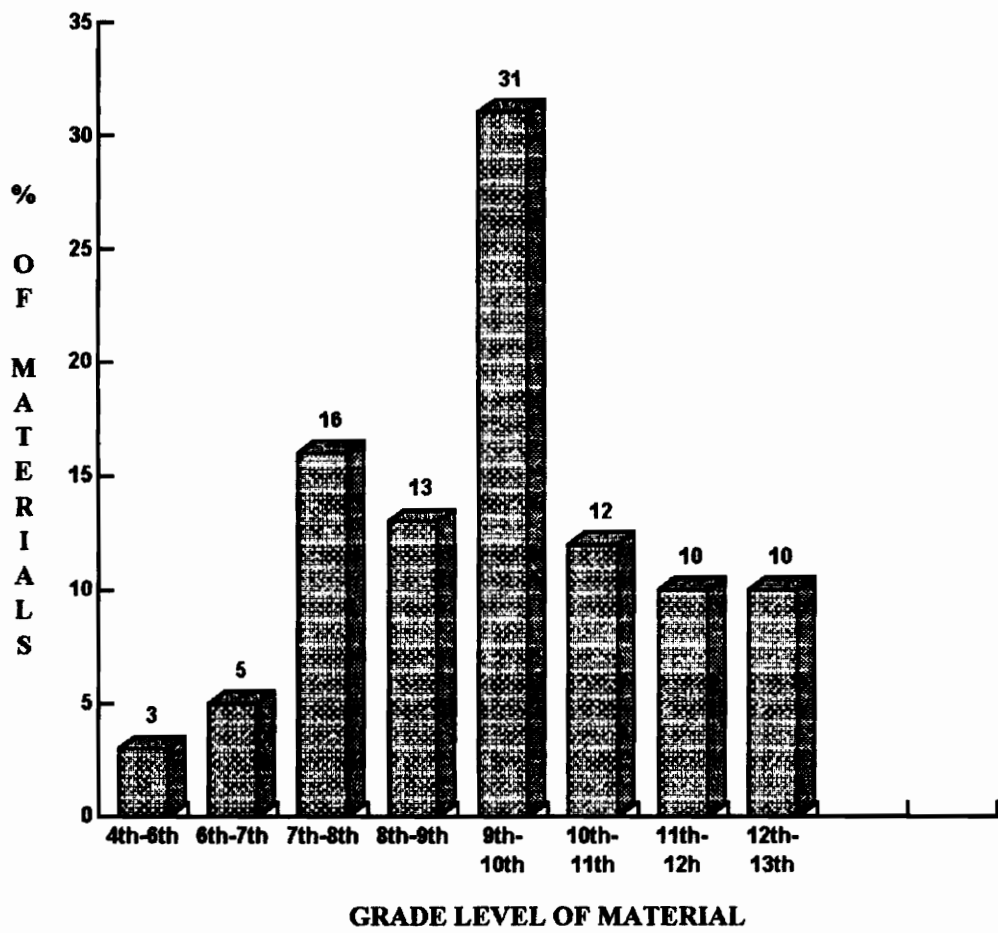


FIGURE 4: READABILITY OF EDUCATIONAL MATERIALS

TABLE 1: TITLE AND GRADE LEVEL OF MATERIAL

HEALTH

(SMOG to FRY)

<u>Title</u>	<u>Grade Level</u>	<u>Range</u>
"*Your First Visit to the Gynecologist"	5	
"Keep Your Child From Choking"	6	5-6
"ABC's of Baby Care"	6	5-6
"Developmental Checklist for Young Children"	7	6-7
"First Steps"	7	6-7
"Self Examination for Oral Cancer"	7	6-7
"Child Development: Birth to Three Years Old"	8	7-8
"Tel-Med"	8	7-8
"One to Two Years Old"	8	7-8
"Seven to Twelve Months Old"	8	7-8
"Early Childhood Years"	8	7-8
"Birth to Six Months"	8	7-8
"Emergency Care Guide"	8	7-8
"Buckle Up Your Kids for Safety"	8	7-8
"First Aid for Children"	8	7-8
"Have a Happy & Safe Holiday"	8	7-8
"First Aid for Eye Emergencies"	8	7-8
"Home Safe Home"	8	7-8
"Child-Proofing Your Home"	8	7-8

"ABC's of Child Development"	8	7-8
"Your Unborn Baby and You"	8	7-8
"What You Should Know About Stress & Your Child"	9	8-9
"How's Your Vision?"	9	8-9
"Caring for Your Baby's Teeth"	9	8-9
"Signs of Possible Eye Trouble in Children"	9	8-9
"How to Avoid Housetraps in Your Kitchen"	9	8-9
"Medicaid's Health Checkup Program"	9	8-9
"Are You Listening to Your Child?"	9	8-9
"Injury Prevention Program"	10	9-10
"Who are Special Needs Children?"	10	9-10
"Parent Resource Center"	10	9-10
"You and Your Baby"	10	9-10
"Two to Four Years Old"	10	9-10
"Playing it Safe in Your Mobile Home"	10	9-10
"Protect Your Child"	10	9-10
"How to Set up a Coal Wood Stove"	10	9-10
"Child Safety"	10	9-10
"Fire Prevention All Over Your Home"	10	9-10
"Poisoning -- Act Fast!"	10	9-10
"Travelers Guide to Hotel & Motel Safety"	10	9-10
"Teen Health Center of Roanoke"	10	9-10
"Fact Sheet: Chlamydia"	10	9-10
"Good Care for Your Child's Teeth"	10	9-10
"Your Child & Otis Media"	10	9-10

"About Tots & Tooth Care"	10	9-10
"About Childhood Communicable Diseases"	10	9-10
"Increased Health Awareness Promotes Health Babies"	10	9-10
"Strabismus"	11	10-11
"The ABC's of Chickenpox"	11	10-11
"Kid stuff"	11	10-11
"Blue Ridge Poison Center"	11	10-11
"Play it Safe"	11	10-11
"Baby-sitting Safety"	11	10-11
"Regional Infant Stimulation Clinic"	11	10-11
"TAP-- Head Start"	12	11-12
"Child Behavior & The Dentist"	12	11-12
"Your Child's Sight"	12	11-12
"A Word of Caution About Treating Flu or Chickenpox"	12	11-12
"Amblyopia"	12	11-12
"Interceptive Orthodontics"	12	11-12
"Questions & Answers - Diphtheria, Tetanus, & Pertussis"	12	11-12
"Development of Children's Teeth"	13	12-13
"Why Xray Children's Teeth?"	13	12-13
"Children's Safety Network"	13	12-13
*"Head Start: A Child Development Program"	13	
"Turning Disabilities Into Abilities"	13	12-13
*"Illusions of Immortality"	13	

PARENTING & FAMILY RELATIONS

(SMOG to FRY)

<u>Title</u>	<u>Grade Level</u>	<u>Range</u>
"Baby's First Shoes"	5	4-5
"Understanding: The Most Important Grade"	7	6-7
"Off To a Sound Start: Your Baby's First Year"	8	7-8
"Your Child's Fears"	8	7-8
"Toys: Tools for Learning"	9	8-9
"Play is Fundamental"	9	8-9
*"Infant Care"	9	
*"Changes & Choices: Your Children and Sex"	9	
"So Many Good-byes"	9	8-9
"Helping Children Learn Self-Control"	10	9-10
"Your Toddler"	10	9-10
"Caring for Your Premature Baby"	10	9-10
"Developing Toilet Habits"	10	9-10
"Becoming a Parent"	10	9-10
"Enjoying Your Baby"	10	9-10
"How to Phone Your Pediatrician"	10	9-10
*"Expecting"	11	
"Baby's Book"	12	11-12

NUTRITION

(SMOG to FRY)

<i><u>Title</u></i>	<i><u>Grade Level</u></i>	<i><u>Range</u></i>
*"Feeding Young Children with Cleft Lip & Palate"	8	
"Food Sources of Iron"	8	7-8
"Infant Feeding Guide"	8	7-8
"Balanced Diet on a Balanced Budget"	9	8-9
"Infant Nursing"	9	8-9
"Tips for Feeding Your Child"	9	8-9
"Supplemental Feeding"	10	9-10
"Infant Nutrition"	10	9-10
"Breast feeding"	10	9-10
"Weaning & Supplementing"	10	9-10
"Learning Together: Feeding in the First Two Years"	10	9-10
"Preparing Formula"	11	10-11
"Food Sensitivity"	11	10-11
"Building a Better Diet"	11	10-11
"Understanding & Using Similac"	12	10-11

HOUSING & TRANSPORTATION

(SMOG to FRY)

<u>Title</u>	<u>Grade Level</u>	<u>Range</u>
"Transitional Living Center"	13	12-13
"Ride Guide"	13	12-13

JOB ASSISTANCE

(SMOG to FRY)

<u>Title</u>	<u>Grade Level</u>	<u>Range</u>
"Dislocated Worker Program"	10	9-10
"Certification Interview: Things to Bring"	12	11-12
"Worker Dislocation"	13	12-13

MENTAL

(SMOG to FRY)

<u>Title</u>	<u>Grade Level</u>	<u>Range</u>
"Save Your Lives..."	7	6-7
"Physical Abuse is Never OK"	7	6-7
"Why Should I Get Help?"	10	9-10

"About Child Abuse"	11	10-11
"What Everyone Should Know About Child Abuse"	11	10-11
"About Drug Abuse"	12	11-12
"Save Their Lives..."	12	11-12
"About Depression"	13	12-13

CRISIS INTERVENTION

(SMOG to FRY)

<i><u>Title</u></i>	<i><u>Grade Level</u></i>	<i><u>Range</u></i>
"The Turning Point"	8	7-8
"CARING"	8	7-8
"TAP's Women's Resource Center"	10	9-10
"Shelter From the Storm"	13	12-13

FINANCIAL ASSISTANCE

(SMOG to FRY)

<i><u>Title</u></i>	<i><u>Grade Level</u></i>	<i><u>Range</u></i>
*"Virginia Medicaid Handbook"	9	
"Resource Mothers Program"	9	8-9
"Making Food Stamps Count"	9	8-9
"Medicaid's Health Checkup -- EPSDT"	10	9-10
"Legal Aid Society of Roanoke Valley"	10	9-10

"Full Circle Senior Services"	11	10-11
"Virginia ADC Program"	12	11-12
"TAP Energy Conservation Programs"	13	12-13
"A World of Wanted Children Would Make a Difference"	13	12-13

OTHER

(SMOG to FRY)

<i>Title</i>	<i>Grade Level</i>	<u><i>Range</i></u>
"Naming Your Baby"	9	8-9
"Measuring Temperature"	9	8-9
"CHIP CHAT" Spring 1992	10	9-10
"10 Steps to the Year 2000"	10	9-10
"If you Live Here...."	10	9-10
"Norplant System"	11	10-11
"CHIP CHAT" November - December 1992	11	10-11
*"The Answer Book"	12	
*"The Most Recent Innovation in Birth Control"	13	
"Planned Parenthood News"	13	12-13
"How Christian Children's Fund Became 1 of Nations....."	13	12-13

*indicates literature was analyzed by the Fry Reading Level Index

AVAILABILITY OF EDUCATIONAL MATERIAL FOR INTERVENTIONS

A study by Brindle (1992) was used to look at the total number of interventions for 1991 (See Appendix E). At the time of this study, 1991 is the only year in which available data are complete. It should be noted that categories of information here are more specific than categories previously used in looking at perceived needs.

Interventions are divided into specific categories. These categories were used to look at the different types of interventions, their frequency, and the number of educational materials available to supplement the interventions. Eleven percent (n=15) of CHIP's library had different materials relating to nutrition, while they had 98 nutrition interventions in 1991. Twelve percent (n=17) of the materials related to social services, while there were 164 social service interventions. There were 54 child care interventions in 1991 and 26 percent (n=38) of CHIP's library was devoted to this topic. Mental interventions accounted for 113 interventions, while only six percent (n=8) of CHIP's library pertained to this topic. The largest number of interventions to occur (n=184) were related to child development, and 12 percent (n=16) of CHIP's library had information on this topic. Parenting skills accounted for five percent (n=7) of CHIP's library. There were 147 parenting skill interventions in 1991. There were 159 child education and 89 adult education interventions in 1991, yet CHIP's library had no materials relating to child education, and had 18 (13 percent) pieces of literature for adult education. While 215 interventions related to budget and housing interventions, only 1.4 percent (n=2) of CHIP's library was devoted to this area. There were 167 vocational and recreational interventions, yet CHIP has no literature in its library to supplement this category of intervention (See figure 5).

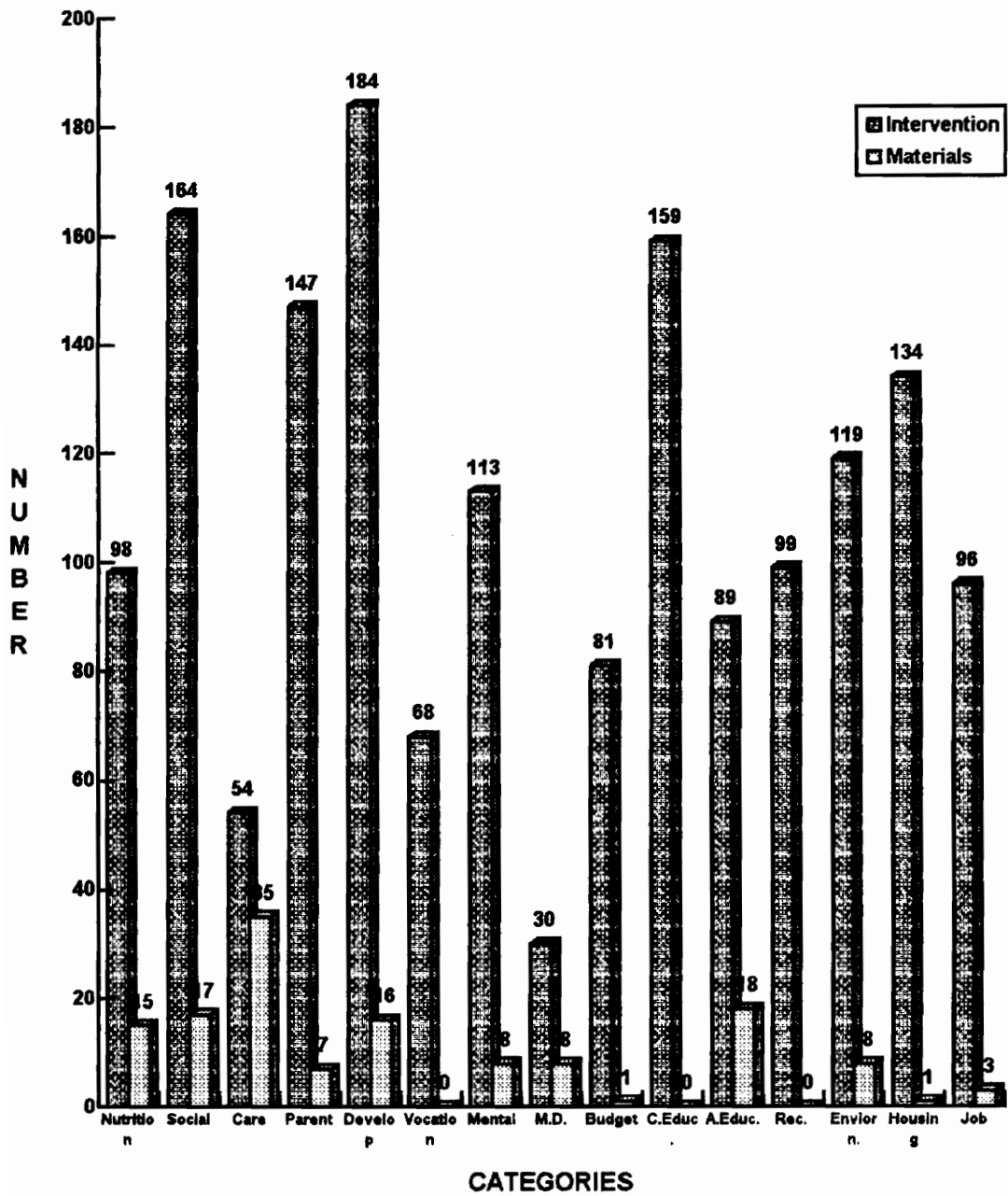


FIGURE 5: AVAILABILITY OF EDUCATIONAL MATERIALS FOR INTERVENTIONS

DISCUSSION

Studies have shown that educational literature is generally written at a grade level that is too high for most "patients" to read. The average patient education literature is on a tenth grade reading level (Owen, et. al, 1993). With a mean readability level at the 10th grade level, CHIP does not deviate from this average.

The results of this study indicate that most CHIP parents have a slightly higher education than the average grade level of educational materials stocked in CHIP's library. In terms of educational level, CHIP parents surveyed in a 1992 study were found to be more educated than the average lower household head (Brindle, 1992). Sixty percent of those surveyed had finished high school and approximately seven percent had completed two or more years of college. In contrast, nationally, only 10 percent of household heads living in poverty finish high school and only five percent of these complete one or more years of college (U.S. Department of Health and Human Services, 1986). Thus, it appears that those CHIP families surveyed were atypical of indigent families in that aspect. The mean Reading level of educational materials (9th-10th grade) given to CHIP parents would indicate that a majority of CHIP parents have the educational background needed to read material printed at the 10th grade level or below. This does not mean, however, that an individual with a certain number of years of formal education completed can read at the same grade level. It should also be noted that four percent in the 1992 study had less than a ninth grade education (Brindle, 1992). Thirty-seven percent of CHIP's educational materials were printed at or below the ninth grade level.

Almost half of all educational literature CHIP had relates to health. Magazines, pamphlets, and brochures contained information regarding women's health issues, child health, and first aid and safety. Eleven percent of the materials related to nutritional needs for both parents and children. This is an important finding since 48 percent of CHIP parents surveyed in a 1992 study cited health as their primary concern. Thus, there is an adequate amount of health and nutrition information available for those requesting it.

A large number of CHIP parents surveyed (36%) believed they needed assistance with finances (Brindle, 1992). CHIP lacks educational literature and resources in this area. Only six percent of the educational material available contained information relating to financial assistance. Likewise, CHIP also lacks resources concerning job assistance. Thirty-five percent of CHIP families surveyed requested assistance with jobs, yet only two percent of CHIP's literature relates to this area.

Other perceived needs of CHIP parents surveyed included housing needs (33%); transportation assistance (29%); mental health concerns (25%); technical training (25%); parenting (19%); family relations (11%); and other (13%) (Brindle, 1992). CHIP lacks educational literature and resources in all of these areas, except parenting and family relations, when compared with the apparent need. Less than 10 percent of CHIP's literature is devoted to transportation, housing, mental health, and technical training combined. The apparent needs greatly outweigh available resources. CHIP seems to have a stronger hold on family relations and parenting with 13 percent of their literature devoted to this topic, however, this seems to be an area of least concern for those CHIP parents surveyed.

Educational materials stocked in CHIP's library do not seem to be chosen by anything other than luck. Materials are not chosen by parental need or by the types of interventions that occur. Thus, CHIP is lacking educational materials in areas that play an important role in the overall family intervention process. One-hundred and fifty-nine child education interventions took place in 1991, yet CHIP has no literature in its library relating to this topic. Another 134 interventions related to housing needs, yet CHIP has only one piece of literature relating to housing. Supplemental educational literature is important in that it facilitates comprehension and retention of the material. It seems as though many educational interventions are lacking this integral element, due to a lack of educational literature.

CHAPTER III

CONCLUSIONS

The Comprehensive Health Investment Partnership has a vast array of educational literature covering a variety of subjects. Most importantly CHIP has a more than adequate library to cover health and nutritional needs. These needs were found to be the greatest among those surveyed in a past study. Not only does CHIP have a plethora of resources on the topic of health and nutrition, but it has information relating to both children and their parents.

On the other hand, CHIP seems to be lacking an adequate amount of information on job and financial assistance, housing, and transportation. CHIP parents indicated a great need for information in these areas, yet CHIP did not have much information in their library on these subjects. This could be attributed to a lack of available materials in the community on these subjects or it could be that CHIP staff do more actual "hands-on" counseling in these areas without using supplemental literature.

In terms of the readability of CHIP's educational materials, CHIP seems to have materials aimed at various education levels. They have materials ranging from a reading level of grade five, to the college level. The only problem here is that materials are not marked by their grade level. Thus, CHIP staff is unaware whether material they are giving to a parent is on the fifth grade level or on the twelfth.

In terms of educational interventions and educational material availability, CHIP seems to have an adequate amount of materials relating to nutrition, social services, child care, development, mental assistance, physician services, adult education, and environmental concerns. On the other hand, CHIP has very little or no information in the areas of vocational skills, budgeting, child education, recreation, housing, jobs, and parenting skills. Each of these categories had a substantial amount of interventions for 1991, yet CHIP's library is not sufficient enough in these areas to fulfill the needs.

It is recommended that CHIP invest in an inventory of booklets that address the same issues but are written at different grade levels. Additionally, these booklets should have their reading level marked clearly on the front cover . Labeling materials with the appropriate readability level would enable CHIP staff to provide parents with materials appropriate for each individual. This would enhance comprehension and retention of information by the parent. Because comprehension and reading levels do not necessarily match, it is recommended that CHIP assess the comprehension levels of CHIP parents. Effort should also be made towards purchasing materials that use simple words, short sentences and graphic illustrations. It is also recommended that CHIP invest in materials that are chosen carefully to address not only needs families perceive as most important, but to address all topics relating to the different categories of interventions as well.. Using educational information as a supplemental tool to interventions is just another way to enhance comprehension and retention of information by the parent.

SUMMARY

The purpose of this study was to evaluate current educational literature provided by CHIP staff to CHIP parents. Readability level of materials as well as the availability of desired information were key factors that were assessed.

All Educational literature in CHIP's library was collected and analyzed. Readability levels were calculated for each piece of literature. Means, ranges, and frequency distributions were calculated for demographical distributions, readability levels, and categories of literature.

Results indicate that the average CHIP parent, of those surveyed, had an education level equivalent to or more than was required for reading the majority of CHIP's educational literature. It should be noted that educational level completed and reading ability do not necessarily match. Results also indicated that CHIP had a more than adequate amount of educational literature relating to topics CHIP parents believed they needed assistance with the most. Although CHIP had literature in areas such as job and financial assistance, the apparent need for information outweighs CHIP's educational resources in these areas.

Results also indicate a need for more educational information that can be used to supplement specific, targeted interventions. CHIP has an adequate amount of information for most interventions, but seems to be lacking in areas such as housing and parenting skills.

Further analysis of the Child Health Investment Partnership is recommended. The researcher recommends further study in the area of parent comprehension of CHIP's educational literature. Research should be conducted to determine methods for quickly estimating a parent's literacy level, not necessarily educational level. The question needs to be asked, "Is CHIP's educational library tailored to meet the individual needs of its clients?"

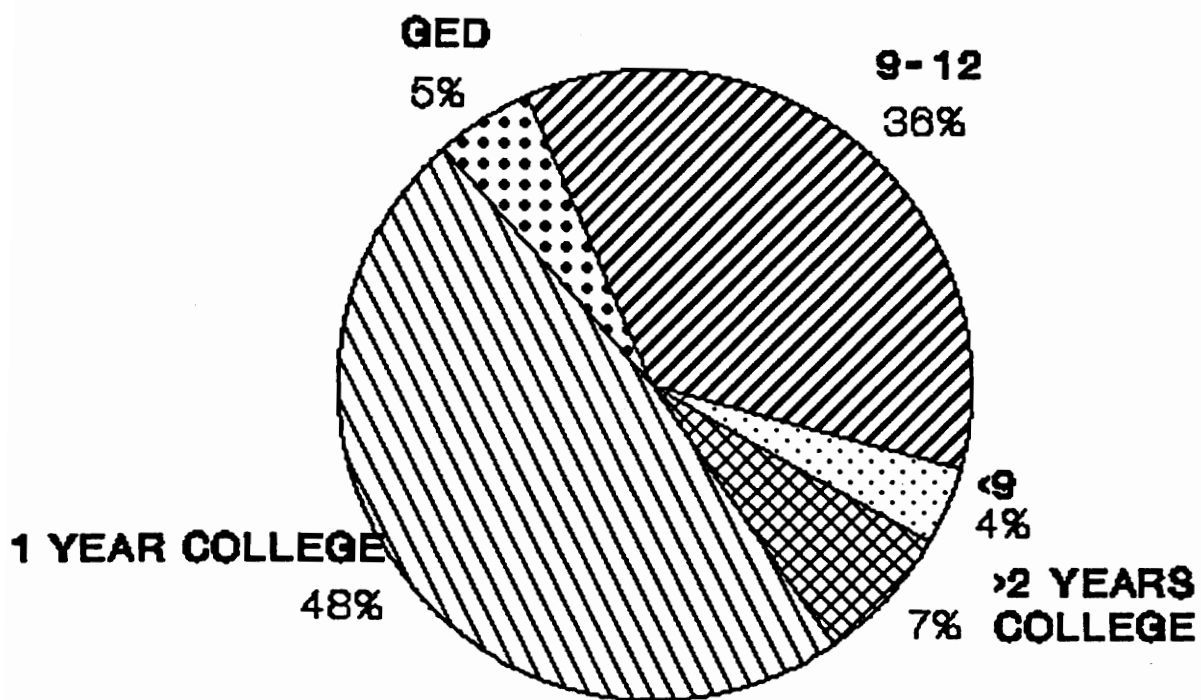
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APPENDIX A
EDUCATION LEVEL OF CHIP PARENTS



EDUCATION LEVEL OF HOUSEHOLD HEADS

Based on 266 responses

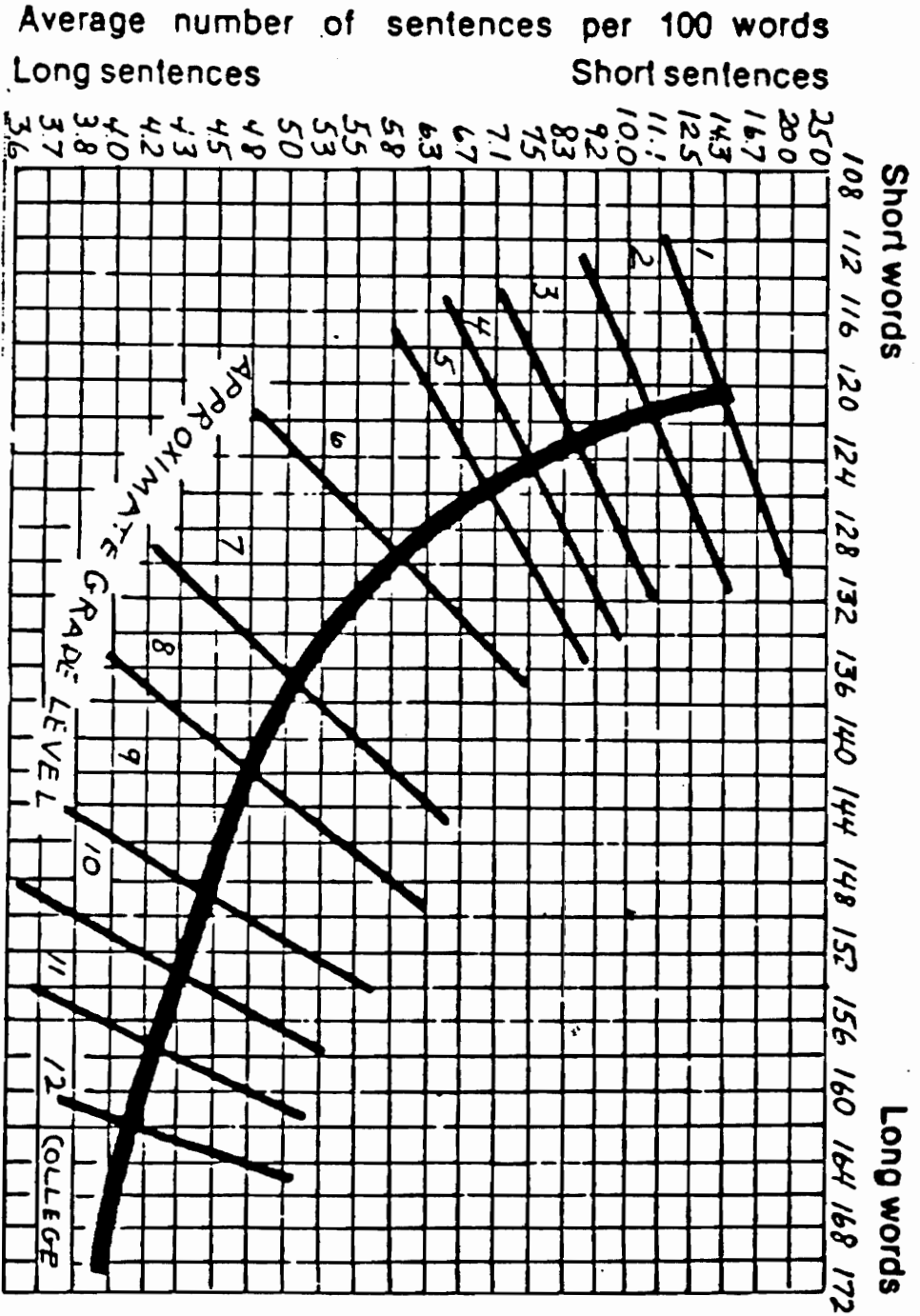
APPENDIX B
SMOG CONVERSION TABLE

Total Polysyllabic Word Count	Approx. Grade Level (+1.5 Grades)
0-2	4
3-6	5
7-12	6
13-20	7
21-30	8
31-42	9
43-56	10
57-72	11
73-90	12
91-110	13
111-132	14
133-156	15
157-182	16
183-210	17
211-240	18

APPENDIX C
FRY READING GRAPH

THE FRY GRAPH

Average number of syllables per 100 words



APPENDIX D
LIST OF LITERATURE PUBLISHERS

PUBLICATIONS AND THEIR PUBLISHERS

VIRGINIA DEPARTMENT OF HEALTH

Richmond, Virginia 23219

- "Caring for Your Baby's Teeth"
- "Injury Prevention Program"
- "Changes and Choices: Your Children and Sex"
- "Food Sources of Iron"
- "Infant Feeding Guide"
- "Tips for Feeding Your Child"
- "Virginia Medicaid Handbook"
- "Medicaid's Health Check-up -- EPSDT"
- "If You Live Here..."

EASTER SEAL SOCIETY OF VIRGINIA

Roanoke, Virginia 24012

- "Are You Listening to Your Child?"

-

SAFETY COUNCIL OF SOUTHWEST VIRGINIA

2728 Colonial Ave SW

Roanoke, Virginia 24015

- "How to Avoid Housetraps in Your Kitchen"
- "Protect Your Child"

VIRGINIA DEPARTMENT OF MENTAL HEALTH

Box 1797

Richmond, Virginia 23214

- "Who are Special Needs Children?"
- "Developmental Checklist for Young Children"
- "First Steps"
- "Regional Infant Stimulation Clinic"

ROSS LABORATORIES

Columbus, Ohio 43216

- "You and Your Baby"
- "Good Care for Your Child's Teeth"
- "Your Child and Otis Media"
- "Baby's First Shoes"
- "Your Toddler"
- "Caring for Your Premature Baby"
- "Developing Toilet Habits"
- "Becoming a Parent"

- "Enjoying Your Baby"
- "Supplemental Feeding"
- "Breast Feeding"
- "Learning Together: Feeding in the First Two Years"
- "Preparing Formula"
- "Understanding and Using Similac"
- "Naming Your Baby"

GERBER PRODUCTS COMPANY

Freeman, Michigan 49412

- "Child Safety"
- "Baby's Book"

MARCH OF DIMES

1275 Mamaroneck Avenue

White Plains, New York 10605

- "Fact Sheet: Chlamydia"

NATIONAL FIRE PROTECTION ASSOCIATION

Batterymarch Park

Quincy, MA 02269

- "Fire Prevention All Over Your Home"

UVA HEALTH SERVICES CENTER

UVA Medical Center

Charlottesville, VA 22901

- "Poisoning--Act Fast"
- "Blue Ridge Poison Control Center"

ROANOKE FIRE DEPARTMENT

Roanoke, VA 24004

- "Travelers Guide to Motel and Hotel Safety"
- "Baby-sitting Safety"

ROANOKE CITY HEALTH DEPARTMENT

1633 Salem Ave

Roanoke, VA

- "Teen Health Center of Roanoke"
- "Resource Mothers Program"

CHILD ABUSE PREVENTION COUNCIL OF ROANOKE VALLEY

-"Understanding: The Most Important Guide:

NATIONAL ASSOCIATION FOR EDUCATION OF YOUNG CHILDREN

1834 Connecticut Ave

Washington, D.C. 2009

-"Off to a Sound Start: Your Baby's First Year"

-"Toys: Tools for Learning"

-"Play is Fundamental"

-"So Many Good-byes"

-"Helping Children Learn Self-Control"

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Rockville, MD 20857

-"Infant Care"

-"A Word of Caution About Treating Flu or Chicken Pox"

-"Head Start: A Child Development Program"

GREATER ROANOKE TRANSIT CO.

P.O. Box 13247

Roanoke, VA 24302

-"Ride Guide"

GRUNER AND JAHR PUBLISHERS

New York

-"Expecting"

MINNESOTA DEPARTMENT OF HEALTH

Minneapolis, Minnesota 55440

-"Feeding Young Children with Cleft Lip and Palate"

AMERICAN SOCIETY OF DENTISTRY FOR CHILDREN

211 E. Chicago Ave

Chicago, Ill 60611

-"Infant Nursing"

-"The Answer Book"

MEAD JOHNSON

Evansville, Indiana 47721

-"Weaning and Supplementing"

U.S. DEPARTMENT OF AGRICULTURE,
FOOD AND NUTRITION SERVICE

- "Building a Better Diet"

TOTAL ACTION AGAINST POVERTY

23 24TH Street

Roanoke, VA 24017

- "Transitional Living Center"

- "TAP Women's Resource Center"

- "TAP Energy Conservation Programs"

- "TAP Head Start"

FIFTH DISTRICT EMPLOYMENT AND TRAINING CONSORTIUM

Roanoke, VA 24016

- "Dislocated Worker Program"

- "Certification Interview: Things to Bring"

FULL CIRCLE SENIOR SERVICES

820 Campbell Ave

Roanoke, VA 24016

- "Full Circle Senior Services"

CHRISTIAN CHILDRENS FUND

Richmond, VA 23261

- "Ten Steps to the Year 2000"

- "How Christian Childrens Fund Became One of Nations"

COMMONWEALTH OF VIRGINIA

Virginia Employment Commission

- "Worker Dislocation"

MENTAL HEALTH SERVICES OF ROANOKE VALLEY

301 Elm Plaza

Roanoke, VA 24016

- "Save Your Lives"

- "Save Their Lives"

SALVATION ARMY

P.O. Box 1631

Roanoke, VA 24008

- "The Turning Point"

SANCTUARY CRISIS INTERVENTION CENTER

4350 Coyner Springs Rd

Roanoke, VA 24012

- "Shelter from the Storm"

VIRGINIA DEPARTMENT OF SOCIAL SERVICES

8007 Discovery Drive

Richmond, VA 23229

- "Virginia ADC Program"

PLANNED PARENTHOOD OF THE BLUE RIDGE

2708 Liberty Rd

Roanoke, VA 24012

- "A World of Wanted Children Would Make a Difference"

- "Planned Parenthood News"

CHILD HEALTH INVESTMENT PARTNERSHIP

402 Luck Ave

Roanoke, VA 24016

- "CHIP CHAT" Spring 1992

- "CHIP CHAT" November-December 1992

BURROUGHS WELLCOME CO.

Research Triangle PK, NC 27709

- "The ABC's of Chickenpox: What a Parent Needs to Know"

STATE FARM GENERAL INSURANCE COMPANY

Bloomington, Illinois 61701

- "Playing it Safe in Your Mobile Home"

CARILION

- "Tel-Med"

WYETH-AYERST LABORATORIES

Philadelphia, PA 19101

- "Your First Visit to the Gynecologist"
- "Norplant System"
- "The Most Recent Innovation in Birth Control"

ROANOKE VALLEY SPEECH AND HEARING CENTER

2030 Colonial Ave

Roanoke, VA 24015

- "Turning Disabilities into Abilities"

NEW YORK AIDS ADVISORY COUNCIL

Corning Tower

Albany, NY 12237

- "Illusions of Immortality"

AMERICAN LUNG ASSOCIATION

Roanoke Region

Roanoke, VA 24019

- "Keep Your Child From Choking"

PROMOTIONAL SLIDE GUIDE CORPORATION

Brooklyn, NY 11217

- "ABC's of Baby Care"
- "ABC's of Child Care"
- "Emergency Care Guide"
- "First Aid for Children"
- "Have a Happy and Safe Holiday"
- "Child proofing Your Home"

AMERICAN CANCER SOCIETY

- "Self-Examination for Oral Cancer"
- "CARING"

THE SOAP AND DETERGENT ASSOCIATION

475 Park Avenue South

New York, New York 10016

- "Home Safe Home"

COOPERATIVE EXTENSION SERVICE

University of New Hampshire

- "How to Set Up a Coal Wood Stove"

CHANNING L. BETE CO, INC.

South Deerfield, MA 01373

- "Child Development: Birth to Three Years Old"

- "Buckle Up For Safety"

- "Your Unborn Baby and You"

- "What You Should Know About Stress and Your Child"

- "Medicaid's Health Checkup Program"

- "About Tots and Tooth Care"

- "About Childhood Communicable Diseases"

- "How to Phone Your Pediatrician"

- "Balanced Diet on a Balanced Diet"

- "Infant Nutrition"

- "Physical Abuse is Never OK"

- "Why Should I Get Help"

- "About Child Abuse"

- "What Everyone Should Know About Child Abuse"

- "About Drug Abuse"

- "About Depression"

AMERICAN ACADEMY OF PEDIATRICS

- "One to Two Years Old"

- "Seven to Twelve Months Old"

- "Early Childhood Years"

- "Birth to Six Months"

- "Two to Four Years Old"

NATIONAL SOCIETY TO PREVENT BLINDNESS

500 East Remington Rd

Schaumburg, IL 60173

- "First Aid for Eye Emergencies"

- "How's Your Vision"

- "Signs of Possible Eye Trouble in Children"

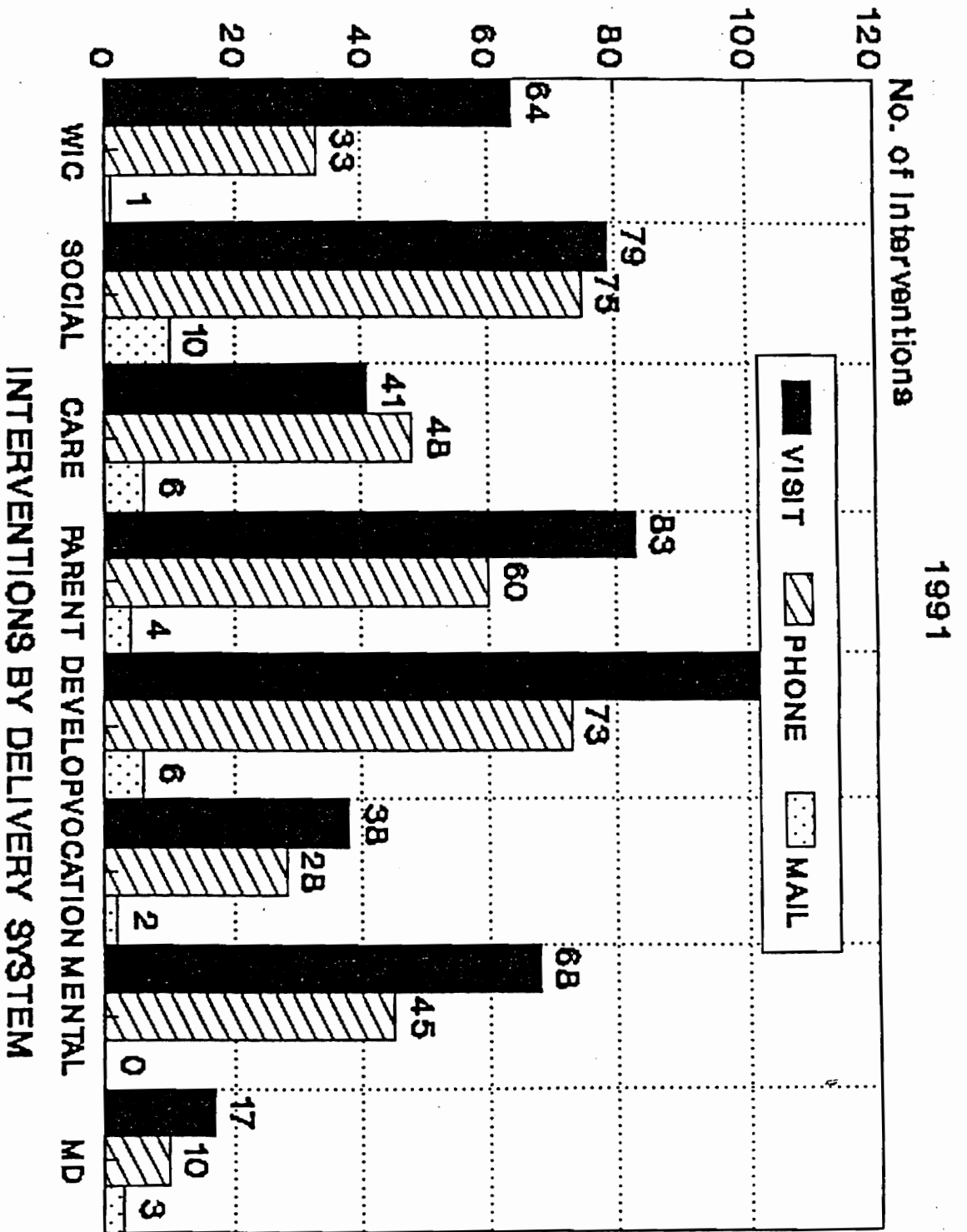
VIRGINIA STATE BAR ASSOCIATION

- "Legal Aid Society of Roanoke Valley"

CITY OF SALEM SCHOOLS

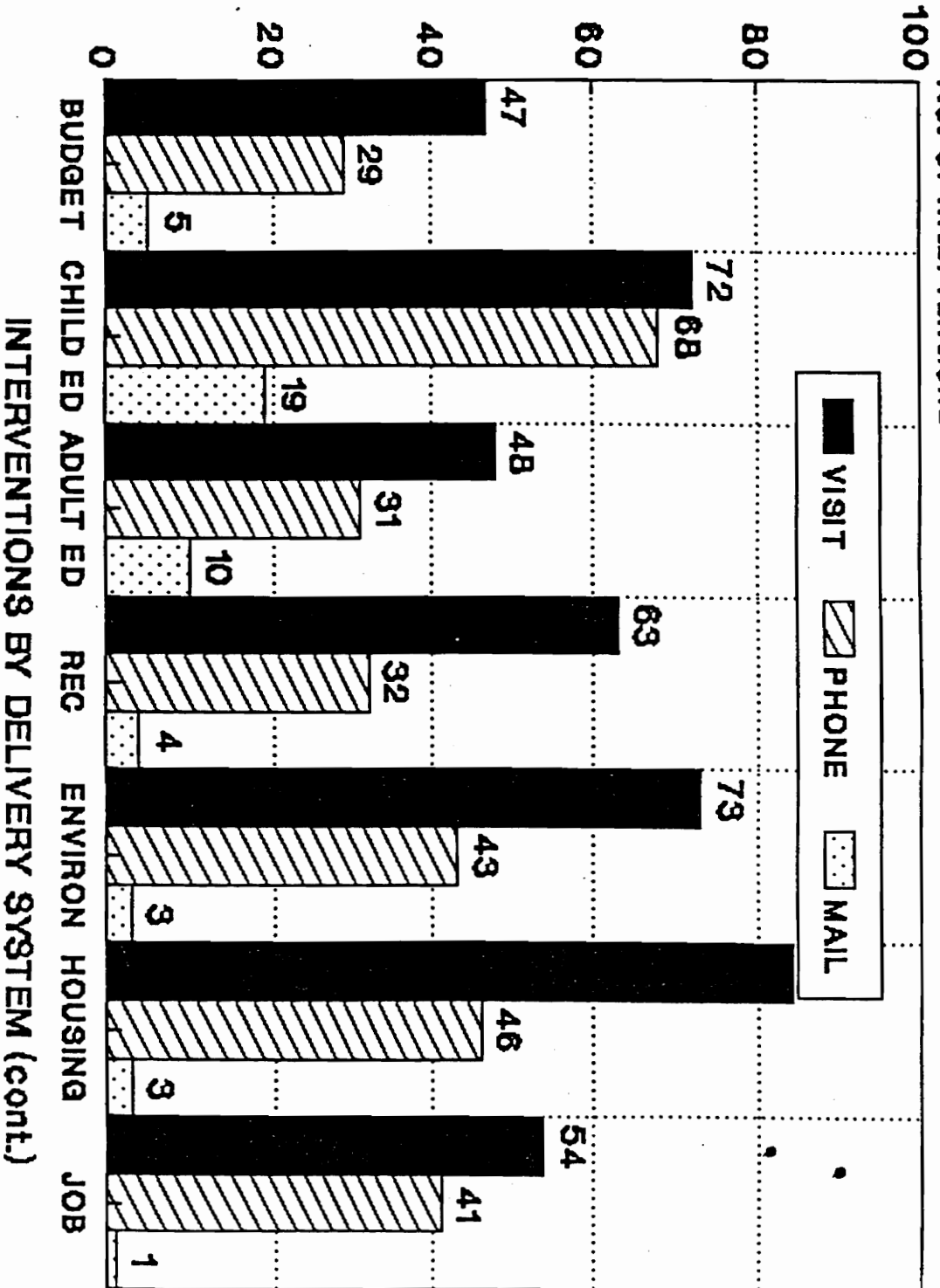
-"Parent Resource Center"

APPENDIX E
INTERVENTIONS FOR 1991



No. of Interventions

1991



JILL RENEE GURGANUS

EDUCATION:

Master of Science, Community Health Education, June 1993
Emphasis of Human Resource Management
Virginia Polytechnic Institute and State University
Blacksburg, Virginia
Awarded Half-time Graduate Teaching Assistantship
Awarded Full Tuition Waiver

Bachelor of Science, Community Health Education, May, 1991
Radford University, Radford, Virginia
Deans List

EXPERIENCE:

Graduate Teaching Assistant
Virginia Polytechnic Institute and State University
Blacksburg, Virginia
August 1991 to May 1993
***CPR and First Aid Instructor**

Events Coordinator
Montgomery Regional Hospital
Blacksburg, Virginia
May 1991 to May 1993
***Planned and coordinated community health programs**
***Assisted with hospital-based support groups and health screenings**

Patient Education Intern
Montgomery Regional Hospital
Blacksburg, Virginia
January 1991 to May 1991
***Provided knowledge to patients and significant others concerning etiology, existence, and predominance of chronic disease**

CERTIFICATIONS AND MEMBERSHIPS

Certified American Red Cross First Aid Instructor
Certified American Heart Association CPR Instructor
Certified American Red Cross HIV/AIDS Instructor

