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Determinants of parent involvement in middle school health education: A case study.

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DETERMINANTS OF PARENT INVOLVEMENT IN MIDDLE SCHOOL HEALTH EDUCATION: A CASE STUDY

by

SCOTT DANIEL WINNAIL

A DISSERTATION

Submitted to the graduate faculty of The University of Alabama and
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ABSTRACT OF DISSERTATION
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Title Determinants of Parent Involvement in Middle School Health Education: A Case Study

A combination of quantitative and qualitative methods were employed to identify barriers and enablers to parent involvement in school health education efforts both inside and outside of the school. Twenty-one middle school parents participated in focus group and telephone interviews. Two hundred seventy-four middle school parents completed 52-item surveys that addressed social and demographic factors, general and health education topics of most importance to parents, barriers and enablers to parent activity in health education, and levels of parent activity in general and health educa-tion.

Study results revealed that the study population in general was highly active in the general and health education of their children. Middle school families were highly educated, usually married, White, parents of two children, upper middle class, and had children who were highly active in extracurricular activities. Parents who were very active in their children's health education were also very active in their general education. These active parents typically had parents of their own who were also very active in their health education.

Parents were most concerned about primary school subjects (mathematics, language arts, social studies, and science). Parents were also most concerned about the following health topics: alcohol, tobacco, other drugs, and first aid and violence prevention.

The primary barrier to parent participation was lack of time. This was followed by a lack of knowledge about opportunities to participate in health education. Study results illustrated that although parents identified lack of knowledge of opportunities to participate in health education as a barrier to involvement, their level of activity did not decrease until this factor was combined with child embarrassment by the presence or participation of a parent at school. Most parents were highly active in their children's health education; however, the primary reason for lowered involvement was perceived child embarrassement by parent participation at school, combined with a parental lack of knowledge of opportunities to participate in health education.

Parents identified numerous factors as enablers or facilitators to their involvement in health education. These enablers included improved school-home communication about health topics that are covered at school, health homework designed to be completed with parents, and increased efforts on behalf of the school to keep parents informed about health topics being covered at school.

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Finally, I would like to thank my family for their never-ending support and encouragement. Their love, support, and nurturing throughout my life have made me into the person that I am.

DEDICATION

As this chapter of my life draws to a close and another begins, it is fitting to thank the one who has endured this dissertation journey by my side. Through the ups and downs, through the storms and doldrums, you have been my strength and support, truly the wind beneath my wings. Dinah, thank you for all you have done, all you do, and all that you will continue to do. Cheers! We've finally got our Ph.D.!

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LIST OF ABBREVIATIONS

ACS	American Cancer Society
ALSDE	Alabama State Department of Education
CDC	Centers for Disease Control and Prevention
CSH	Comprehensive School Health
CSHE	Comprehensive School Health Education
DHHS	Department of Health and Human Services
DoDDS	Department of Defense Dependent Schools
HBM	Department of Health and Human Services
HCSS	Hoover City School System
HS&B	High School and Beyond (survey)
IRB	Institutional Review Board
JCNHES	Joint Committee on National Health Education Standards
LEA	Local Education Agencies
NASBE	National Association of State Boards of Education
NASN	National Association of School Nurses
NPSHEO	National Professional School Health Education Organizations
SEA	State Education Agencies

CHAPTER 1

INTRODUCTION

What is the importance of school health education? The following quote by Oberteuffer (1977) encapsulates the need for school health education:

> If our values are straight and we value human health above all else, then health education becomes one of the master areas in all of American education, along with language. It deals, or should deal, with all those phenomena indigenous to being human, that develop or retard, create or kill. Nothing is more important. Time must be found for it. (p. 52)

If a primary role of schools is to attend to the academic needs of their students, the physical needs must be met first (Terwilliger, 1996). This is where the job of school health and health education come into play.

Statement of the Problem

State of adolescent and school health. Perhaps the most up-to-date source for health information on adolescents is the 1995 Youth Risk Behavior Survey. This study of public high school students in 25 states addressed health risk behaviors in the following six health-risk categories: unintentional and intentional injury, tobacco use, alcohol and other drug use, dietary behaviors, sexual behaviors, and physical activity (Centers for Disease Control and Prevention [CDC], 1996). The results of this survey indicated that not only are there high percentages of injuries

(unintentional and intentional) and sexual behaviors among public high school students in the United States, there is also significant participation in substance use. Each student needs to live a healthy lifestyle that includes being physically active and eating a balanced diet (CDC, 1996). Additionally, a national survey of school nurses and nurse supervisors revealed that an increasing number of elementary, middle, and high school students live in poverty (Igoe, 1994). These students live in disrupted, low-income, single-parent families that lack adequate medical and health care. They also suffer from malnutrition, increased crime, greater childhood morbidity, and numerous other negative health consequences (Igoe, 1994).

Often times, damaging health behaviors are adopted during the period of time known as adolescence (Council on Scientific Affairs, 1990). Consequently, these damaging health behaviors can lead to homelessness, sexually transmitted infections, depression, early pregnancy, childbirth, abortion, illness, injury, and even death. Not surprisingly, among all age groups, adolescents had the lowest rate of physician visits and were the only societal segment to experience a rise in mortality rates during the 20-year period from 1970-1990. Between the years of 1970 and 1990, the number of school-based health clinics rose from 1 to 120 (Council on Scientific Affairs, 1990). Currently, there are only 700 school-based health clinics nation wide (Allensworth & Bradley, 1996) in roughly 15,000 public school districts (National Center for Education Statistics, 1995). These clinics have been established to help meet the numerous health needs of increasingly diverse

adolescent school populations. There are approximately 40,000 school nurses in elementary and secondary schools in the United States (Burt, Beetem, Iverson, Hertel, & Peters, 1996). Although this number appears quite large, there is an insufficient number of school nurses to provide at least one for each school. This falls far short of the one school nurse for every 750 students that the National Association of School Nurses recommends (NASN; Vail, 1996). Currently, only six states meet this NASN recommendation.

Many times, school nurses are responsible for providing some or all of the health education that students receive. At present most, if not all, public schools at both primary and secondary levels require some type of health education. Comprehensive School Health Education (CSHE) programs, those that attempt to give students the skills, knowledge, and opportunities to develop to their fullest potential (Kane, 1993), are increasing among American schools; however, their implementation is not uniform across the nation, or even across states (Collins et al., 1995; Kolbe et al., 1995; Metropolitan Life Foundation, 1988). Classroom health instruction also differs across the nation because of inconsistencies in teacher preparation (Butler, 1993; National Action Plan for CSHE, 1993). This means teachers of health differ in their knowledge of health topics and also in the instructional techniques that they employ in the classroom. School health education is in a state of flux while gradually improving. School health education is at a crucial junction and could benefit from stronger family and community links.

Importance of school-community links. As school-reform efforts continue and are viewed with increasing importance, parent and community involvement in the school have become pressing issues. In keeping with Dewey's (1913) suggestion that teachers need to know more about the environment in which students live, involving parents and the community in children's learning processes is an excellent opportunity. Because of changes in access to resources and power, the nature of the family and its functions in this society are also changing. There are greater demands on parents' time, which, in turn, diminishes the nurturing attention that would normally be focused on children (Gordon, 1995). It is with regard to the dynamic state of the nature of the family that schools must also be motivated to adapt.

In the past, schools and teachers participated in few collaborative efforts with the community at large. Only at times of crisis did teachers contact entities outside the school (Kirst & Kelley, 1995). In a modern society where the tide of school and community interest focuses on integrating services to address more comprehensively the needs of all children and where constructivist thought focuses on development of the "whole" child, it is essential for schools to collaborate their efforts with not only parents, but also the community as a whole (Gordon, 1995; Kirst & Kelley, 1995). Teachers cannot do their job alone, and need the help and input of parents and the community (Davies, 1991).

Parent involvement. Schools and teachers are now expected to respond to more demands and situations than ever before. One of these demands is the involvement of parents in school initiatives. It has been known for some time that parents can have a

substantial impact on their children's academic achievement and their social and emotional development (Becher, 1984; Edwards, 1995; Goodson & Hess, 1975; Scott-Jones, 1987; Slaughter & Epps, 1987; Stevenson & Baker, 1987). For example, students whose parents were more involved in their learning process had better reading scores on standardized tests (Epstein, 1984).

Parent involvement helps facilitate greater learning on the part of the child while providing a more positive home and living environment through behavioral modeling and reinforcement (Edwards & Young, 1992). Parent involvement needs to be sustained (Ascher, 1988; Gordon, 1978), and parents need to be involved in a variety of roles over time (Gordon, 1978; Swap, 1991). This parent involvement is something that schools can play a major role in facilitating. The relationships developed between parents and teachers allow them to collaborate in order to more appropriately facilitate children's intellectual and social development (Bronfenbrenner, 1974; Epstein & Dauber, 1988; Stevenson & Baker, 1987).

The literature points to three overall areas or levels of parent involvement (Ascher, 1988; Gordon, 1977, 1978). These three levels are policy (community impact model), school (school impact model), and home (parent impact model). Policy-level parent involvement includes policy decision making; advocacy for schools, advocacy for school programs, and advocacy for students; and oversight of schools and programs. School-level parent involvement includes participating in fund raisers, volunteering to help with fieldtrips, and serving as paraprofessionals in clerical-type positions and as teachers' aides within the school. The third level of parent involvement includes home tutoring and reinforcing of school work and school values at home.

Parents can be involved in all three levels with education, although some are more difficult than others for parents to participate in. It is stressed that parent involvement should be ongoing and should be consistent in order to be most effective (Gordon, 1977, 1978).

Barriers and enablers to parent involvement. The following are factors that act as either barriers or enablers (facilitators) to parent involvement in the schools and their children's education. Barriers to parent involvement include traditional hierarchical parental models in which teachers tell parents what to do (Comer & Haynes, 1991; Cooper & Jackson, 1989); language (Cooper & Jackson, 1989); lack of understanding on the school's part of families' cultures, strengths, and goals (Edwards, 1995); perceived alienation perpetuated by school personnel (Thompson, 1991); mistrust of schools and teachers (Edwards & Young, 1992; Herman & Yeh, 1983; Rich, 1985); social class (Leitch & Tangri, 1988; Slaughter & Epps, 1987; Stevenson & Baker; 1987); lack of time (Leitch & Tangri, 1988; Rich, 1985); and limited training for parents on how to be involved with the school (Becker & Epstein, 1982; Bright, 1996).

Additional enablers or facilitators of parent involvement were described by Finders and Lewis (1994). These enablers include clarifying how parents can help, encouraging parents to be assertive, developing the trust of parents in the schools and teachers, building on home experiences of children, and using the parents' expertise. Henderson (1987-88) observed that it is critical for schools to involve parents while their children are still young. Gordon (1978) echoed these comments by suggesting that

the most successful type of parent involvement is that which is well planned, comprehensive, and long lasting. He implied that short "one-shot" efforts will produce little more than the effort that went into them.

Parent involvement in school health education. Both parents and children are interested in school health and school health services (American Cancer Society [ACS], 1994; Weathersby, Lobo, & Williamson, 1995). Additionally, the general education literature illustrates that parents also desire involvement with schools and school programs (Baker & Stevenson, 1986; Dauber & Epstein, 1989; Leitch & Tangri, 1988).

Parent involvement in school health education is viewed similarly to general education. Leaders in the school health education field feel that parents must be involved in school health education. School health advocates highly encourage program planners and health educators to actively involve parents in all school health education efforts (Allensworth, 1993; Dryfoos & Santelli, 1992; Joint Committee on National Health Education Standards [JCNHES], 1995; National Association of State Boards of Education [NASBE], 1990; Pollock, 1987; Welshimer & Harris, 1994; Werch et al., 1991). Parent involvement in health education is necessary for successful comprehensive school health interventions (Kelder, Parcel, & Perry, 1996). Some school-based health research has been done which incorporates a parent component into the intervention. Findings show parent involvement to be a useful tool in promoting child health (Greenberg, 1977; Vincent, Clearie, & Schluchter, 1987; Werch et al., 1991).

Parent involvement has shown to protect against adolescent health risk behaviors (Murray, Kelder, Parcel, & Orpinas, 1998; Resnick et al., 1997).

Health literacy. For many years, professionals in the health education field have touted the tremendous importance of parent involvement to the success of health education programs and have encouraged teachers to do more to involve parents (Allensworth, 1993; Birch, 1994; Dryfoos & Santelli, 1992; Greenberg, 1977; Lavin, Shapiro, & Weill, 1992; Perry, Crockett, & Pirie, 1987). In the United States today, there is a national move to foster literacy in school subject areas aside from English and reading. The idea is to develop students who will become adults who can function in society using problem-solving skills that are applicable to the specific subject area and life alike. "Health literacy" is a specific concept that has received recent attention since the pub-lishing of the National Health Education Standards (JCNHES, 1995). Health literacy, as defined by the standards, is "the capacity of an individual to obtain, interpret, and un-derstand basic health information and services and the competence to use such infor-mation and services in ways which are health enhancing" (p. 6). The standards were fashioned by combining characteristics of a well-educated, literate person within the context of health. The standards consist of seven health education standards, along with specific competencies for each. The purpose of these standards is to provide a national framework for the development of state health education courses of study and curricula that foster health literacy in terms of applicable knowledge and skills.

Within the national standards (JCNHES, 1995), opportunity-to-learn standards have been created to involve entities outside of the school in health education planning. These opportunity-to-learn standards point out specific responsibilities that different local, state, and national groups should assume in order to promote school health and health literacy in children and youth. The opportunity-to-learn standards identify five entities on the local, state, and national levels that should be critically involved in school health promotion efforts. These five entities are local education agencies, communities, state education agencies and state departments of health, institutions of higher education, and national organizations. Of these, all have specific responsibilities identified that should involve parents in the process of promoting child and adolescent health in the schools and the community (JCNHES, 1995). For ex-ample, in order for young people to become health literate, "local education agencies must provide for active family participation in fostering health literacy for students" (p. 45). If followed, these standards can help assure parent involvement in many health education efforts. The standards are rapidly gaining broad appeal and use by state edu-cation agencies (SEAs) and local education agencies (LEAs). Because of this, the importance of involving parents in the health education process is also gaining more attention.

Purpose of the Study

The purpose of this research study was to determine the barriers and enablers to parent involvement in middle school health education.

Research Questions

Answers to the following questions were sought from parents of middle school students enrolled in Birmingham, Alabama area schools:

1. What do parents perceive as enablers or facilitators of their involvement in school health education programs?

2. What do parents perceive as barriers to their involvement in school health education programs?

Significance of the Study

With the tremendous advocacy for parent involvement present in the school health education literature (Allensworth, 1993, 1994; ACS, 1994; Dryfoos & Santelli, 1992; JCNHES, 1995; National Association of State Boards of Education [NASBE], 1990; Vincent et al., 1987; Weathersby et al.,1995), it is important to identify the key factors that either inhibit or facilitate parent involve-ment. Although promotion of different methods for parent involvement is important, it is essential to first delineate existing barriers and enablers to this involvement. By such an action, steps can be taken to minimize barriers and maximize enablers, in turn in-suring that methods of parent involvement that are promoted will be as effective as possible.

Although the general education literature identifies numerous factors that both enable and inhibit parent involvement (Comer & Haynes, 1991; Cooper & Jackson, 1989; Edwards, 1995; Edwards & Young, 1992; Finders & Lewis, 1994; Gordon, 1977, 1978; Rich, 1985), these factors may or may not be applicable to parent in-volvement in school health education, given the potentially sensitive nature of many

health education topics (Pollock, 1987; Welshimer & Harris, 1994). Therefore, it is important to begin to identify these barriers and enablers to parent involvement in the realm of school health education and promotion, rather than to assume that factors which are applicable to general education are also applicable to school health education and promotion. One study by Hahn, Simpson, and Kidd (1996) identified these factors in a small group of parents of early elementary school children, in relation to drug use. The limited internal validity of this study heavily suggested a need for further study, especially relating to middle and high school parent involvement.

Research indicates that teachers feel more comfortable and are more effective when they have more training (Boscarino & DiClemente, 1996; Cameron, 1991; Connell, Turner, & Mason, 1985; Darling-Hammond, 1996; Gingis, 1992; Mac-Gilchrist, 1996). If teachers are going to be expected to incorporate parents into health lessons and elicit the involvement of parents in different activities, then teachers will require adequate and accurate training to do so. This training should come in the form of both pre- and inservice training (Birch, 1994). Additionally, if teachers are to be trained in soliciting and promoting parent involvement for health promotion efforts, the training should also identify issues that are perceived as potential barriers and facil-itators by parents.

This study is unique in that it attempted to identify barriers and enablers to parent involvement that are potentially unique to school health education at the middle school level. It attempted to begin bridging the gap that currently exists between what English (1994) called the rhetoric of parent involvement and reality. This study did as Lewis (1992) suggested and "ask parents directly what they want" (p. 4), rather than

providing them only with the services that are at the immediate disposal of the school. The potential benefits of this research may apply to professional teacher preparation (Birch, 1994), school-based health education research, and the develop-ment of state courses of study and health education curricula.

Middle school parents were chosen for this study because of their unique and critical position during a major transition time in the life of young people. Research indicates that parent involvement decreases significantly in the late-elementary and early-middle-school years (Dauber & Epstein, 1993; Snow, Barnes, Chandler, Goodman & Hemphill, 1991). Parent involvement in their children's education is greatest when their children are young, and this involvement decreases as children age, dropping to almost no involvement by the time children reach high school (Dryfoos, 1994). Because the middle school years are a pivotal time in parent involvement, insights and opinions of parents toward school and specifically health education involvement are critical to obtain at this point in time.

Limitations

The following are limitations that were inherent in this study because of study design and other factors.

1. Study conclusions may not be generalizable beyond the study population because of the narrow sample.

2. The results come from a sample of middle school parents and may not be generalized to parents of high school or elementary school children.

3. Data collected in this study may be biased because of the nature of data collection (self-report).

4. Because study participation was voluntary, data collected may not equally represent nonparticipating parents because of their likelihood to avoid participation.

5. Data collected by qualitative means (focus group) may be seen by some as "less valid" than those collected by quantitative means (survey).

Definition of Terms

Parent involvement: Parent involvement is a broad term that includes, but is not limited to, three areas: home involvement, school involvement, and policy-level involvement (Ascher, 1988; Gordon, 1977, 1978). Home involvement includes acting as a tutor for the child, helping the child with homework, discussing school-related issues, and modeling health behaviors. School involvement includes volunteering within the school (clerical, teacher aid, etc.), serving in paid school positions, participation in parent groups (PTA, PTO), attendance at back-to-school or parent-teacher conferences, parent support of school health activities, involvement in curriculum decisions, and support of school health-teacher efforts and initiatives, and being involved in extracurricular activities. Policy-level involvement includes serving on school boards, being involved in major school decision making, and advocating for school and facility improvements and for teacher and student needs.

High school: High school refers typically to grades 9-12. In some cases, high school may refer to grades 10-12. These grade ranges are traditionally represented by age ranges from 13 years to 19 years.

Middle school: Also refered to as junior high school, middle school typically refers to grades 6-8. In some cases, grade nine may also be included. Middle school usually covers ages ranging from 11 years to 14 years.

Barriers: Barriers are factors that act to inhibit or impede future actions from being taken (Strecher & Rosenstock, 1997).

Enablers: Enablers or enabling factors are skills, resources, or vehicles created by forces or systems within a society that facilitate the performance or an action by individuals (Modeste, 1996).

Parent: Parent is a term that can refer to a number of individuals who are responsible as the primary care givers or guardians of a child. This parent may be a biological or adopted mother, father, or both; uncle, aunt, or both; or a foster parent. Grandparents may also be considered parents, given their recent increasing role as primary care givers of children, particularly as parents grow younger and younger (Edwards & Young, 1992).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter discusses the history of education and educational reform. It provides an overview of the state of school health and the importance of parent and community involvement in the schools. From this literature review, recommendations for needed research are made.

Current State of School Health--Nation and State

In 1995, the Centers for Disease Control and Prevention (CDC, 1996), Division of Adolescent and School Health, once again sponsored the Youth Risk Behavior Survey. This anonymous, 84-question, multiple-choice survey was administered to roughly 11,000 public high school students in 25 states and 12 cities. The survey addressed health risk behaviors in the following six health-risk categories: unintentional and intentional injury, tobacco use, alcohol and other drug use, dietary behaviors, sexual behaviors, and physical activity. The results of this survey indicated that there are high percentages of injuries (unintentional and intentional) and sexual behaviors among public high school students in the United

States. This age group uses substantial amounts of alcohol, tobacco, and other drugs. They are also sedentary and in need of more balanced nutrition (CDC, 1996).

The Alabama Youth Risk Behavior Survey was done as part of the national survey (Alabama State Department of Education [ALSDE], 1995b). Results from Alabama identified many of the same adolescent risk behaviors as does the national survey. In the risk area of injuries, Alabama youth were significantly more likely than the national average to ride in a vehicle with an intoxicated driver and also to drive a vehicle while intoxicated (Figure 1). In the risk area of tobacco risk behaviors, Alabama youth were slightly more likely to have ever tried cigarettes than the national average. In the risk area of alcohol and marijuana use, Alabama youth were slightly less likely to use these substances than the national average; however, their participation rates were very similar to the national average for almost every category (Figure 1).

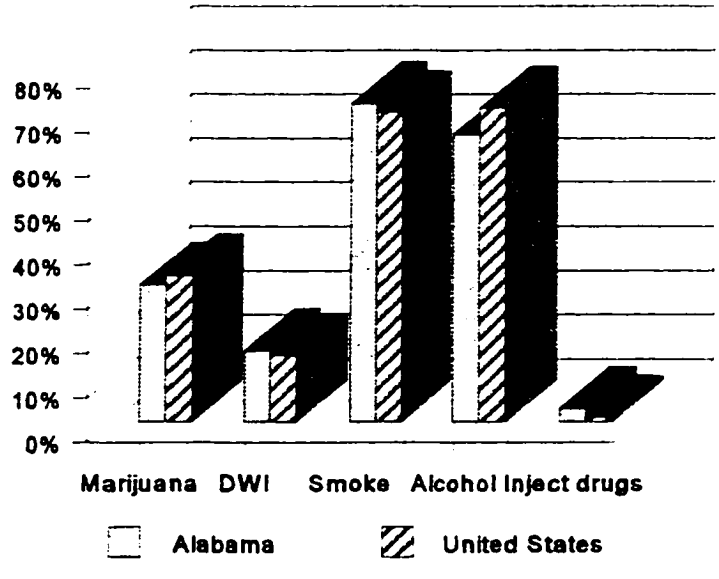

Figure 1. Reported substance use ever.

In the risk area of HIV/AIDS education, Alabama youth were less likely to have received education in school or from family members than the national average (Figure 2). In the risk area of physical activity, Alabama youth once again fared worse in every category as compared with the national average, with the exception of physical education (PE) class attendance (Figure 2).

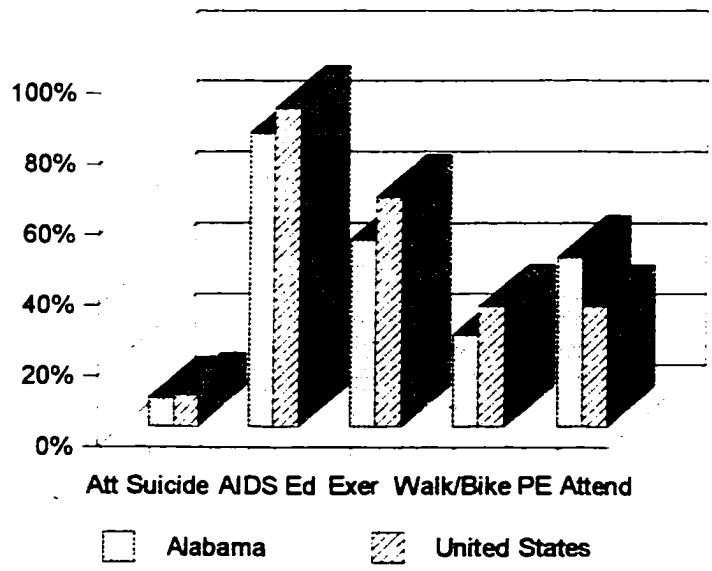

Figure 2. Violence, AIDS education, and exercise.

And in the risk area of diet, Alabama youth reported more unhealthy behaviors in nearly every category than the national average, with the exception of vegetable consumption (Figure 3). As can be seen from these results, Alabama youth have more severe health risk behaviors than youth around the country and, as a result, need more attention in terms of health promotion and education (ALSDE, 1995b).

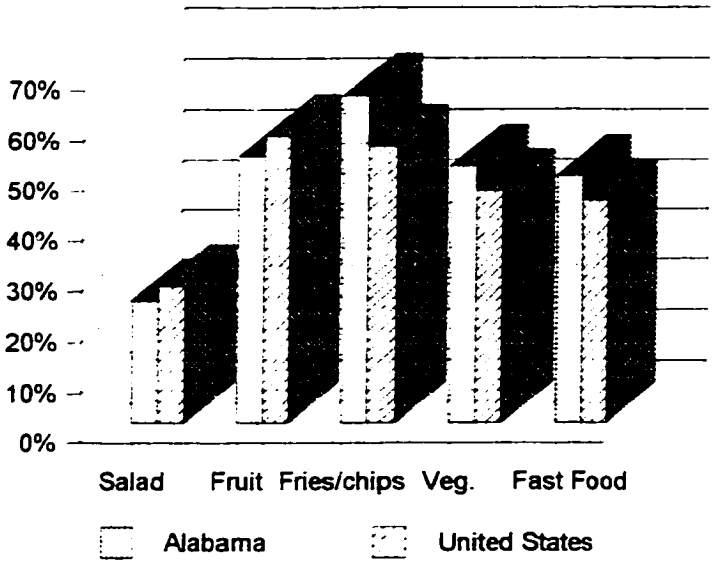

Figure 3. Dietary behaviors yesterday.

In 1994, a national survey of school nurses and nurse supervisors revealed that an increasing number of public school students live in poverty, disrupted families, income disparities, and single-parent families (Igoe, 1994). They also live with a lack of medical and health care, malnutrition, increasing crime, high child-hood morbidity, and numerous other negative health conditions (Igoe).

Frequently, negative health behaviors like those mentioned above are adopted during the period of time known as adolescence (Council on Scientific Affairs, 1990). As a result, these behaviors can eventually lead to the following conditions: homelessness, sexually transmitted infections, depression, early pregnancy, child-birth, abortion, illness, injury, and even death. Alarmingly, among all age groups,

adolescents have the lowest rate of physician visits and are the only segment of society that experienced a rise in mortality rates during the 20-year period from 1970-1990. Between 1970 and 1990, school-based health clinics rapidly multiplied from 1 clinic to 120 (Council on Scientific Affairs, 1990). Currently, there are still only 700 school-based health clinics nationwide (Allensworth & Bradley, 1996), in roughly 15,000 public school districts (National Center for Education Statistics, 1995). These clinics have been established to help meet the numerous health needs of an increasingly diverse adolescent school populations.

Today, elementary and secondary schools in the United States are served by approximately 40,000 school nurses, according to NASN (Burt et al., 1996). Despite thousands of school nurses nationwide, the number of nurses is insufficient to provide at least one for each school, far short of the NASN goal of one nurse for every 750 students (Vail, 1996). At present, only six states meet this NASN recommendation. Many states far exceed the suggested limits set by NASN, including Alabama, which has an average of 5,315 students for each school nurse (Vail).

School nurses are often involved in the health education that most states require in some form at every grade level. CSHE programs, those that attempt to give students the skills, knowledge, and opportunities to develop to their fullest potential (Kane, 1993), are increasing among American schools; however, their implementation is not uniform across the nation or from school district to school district (Collins et al., 1995; Kolbe et al., 1995; Metropolitan Life Foundation,

1988). Frequently, health instruction differs across the nation because of inconsistencies in teacher preparation (Butler, 1993; National Action Plan for CSHE, 1993). Consequently, teachers of health differ not only in their background in health topics, but also in the instructional techniques that they employ in the classroom.

History of Educational Reform

Educational instruction is directly affected by educational reform. At one time, education in this country focused on giving children information and expecting them to memorize and internalize this information. This rationale applied to the "three R's and health education alike" (Creswell, Newman, & Anderson, 1985, p.17). Around the turn of the century, this "knowledge solves problems" line of thinking began to bend. Following the lead of John Dewey, educators realized that the expectations they once had for young learners were not entirely correct. In fact, it was discovered that young learners learn better if the topics being taught are relevant and of interest to them (Dewey, 1913). This reasoning is nothing new to many of today's educators, but it was revolutionary at the time. Dewey's thoughts were slow to catch on, but finally did begin to positively affect the monolith of the educational system (Hosford, 1984, p.6).

Constructivism. More recently, the ideas of Jean Piaget have caught on in the educational field. The earlier writings of Piaget focused on developmental stages, whereas later writings and research focused on the construction of knowledge (Fosnot, 1996).

In his writings on developmental stages, Piaget suggested that all children and individuals experience global stages in which more understanding and a better grasp of reality is gained (Fosnot, 1996). Piaget's later work, rather than defining stages of learning, focused on the process through which new constructions, new perceptions, and new understanding come about (Fosnot, 1996). This research led to the development and spread of the theory now known as constructivism.

Constructivism is a theory which actually corresponds with the ideas of Dewey. It is a body of knowledge which validates much commonsense thinking. Constructivism suggests, for example, that students view their environments "in ways that may be very different from those intended by the educators (von Glasersfeld, 1996, p. 7). von Glasersfeld suggested that this broad environment may include textbooks, computer programs, curricula, tasks assigned, and even their teachers. von Glasersfeld and Steffe (1991) observed that in order to cause or induce change among students' ways of thinking, educators must understand each students' individual experiences and the conceptual relations they currently possess.

The theory of constructivism addresses the misconception that students should be able to learn directly from the ready-made perceptions of the educator. Students are expected to learn concepts and ideas in the same manner or fashion that educators did when they were in school (von Glasersfeld, 1996). To address this, Dewey suggested that educators be familiar with the things that were important to their students and teach about things that interested the students (Dewey, 1913). Finally, constructivism suggests that rather than learning being viewed as the result of development (as Piaget once suggested), it really is development (Fosnot, 1996).

The result of constructivism in education has been a paradigm shift in the way instruction is viewed. This shift calls for classroom instruction to shift from teacher-centered to learner-centered instruction (Haberman, 1991; Shingold, 1990; Waxman & Padron, 1995; Wiburg, 1991). The shift is from content coverage and knowledge accumulation to a form of learning which focuses on a complex form of thinking (Presseisen, 1990). This type of instruction consists of challenging students to actively find the answers to questions as opposed to sitting and ingesting didactic information (Shingold, 1990). This instructional mode is one in which the teacher facilitates the learning process instead of just providing the information to the students (Wiburg, 1991) and one in which a broader variety of people are involved in the learning process, including parents. Constructivism can be applied to instruction in the areas of mathematics (Cobb, 1995; Lochhead, 1992), science (Anderson, 1992; Fosnot, 1993), technology (Jonassen, 1991; Perkins, 1991), art (Sherman, 1978), reading and spelling (Henderson, 1985), and even health education (Rogers et al., 1995).

Parent Involvement

Importance of school-community links. As school-reform efforts continue, parent and community involvement in schools has become increasingly important issues. Parent and community involvement in child learning has great potential and is certainly in keeping with Dewey's (1913) suggestion that teachers need to know more about the environment in which students live.

Because of changes in access to resources and power, the nature of the family and its functions in this society are also changing. Today, there are greater demands on

parents' time, which, in turn, diminishes the nurturing attention that would normally be focused on children (Gordon, 1995). It is with regard to the dynamic state of the nature of the family that schools must also be motivated to adapt and meet the ever-changing needs.

In the past, schools and teachers participated in few collaborative efforts with the community at large. Only at times of crisis did teachers contact entities outside the school (Kirst & Kelley, 1995). In a modern society where the tide of school and community interest focuses on integrating services to address more comprehensively the needs of all children and where constructivist thought focuses on development of the "whole" child, it is essential for schools to collaborate their efforts with not only parents, but also the community as a whole (Gordon, 1995; Kirst & Kelley, 1995). Teachers cannot do their job alone, and need the help and input of parents and the community (Davies, 1991). In addition, given the tremendous needs of children in the schools and the limited financial resources of the schools, the only way to muster sufficient resources to meet these needs is through partnerships with the community (Holtzman, 1995). Indeed, given the ever-increasing responsibilities of the school to perform more functions traditionally performed by the family, it is in the best interest of the schools to involve the community in partnerships and collaboration to a greater degree to help meet these needs and demands (Gordon, 1995; Holtzman, 1995).

These conclusions are validated by a study conducted by Armor and colleagues (1976) which focused on 20 minority elementary schools in the Los Angeles area. Results showed that there was a high degree of correlation between gains in reading achievement of sixth graders in African American schools and parent and community

involvement. The authors concluded that more vigorous efforts of schools to involve parents and the community in school decision-making resulted in far better reading achievement among sixth graders. This finding did not apply to Mexican American schools probably because of the language barrier (Armor et al.).

It is natural, because teacher training in the area of community involvement is minimal, that teachers may feel uncertain and apprehensive about such efforts. It is only through thinking, dialogue, and planning that teachers will become comfortable with collaborative efforts to help better meet the needs of all children (Kirst & Kelley, 1995).

Parent involvement. Ironically, while schools are having to adapt to ever-increasing responsibilities acquired because of the changing nature of the family, they are also encouraged to involve parents in school initiatives to a much greater degree than ever before. It has been known for some time that parents can have a substantial impact on their children's academic achievement and their social and emotional development (Becher, 1984; Edwards, 1995; Goodson & Hess, 1975; Jencks, 1972; Scott-Jones, 1987; Slaughter & Epps, 1987; Stevenson & Baker, 1987). Parent involvement helps facilitate greater learning on the part of the child while providing a more positive home and living environment through behavioral modeling and reinforcement (Edwards & Young, 1992).

A foundational study on parent involvement was conducted by researchers at Johns Hopkins University in 1966 (McDill, Rigsby, & Meyers). Researchers selected a national sample of 20 high schools in eight states. The study involved 20 principals,

1,000 teachers, and 20,000 students. Results showed that parental and community interest in the quality of education was the critical factor influencing the impact of school environment on educational achievement and aspirations. McDill and colleagues encouraged principals to be responsible for bringing parents into the schools and increasing their involvement. Finally, they stressed the importance of making sure that home and school environments were mutually reinforcing each other and that the primary way to do this was by involving parents to a much greater degree in the schools.

Olmsted and Rubin (1982), in a review of four evaluation studies of a Head Start parent involvement program, made the following constructive observations. First, low-income parents who received training to work with their early-elementary school children improved their teaching behavior at home. Second, the children of these same parents had improved performance in both reading and mathematics (Olmsted & Rubin, 1982).

Epstein (1984) conducted a longitudinal study in which teacher involvement of parents in the student learning process was compared with California Achievement Test scores. Students whose teachers used parents to a greater degree scored higher on the California Achievement Test in the area of reading. There was no change in mathematics scores (Epstein, 1984). A parent involvement study conducted by Ryan (1992) showed that parent involvement was related to improvements in not only reading, but also mathematics and attendance.

Snow and colleagues (1991) studied low-income second, fourth, and sixth graders in elementary schools in the Northeast. Results showed that the most sig-

nificant correlate with improved student literacy was formal involvement of parents in the schools. Formal school involvement included attending school activities, PTA participation, and volunteer service. The researchers attributed these activities to providing parents with information about the school environment so that they could better prepare their children and demonstrate to them that school is important (Snow et al.).

In a 1990 study in one California high school, Rumberger, Ghatak, Poulos, Ritter, and Dornbusch discovered that family involvement can actually reduce dropout rates among students. Surveys completed previously by high school students who both remained in high school and who dropped out of high school showed that students whose families were more involved in their education were less likely to drop out of school. Specific types of family involvement included monitoring and helping students with homework, attending school conferences and functions, participating in extra-curricular activities linked with the school, and providing a supportive learning environment at home (Rumberger et al., 1990).

More recently, however, it has become apparent that schools can help facilitate and encourage parents in their roles to develop their own children. More specifically, teacher-parent and community-school relationships are the most important. And it is the strength of these relationships that ultimately affects the success of children and adolescents in school (Comer & Haynes, 1991; Epstein, 1987, 1990). These relationship links allow parents and teachers to collaborate in order to more appropriately facilitate children's intellectual and social development (Bronfenbrenner, 1974; Epstein & Dauber, 1988; Stevenson & Baker, 1987).

A number of studies demonstrated that parents desired to be more involved with their children's education and would appreciate more aid from the school and teachers to do so (Baker & Stevenson, 1986; Dauber & Epstein, 1989; Leitch & Tangri, 1988). Conversely, teachers also desire more interaction with parents (Carnegie Foundation, 1988; Epstein & Becker, 1982). Ultimately, parent involvement needs to be sustained (Ascher, 1988; Gordon, 1978), and parents need to be involved in a variety of roles over time (Gordon, 1978; Swap, 1991).

One specific study by Simich-Dudgeon (1993) worked with teachers of two high schools to create parent training programs to help improve students' language skills. Non-native English-speaking parents were trained by teachers to work on home lessons with their non-native English-speaking high-school-aged children. Results of the intervention not only showed improvements in the language skills of the students and improved student lesson discussion with parents, but also improved parent contact with the school system (Simich-Dudgeon).

Becher (1984) reported in a review that parent-education programs designed to teach low-income parents to work with their children were effective in improving children's language skills, test performance, and school behavior. These programs also improved parents' teaching styles and the way they interact with their children in the home learning environment. Becher further noted that the most effective programs operated on the following assumptions:

1. All parents have strengths and should know that they are valued.

2. All parents can make contributions to their child's education and the school program.

3. All parents have the capacity to learn developmental and educational techniques to help their children.

4. All parents have perspectives on their children that can be important and useful to teachers.

5. Parent-child relationships are different from teacher-child relationships.

6. Parents should be consulted in all decisions about how to involve parents in the education of their children..

7. All parents really do care about their children.

Becher (1984) concluded that interventions that encourage parent involvement with their children are effective in improving the cognitive development of the children.

An early study by Gillum (1977) examined three Michigan school systems that included parents in their performance contracts to improve reading skills for low-income elementary school children. The study involved approximately 2,000 students in 12 schools and the score on the Stanford and Metropolitan Achievement tests. Study results show that the system with the greatest degree of parent participation experienced the greatest gains in student achievement test scores. This study showed that even in low-income school systems it is possible to improve reading skills of elementary school children with major involvement from their parents.

Baker and Stevenson (1986) studied socioeconomic status (SES) and mothers' involvement in managing their children's education. Baker and Stevenson learned that SES was a poorer predictor of student success in high school than was the mother's ability to identify and use strategies to improve achievement and promote success in school. The authors noted that although higher SES mothers were more likely to act on

the knowledge than were low SES mothers, both had about the same level of knowledge of strategies to take. Baker and Stevenson identified a need for improving the managing skills of lower SES mothers to promote better achievement of their children.

A retrospective analysis of factors contributing to the success of adults identified enthusiastic parent involvement as the most common denominator in child success (Bloom, 1985). Even when child skill and knowledge exceeded that of the parents, parent encouragement and support remained a driving factor in the life of their child (Bloom).

Eagle (1989) examined 11,227 high school surveys from the 1980 High School and Beyond (HS&B) national survey conducted by the National Center for Educational Statistics. Among her findings, Eagle learned that the following were significantly related to student likelihood to continue with post-high-school education: parent involvement during high school, parents' reading to the student in early childhood, and a designated place to study in the home. Of these three, parent involvement (defined as frequency of talking to teachers, parent involvement in planning for post-high-school activities, and parent monitoring of school work) had the greatest single impact on student pursuit of post-high-school education (Eagle).

Fehrmann, Keith, and Reimers (1987) examined 1980 HS&B national survey data and discovered that, aside from intellectual ability, parent involvement had the second strongest relationship with high school students' achievement (grades). Fehrmann and colleagues make the recommendation that in order to improve high school student grades, parents should keep close track of their children's achievement

in school, work closely with their children in planning for the future, and monitor their children's daily activities (Fehrmann et al.).

Researchers in San Francisco analyzed the impact of another type of parent involvement, parenting styles (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). Findings from this study of 7,836 students in six high schools in the San Francisco area illustrated that parenting style was a more powerful predictor of student academic success than even parent education, ethnicity, or family structure. Findings showed that parents who were authoritative (set rules and explained issues to their children, including necessary praise and correction) had more academically successful children than did permissive or authoritarian parents (Dornbusch et al.).

Eagle (1989) suggested that if parents are more involved with the education of their children during high school (monitoring of school work, frequently talking to teachers, and helping plan for post-high-school education), the children will be more likely to go on to post-high-school education. Eagle's results indicated that this finding is independent of social class and SES.

The literature points to several areas or levels of parent involvement, and Ascher (1988) identified three of these: policy, school, and home. Policy-level parent involvement includes policy decision making; advocacy for schools, programs, and students; and oversight of schools and programs. School-level parent involvement includes involvement in fund raisers, volunteer positions, and paraprofessionals in clerical-type positions within the school. The third level of parent involvement includes home tutoring and reinforcing of school work and school values at home. All three

levels are open to parent involvement, although some are more difficult than others for parents to participate in.

Gordon (1977, 1978) identified similar areas of parent involvement approximately 10 years earlier than Ascher (1988). Gordon classified these areas as models of parent involvement and labeled them as the parent impact model (includes the influence of the home environment and parents on the cognitive development of the child and working at home with children in an educational capacity), the school impact model (direct parent involvement in school programs and activities, including volunteering, serving as teacher aides, and serving on councils and decision-making bodies), and the community impact model (includes parents acting as tutors at home and also active members of the community at large). Gordon emphasized the importance of comprehensive and ongoing parent involvement to enhancing student achievement.

Through a survey done with limited-English speaking parents, Epstein (1986) identified five types of parent involvement: parenting (basic parent responsibilities), communicating (communication between parents and schools), volunteering (classroom aid, parent organizations, fund raising, political awareness, supervision), learning activities at home (involvement with children's homework), and governance and advocacy.

In summary, parent involvement can and does positively affect student success in school (Hamilton & Osborne, 1994; Sullivan, 1998). In a review of 48 studies, Leler (1983) concluded that the fuller the participation of the parents in the school lives of their children, the more substantial the impact made. Leler suggested that parents should be involved in a variety of roles, while also being involved in structured training programs for involvement. More specifically, Swap (1993) reviewed the literature from

the past several decades and concluded that in order to maximize student success, parents must become full partners with the schools. Parents and schools together should not only plan, but also make major decisions which will affect the students. Learning enhancement should be stressed both in school and at home. Schools need the support of parents in a variety of ways and, in turn, should provide parents with a link to health, education, and social services. In a nutshell, Swap called for comprehensive, coordinated efforts made by parents and schools, throughout a child's educational career. In the words of Henderson and Berla (1995),

> The evidence is now beyond dispute. When schools work together with families to support learning, children tend to succeed not just in school, but throughout life. In fact, the most accurate predictor of a student's achievement in school is not income or social status, but the extent to which that student's family is able to: create a home environment that encourages learning, express high (but not unrealistic) expectations for their children's achievement and future careers, and become involved in their children's education at school and in the community. (p. 1)

African American parent involvement. Parent involvement is important to children's academic and socioemotional development in all racial groups; however, research shows potentially unique dynamics in African American families. Bean (1990) made the following astute comment about African American school achievement:

> While many school improvement projects can be implemented without a parent or family component, programs that aim to make a substantial impact on the long-term participation and performance of under-represented children of color in mathematics and science must generate home and community support. (p. 361)

Bean's research demonstrated that substantial gains in mathematics and science were made by elementary school students whose parents were actively involved with their

learning. Losses in mathematics and science achievement were experienced by students who did not have parent involvement in their learning (Bean).

Another factor that directly influences learning in African American children is maternal education (Scott-Jones, 1987). As the maternal education level increased, mothers were more familiar with the school and more willing to get involved in their children's learning (Stevenson & Baker, 1987). Additionally, student achievement also appeared to increase; however, mothers whose educational levels are lower may not contribute positively to their children's achievement. Mothers with low educational levels may desire to aid their children with homework and school-related tasks, but may not have the skills and knowledge to do so, or may even give misinformation in their attempt to help (Scott-Jones, 1987).

Another factor related to parent involvement among African Americans is student achievement. A cross-sectional study by Stevenson and Baker (1987) showed that parents who were more involved in school activities had children who performed well in school. Additionally, parent involvement is related to teachers' reports of whether students were performing to their ability. If students were reported by teachers to perform to their ability, parents were more likely to be involved in school activities. African American parents of younger children were also more likely to be involved in school activities than parents of older children (Stevenson & Baker).

Finally, the home environment in African American families positively or negatively affects student achievement (Slaughter & Epps, 1987). This finding is also applicable beyond African American family environments, where a positive home environment is linked with positive student achievement (Cooper & Jackson, 1989).

In homes where children were encouraged to achieve academically and in families in which parents understood how to help facilitate their children's academic success, children were more likely to do well in school. Conversely, in households where parents were pessimistic about how educational success would affect life and job success, students were less likely to perform well in school (Slaughter & Epps, 1987). The following section discusses barriers and enablers that generally apply to most racial groups.

Barriers and enablers to parent involvement. The first barrier to parent involvement in their children's education is the traditional hierarchical parental model (Comer & Haynes, 1991; Cooper & Jackson, 1989). Cooper and Jackson suggested that hierarchical models which mandate parent involvement are not effective when applied to low-income or non-English-speaking urban families. These models place parents below or under the control of a more powerful teacher or administrator. Cooper and Jackson noted that these parents typically prefer to be viewed as experts on their children. Accordingly, the experience and insight of these parents should be sought by schools and teachers and applied in the schools, rather than parents being told what to do. Cooper and Jackson commented that "unless parents are empowered and involved beyond joining the parent association, many urban parents, it seems, find these structured, organized groups too formal, off-putting, and distant, failing to meet their needs" (p. 266).

Barrier number two is language. A number of studies noted that language can be a barrier either to non-native English speakers (Cooper & Jackson, 1989; Murray et

al., 1998). Both of these audiences may have difficulty in interpreting and understanding written materials. Additionally, they may also have limited ability and confidence in communicating using both written and language skills (Finders & Lewis, 1994). Using printed material that is easier to understand, as well as written material and language that is native to the parent, can drastically reduce this barrier (Finders & Lewis).

A third barrier is a lack of understanding by the school of families' cultures, strengths, and goals (Edwards, 1995). Because family background and parental influence have such a strong bearing on children's development (Coleman et al., 1996; Slaughter & Epps, 1987), it is essential for schools and teachers to understand the home situations of their students in order to better meet their needs and to avoid asking parents to participate in tasks they may already be involved with. Additionally, when schools and parents have different approaches to learning, children's achievement may be negatively affected (Kellaghan, Sloane, Alvarez, & Bloom, 1993).

Barrier number four is perceived alienation perpetuated by school personnel (Thompson, 1991). Parents can be intimidated by the attitude that teachers view the parents as incompetent or intruding (Bright, 1996; Swap, 1991). Additionally, parents may feel ill-prepared to function in the school environment because they are not familiar with school routines, curricula, and school processes (Green, 1969; Wilson & Herbert, 1978). This barrier of perceived alienation can be overcome if teachers and schools maintain and increase communication with parents, including providing regular updates on children's classroom activities (Ascher, 1988; Rich, 1985). Schools can also help prevent parents from feeling alienated if the schools are more aware of parental

limitations (time constraints, language, monetary resources) and act to better facilitate parent involvement, (Rich, 1985). Finally, schools must work to help parents feel involved. One way is to create for them definite roles in the school decision-making process (Herman & Yeh, 1983; Leler, 1983). These roles can include board positions, committee positions, advisory positions, and the like.

A fifth barrier to parent involvement in the schools is mistrust. Many poorer parents see schools as "institutions for the elite" because school board members are often property and land owners and because the taxes of these individuals help to support the schools (Edwards & Young, 1992). Often these parents, because of their work schedules and limited transportation, are excluded from participation in the limited opportunities available (Edwards & Young; Rudinitski, 1992). To overcome these barriers, schools must work to help parents feel involved in the decision-making process (Herman & Yeh, 1983) as well as work with parents to overcome limitations such as time and transportation (Rich, 1985). Schools need to be perceived as flexible and open to change as the needs of its constituency change (Giannetti & Sagarese, 1998; Rudinitski, 1972).

Barrier number six is social class (Slaughter & Epps, 1987). Children who are of a lower social class tend to have lower levels of achievement than children from middle- and upper-class families (Benson, Buckley, & Medrich, 1980; Slaughter & Epps, 1987). Teachers also tend to favor and give more attention to higher achievers in their classrooms (Mostinger, 1990). Parents from lower social classes whose children are not high achievers will interpret teachers' lack of attention to the children as a result of their lower class rather than their underachievement (Mostinger). These parents

often have lower educational levels (Stevenson & Baker, 1987), which, in turn, adds to their view that teachers' lack of attention is based on class rather than the childrens' underachievement (Leitch & Tangri, 1988). Additionally, lower class parents have additional challenges with transportation, child care, and language, which also contribute to their limited involvement in the schools (Edwards & Young, 1992; Finders & Lewis, 1994).

A seventh barrier to parent involvement is lack of time (Leitch & Tangri, 1988). Parents feel that the many constraints on their time limit their involvement with their children at home and at school. Surprisingly, Leitch and Tangri found that working parents were more involved in the schools than unemployed or nonworking parents. Rich (1985) gave the following suggestions for dealing with the time barrier: Give parents advance notice about meetings, schedule evening meetings with child care, be sensitive to child care needs when school is canceled, and provide before- and after-school child care.

Barrier eight is limited training for parents on how to be involved (Becker & Epstein, 1982). Parents in a study by Bright (1996) expressed greater need for information from teachers on how to help children with homework. Cooper and Jackson (1989) and Whiteford (1998) showed that children whose parents were counseled in positive home-teaching techniques made positive and lasting gains in intelligence. These same parents also reported increased confidence in working with their children. Leler's (1983) review of 48 studies revealed that programs that trained parents to tutor their own children at home had the greatest impact on parent involvement and student achievement. Finally, by helping parents better understand what is expected of their

child at school and by keeping them informed of how to meet those expectations, parents can better encourage their children at home (Kellaghan et al., 1993).

Additional enablers or facilitators of parent involvement were suggested by Finders and Lewis (1994). These enablers include clarifying how parents can help (Giannetti & Sagarese, 1998), encouraging parents to be assertive, developing the trust of parents in the schools and teachers (Cavarretta, 1998; Giannetti & Sagarese, 1998), building on home experiences of children, and using the parents' expertise. Henderson (1987-88) observed that it is critical for schools to involve parents while their children are still young. Gordon (1978) concluded similarly, 10 years earlier, by suggesting that the most successful type of parent involvement is that which is well planned, comprehensive, and long lasting. He implied that short one-shot efforts would produce little more than the effort that went into them.

In 1991, California created a state policy designed to facilitate parent involvement in the schools (Solomon, 1991). This policy recommended that comprehensive parent involvement programs should involve parents in a variety of roles and at all grade levels (K-12). The policy also said that parent involvement programs should be designed to do the following six things:

1. Help parents develop parenting skills and foster conditions at home that support learning.

2. Give parents skills designed to assist children in learning at home.

3. Provide access to and coordinate community and support services for children and families.

4. Promote clear two-way communication between the school and the family as to the school programs and children's progress.

5. Involve parents, after appropriate training, in instructional and support roles at school.

6. Support parents as decision makers and develop their leadership in governance, advisory, and advocacy roles.

It was the hope and conclusion of the California board that the above policy would promote and increase parent involvement in the schools (Solomon, 1991).

Current State of Teacher Preparation in Family Involvement

In a review of state teacher certification requirements in 51 state departments of education, regarding family involvement, Shartrand, Weiss, Kreider, and Lopez (1997) discovered that many states failed to mention working with families or parents. Twenty-two states did mention some type of family involvement in their certification programs; however, five states mentioned certification for early childhood. Only eight states mentioned family involvement for early childhood and kindergarten through grade 12 (K-12), and nine states mentioned certification for K-12 only. Of those states that mentioned parent involvement as a part of their certification program, fewer than half provided preservice teachers with a full course on parent involvement. Additionally, only about 20% of schools that included parent involvement training actually included direct work with parents as part of their curriculum. In this study, parent involvement was most often offered as part of a required course and during student teaching.

Shartrand and colleagues (1997) emphasized that although preservice teachers may experience training in traditional parent-teacher conferences, training in more contemporary family involvement activities is still lacking. There is further need for teacher education programs to create a comprehensive definition for family involvement, given the potential benefit that they hold for improving family involvement in schools.

Parent Involvement in School Health

Comprehensive school health (CHS). CSH is a concept which has gained much interest and support over the past decade in its attempt to help meet the many health needs of the children in the schools. CSH programs attempt to give students the skills, knowledge, and opportunities to develop to their fullest potential (Kane, 1993). Comprehensive school health education (CSHE) is the educational component of CSH that generally deals with the classroom. The National Professional School Health Education Organizations (NPSHEO); (1984) defined CSHE as "health education in a school setting that is planned and carried out with the purpose of maintaining, reinforcing, or enhancing the health, health-related skills, and health attitudes and practices of children and youth that are conducive to their good health" (p. 312). CSH programs promote the idea that multiple entities within the schools and communities need to be involved in promoting the health of the students.

The CSH model includes seven components or elements that should be included in any CSH program: school health services, school health education, school health environment, integrated school and community health promotion efforts, school physical education, school food service, and school-site health promotion programs for faculty and staff (Allensworth & Kolbe, 1987). Of these components, the integrated school and community component is of primary concern. This component identifies the true need for parent inclusion or involvement in any CSH effort (Killip, Lovick, Goldman, & Allensworth, 1987). Additionally, Kelder and colleagues (1996) recommended that in order for comprehensive health interventions to be successful, parents must be actively involved in the health promotion of their children.

Health literacy. Health literacy is the overall goal for CSHE. For many years, professionals in the health education field have touted the tremendous importance of parent involvement for the success of health education programs and encouraged teachers to do more to involve parents (Allensworth, 1993; Birch, 1994; Dryfoos & Santelli, 1992; Greenberg, 1977; Lavin et al., 1992; Perry et al., 1987). In 1993, a meeting sponsored by the American Cancer Society developed a National Action Plan for Comprehensive School Health Education (1993). This national action plan emphasized the involvement of parents and the community in a comprehensive school health-education program.

In the United States today, there is a national move to foster literacy in school subject areas aside from English and reading (ALSDE, 1995a; Short, 1997). The idea is to develop students who will become adults who can function in society using problem-solving skills which are applicable to the specific subject area and life itself.

Health literacy is a specific concept that has received recent attention since the publishing of the National Health Education Standards (JCNHES, 1995). Health literacy, as defined by the standards, is "the capacity of an individual to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways which are health enhancing" (p. 6). The standards were fashioned by combining characteristics of a well-educated, literate person within the context of health. The standards consist of seven health education standards, along with specific competencies for each (JCNHES).

Within the national standards, opportunity-to-learn standards have been created to involve entities outside of the school in health education planning (JCNHES, 1995). These opportunity-to-learn standards focus on the involvement of five different groups: local education agencies, communities (including community agencies and families), the state education agency, higher education institutions, and national organizations. These opportunity-to-learn standards are designed to give each of these five entities specific guidelines for involvement in school health in the hope of promoting a more comprehensive and effective push toward achieving the goal of health literacy. The guidelines given to all of the five entities include specific ways to involve parents and families in health education and promotion efforts, highlighting that parents play an integral role in developing health literate children. The standards are rapidly gaining

broad appeal and use by SEAs and LEAs because of this, and the importance of involving parents in the health education process is also gaining more attention.

The new 1997 Alabama Health Education Course of Study (ALSDE, 1997a) was recently developed using the national standards (JCNHES, 1995) as a backbone. It however, refers to the seven health education standards as health literacy goals. In keeping with the focus of the standards, the 1997 Alabama Health Education Course of Study has also been designed with parent involvement in mind. It places the responsibility of parent involvement entirely on the school and the teachers who teach health education, expecting them to determine when and where to incorporate parent involvement.

Parent involvement in health education. Both parents and children are interested in school health education and school health services (American Cancer Society, 1994; Torabi & Crowe, 1995; Weathersby et al., 1995). Parents also feel that school health education would reduce the health problems of students and that the federal govern-ment should do more to support school health education (Torabi & Crowe, 1995). Additionally, the general education and school health education literature illustrates that parents also desire involvement with schools and school programs (Baker & Stevenson, 1986; Dauber & Epstein, 1989; Landis & Janes, 1995; Leitch & Tangri, 1988; Perry, 1986).

One of the conclusions in a publication prepared by the NASBE (1990) and titled Code Blue: Uniting for Healthier Youth completely reinforces the importance of parent involvement. The NASBE in this document recommended that parents must be

involved in health education efforts in order to maximize the influence on children's current and future health behavior. Associated with NASBE's recommendation is a finding by Dryfoos and Santelli (1992). They suggested that in terms of a positive health education learning environment at school, parents have the potential to be the most effective and articulate advocates for the health of their children, if they are purposefully involved. On a similar note, Allensworth (1993) suggested that school health move beyond the classroom instruction model and into the health promotion model. This is a model that incorporates all aspects of the child's environment. It is only through consistent and repeated messages promoted by teachers, school staff, peers, and parents, that successful health behavior change will occur in students (Allensworth & Wolford, 1989; Bremberg, 1991; Elder, 1991; Killip et al., 1987).

Childhood learning is influenced by aptitude, instruction, and environment (Allensworth, 1993). Of these three domains, parents have the ability to greatly influence both instruction and environment. In terms of the home environment, parents have a primary impact on child health because of their role in reinforcing, modeling, and providing barriers or facilitators to positive child health behaviors (Johnson et al., 1994; Patterson et al., 1989; Perry, 1986; Perry et al., 1987). Perry and colleagues (1988) also suggested that at-home learning activities are most likely to involve the parents and the family in activities that reinforce topics covered in regular health education classes.

As early as 1977, Greenberg reported that parent home involvement in dental education greatly improved the health state of the teeth of seventh graders. In fact, this parental home involvement was more efficient in promoting student dental health than

was the classroom instruction segment of the intervention. The drawback to this parent involvement piece was the relatively low number of parents who not only agreed initially to be involved, but also remained at the conclusion of the intervention (Greenberg).

Resnick et al. (1997) are currently conducting a longitudinal study entitled the National Longitudinal Study on Adolescent Health. In a review of over 12,000 surveys extracted from an initial national survey of over 90,000 adolescents in grades 7 to 12 in over 80 high schools and feeder middle schools, researchers found that parent and other adult involvement was protective against adolescent health risk behaviors. Adolescents who felt that parents and other adults were interested and involved with their lives were less likely than their counterparts to be depressed; use cigarettes, alcohol, and marijuana; be involved in sexual behaviors; and be involved in violent behavior.

In 1987, Vincent et al. evaluated a rural intervention to reduce teen pregnancy. Parents alone and parents and children together received health instruction to reduce sexual risk behaviors. The community-based intervention was truly a collaborative effort which involved parents, teachers, ministers and church representatives, community leaders, and public school children. Vincent and colleagues attributed the remarkable success of the program to the inclusion of a broad array of community participants, of which parents were one.

In discussing parent involvement in the Minnesota Heart Health Program, Perry (1986) identified activities that parents of fourth graders prefer and would rather not be involved with. Perry reported results from 208 parent opinion surveys that addressed diet and physical activity. Between 40% and 50% of parents were "very interested" in receiving refrigerator tip sheets, homework activities, worksheets, and mailed broch-

ures. Parents were least interested in participating in evening meetings and receiving phone calls with nutrition updates. Perry's findings noted that elementary parents in one community in Minnesota preferred to be involved with their children's health education from the comfort of their own homes rather than in some type of formal meeting.

Perry, Pirie, Holder, Halper, and Dudovitz (1990) evaluated the Unpuffables Program, a smoking prevention program for preadolescents and their parents. The program contained take-home activities to be engaged in by parents and children. Findings from the evaluation showed that students are strong initiators of this pre-vention program and did bring up the topic of smoking. White-collar parents were found to be more likely to engage in the activities than blue-collar parents. Additionally, this program appeared to increase the percentage of parents who intended to quit smoking (Perry et al., 1990).

Werch and colleagues (1991) designed and implemented a late elementary school (grades 4-6) drug-related prevention program which was designed to include a substantial parent-communication piece. Parents were involved through materials and activities that their children brought home from school. All communication between the 1,022 parents and schools was facilitated through the children. Results of the program showed that parents who were involved in the program not only communicated more routinely with their children about the dangers of drug use, but that they also were more motivated to communicate with their children. Study children and controls show-ed no differences in intention to use drugs; however, they reported less susceptibility to experiment with cigarettes (Werch et al.).

The multicenter Child and Adolescent Trial for Cardiovascular Health (CATCH), which involved 96 schools in four cities across the United States, in-

corporated a strong parent involvement piece into its school-based intervention program (Johnson et al., 1994). Of the 96 schools involved in the study, 28 (7 in each of the four sites) participated in the parent component of the intervention. Parents of children in grades 3-5 worked with a 4-week, home-based curricula that their children received in school and brought home to the parents. In addition, grades 3 and 4 parents and students participated in an annual family fun night, which was designed to show parents fun activities that children could participate in and still learn about promoting cardiovascular health. The major finding from this study was that it is possible to create an elementary school cardiovascular risk reduction intervention that successfully involves a significant number of student and parent participants. The overall participation rate was 66.7% for all four sites and ranged from 54.7 to 76.6% (Johnson et al.).

Nader and colleagues (1992) developed a family-based cardiovascular risk reduction intervention which was implemented among both Mexican Americans and Anglo Americans. Grade 5 and 6 parents in 12 matched schools were involved in the hopes of reducing cardiovascular disease risk factors. This intervention was solely family based and included 12 weekly sessions and 6 maintenance sessions. The intervention was adapted to meet the language and cultural needs of Mexican Americans as well as those of Anglo Americans. Results showed that the program was successful in changing diet as well as physical activity patterns over 3 years of follow-up. Additionally, parent participation remained relatively high. Average attendance for the 12 weekly sessions was 71% and 57% for Anglo and Mexican Americans, respect-ively. It was also 42% and 39% for the six maintenance sessions (Nader et al., 1992).

Resnick and colleagues (1997) examined data collected from over 12,000 students in the National Longitudinal Study of Adolescent Health. Interviews were completed in subjects' homes and assessed emotional distress, suicidal thoughts and behaviors, violence, substance use, sexual behaviors, family context, school context, and individual characteristics. Study results showed that parental expectations, parental presence at home, and parental connectedness (feeling loved and cared for) positively affected child health behaviors and reduced negative health outcomes.

Given the potentially sensitive nature of some topics in health education (human growth and development, negotiation skills, sexually transmitted diseases and pregnancy, and stress management), it is imperative that parents be actively involved in the implementation of health education programs (Pollock, 1987; Welshimer & Harris, 1994). Welshimer and Harris revealed some interesting conclusions following the implementation of a parent survey on sexuality education programming. They found that as a result of implementing a survey (N = 479 parents) to determine parents' attitudes toward sexuality education in the schools, parents had a more positive attitude toward the school and were more supportive of the sexuality education program. Welshimer and Harris also advocated that health educators, particularly when developing sexuality education programs, actively involve community members (parents) in all phases of program planning, development, and evaluation, as well as mobilize community support and anticipate community opposition. The authors suggested that health educators need to specify the type of support needed from the community.

Behavioral Theory

The Health Belief Model. The HBM has its origins in the 1950s (Rosenstock, 1991, Strecher & Rosenstock, 1997). It was developed by social psychologists to explain patient failure to comply with certain disease treatment regimens Over the years, the theory has been refined into the working interpersonal model that exists today (see Table 1). Table 1 is adapted from Strecher and Rosenstock (1997).

The HBM consists of components that attempt to isolate factors that cause a person to take certain actions in a given situation. The basic premise of the theory suggests that by identifying an individual's perceived threat of a given situation as well as whether the perceived benefits of performing the behavior outweigh the perceived barriers, the person's future behavior may be more thoroughly explained (Strecher & Rosenstock, 1997). The combination of these three variables suggests the likelihood of the person taking the preventive action (Rosenstock, 1991).

More specifically, the constructs of the theory that combine to affect the likelihood of performing the preventive behavior are as follows. The perceived threat is made up of a combination of two factors, perceived susceptibility and perceived severity. Perceived susceptibility is the selective perception of risk of contracting a health condition (Strecher & Rosenstock, 1997), or, in the case of parent involvement, the perceived risk of a child experiencing or participating in negative health behaviors. An example of perceived susceptibility would be parents viewing their teenage daughter as susceptible or at potential risk of becoming pregnant during her high school career. Perceived severity involves feelings of the seriousness of con-tracting a health condition (Strecher & Rosenstock). In the case of parental involvement, perceived

severity is the perception of how great a threat a given negative health risk poses to their children; some parents discount health threats because they have no experience with a disease (e.g., AIDS). Parents who believed their teenage daughter to be at great risk for becoming pregnant perceive the severity of the situation to be very great. The combination of perceived serverity and perceived susceptibility are referred to as the perceived threat.

Perceived benefits include the belief about the positive effects of participating in activities to reduce a disease threat (Strecher & Rosenstock, 1997). In terms of parental involvement, perceived benefits are the perceived reductions in health risk that children will be involved in because of parent involvement at various levels of the school health education program. In other words, the positive effects that result from their involvement. These can also be perceived benefits experienced directly by the parents. For example, parents might choose to have their children vaccinated in order to avoid potential health complications in the future.

Perceived barriers include the belief about the negative effects of participating in activities to reduce the disease threat. These are the perceived costs of participating in the behavior (Strecher & Rosenstock, 1997). In terms of parent involvement, perceived barriers include perceptions of items or situations that may impede parent participation or that may cause negative response in a child. These barriers can also be the negative results or the costs of being involved. Parents might, for example, choose not to participate in school activities because of the perceived time and money commitment that will be necessary.

Table 1

Health Belief Model

Construct	Definition	Example
Perceived susceptibility	Selective perception of the risk of participating in a behavior or contracting a health condition.	Idea that parents can impact a child's health by being involved in health education.
Perceived severity	Perception of the degree of threat of a negative health behavior.	Parents feel that a child's risk of poor health is great enough to necessitate their involvement
Perceived benefits	Belief about the positive results of adopting a behavior.	Perception that a child will be healthier if parents participate in his or her health education.
Perceived barriers	Factors that inhibit involvement.	Parents may view involvement in their child's health education as too time-consuming.
Cues to action	Factors that affect readiness to comply or participate.	Perceived friendliness of teacher, number and type of attempts to involve parents.
Self-efficacy	Confidence in ability to take and maintain an action.	Parents belief that their involvement will make a difference.
Modifiers	Other variables that can affect one's decision to act.	Readability of fliers that request parent involvement. Language that is used in fliers.

The perceived threat is a force that leads to engaging in a behavior. When mediated by the combined weight of perceived barriers compared with perceived benefits, a clearer understanding of the ultimate decisions in favor or against participation in a behavior can be better understood.

Another construct of the HBM is referred to as cues to action. Strecher and Rosenstock (1997) referred to cues to action as being "strategies to activate one's readiness" (p. 45). More specifically, these cues provide prompts or reinforcement to participate in a behavior. They also act to reinforce a behavioral decision come to by reviewing the perceived threat along with perceived barriers and benefits.

Another HBM construct is self-efficacy. Self-efficacy is a confidence in one's ability to participate successfully in a given action (Strecher & Rosenstock, 1997). In terms of parent involvement, self-efficacy is the parents' belief that they can be successfully involved in the school health education of their child and receive desired outcomes such as improved grades and better health habits.

An additional construct is referred to as other variables or modifiers. This construct consists of demographic and sociodemographic variables that could potentially affect one's decision to initiate a behavior. Of these, educational attainment is thought to be particularly influential (Strecher & Rosenstock, 1997).

Self-efficacy, cues to action, modifiers, perceived threat, perceived barriers, and perceived benefits all influence whether parents will decide to participate in the health education of their children. By identifying specific components of each of these constructs, understanding of individual choice to engage in behaviors can be greatly enhanced.

This theory has been used with relative frequency in the health education and health promotion field. It has also been used with relative success within the context of school health, adolescent health behaviors, or both (Bush & Iannotti, 1990; Eisen & Zellman, 1986 ; Eisen, Zellman, & McAlister, 1992; Hahn et al., 1996; Petrosa & Jackson, 1991; Petrosa & Wessinger, 1990; Walter et al., 1993). More specifically, the HBM has been used to help explain parent involvement in both human sexuality programs for high school students (Brock & Beazley, 1995) and drug prevention programs for early-elementary students (Hahn et al., 1996). Because the HBM's constructs are few and focused, the theory is easily used to plan and design questionnaires and other needs-assessment instruments based on theory constructs.

Hahn et al. (1996) conducted focus groups with prekindergarten and kindergarten parents and school personnel to determine strategies to promote parent involvement in alcohol, tobacco, and other drug prevention programs for very young children. Researchers used HBM constructs (Rosenstock, 1991) to guide focus group development. Overall, 20 parents and 18 school personnel from two schools were involved. The primary concerns of parents and school personnel focused on the HBM construct of cues to action. The most influential cue expressed by children to their parents was enthusiasm for school activities. Additionally, trans-portation, child care, and incentives were identified as essential elements to parent involvement. Additional enablers to parent involvement in children's health education included positive attitudes of school personnel toward parents, a combination of communication strategies, and multiple opportunities or areas for involvement (Hahn et al., 1996).

Quantitative and Qualitative Methods

Information gathering is essential to understanding. There has been a great deal of debate concerning the validity of quantitative versus qualitative data. Although some experts rely solely on one method, most agree that both methods are useful if applied correctly (Slavin, 1992).

Quantitative information gathering involves collecting numerical data from groups or individuals and often involves statistically analyzing those data for relationships (Slavin, 1992). This mode of data collection involves posing hypotheses in the beginning and using data to prove or disprove the hypotheses. Quantitative techniques involve surveying, nominal group process, and vital records reviews--basically any data collection that categorizes information into numerical form. It is possible to also quantify qualitative information using different techniques.

Qualitative information gathering usually begins without a formal hypothesis and develops formal hypotheses over time, according to different situations (Slavin, 1992). Qualitative data collection techniques include observations, video taping or photographing, interviewing either personally or in groups such as focus groups, and personal documentation. It is important to remember that qualitative information can be quantified using different methods.

Focus group interviews are one type of qualitative procedure which can be stand-alone, used to expand upon quantitative findings, or used to inform quantitative instrument development. O'Brien (1993) described the use of 10 focus groups in Portland, Oregon, to inform the development of a quantitative questionnaire to assess the psychological health of gay men and women infected with HIV. O'Brien noted that

the findings from these focus groups helped inform the content of the questionnaire (e.g., phraseology and question applicability to the intended audience) and also helped construct new and more accurate hypotheses. He also pointed out how focus groups can also provide and understanding of how participants view given research.

Similarly, Goldman and Johnson (1996) conducted focus groups with military parents whose children attended Department of Defense Dependents Schools (DoDDS). The DoDDS is an overseas school system run by the U.S. Department of Defense in an effort to provide quality kindergarten through grade 12 education for children of active military worldwide. Parent focus groups and school principal and advisory council reviews were conducted to ensure that the 35-item questionnaire to evaluate the effectiveness of the DoDDS was easy to understand and pertinent to parents. The evaluation project was known as the Report Card From DoDDS Parents Survey and was distributed to parents of over 85,000 school children worldwide.

Summary of Literature

As can be seen by the information presented above, school health in the United States is still in need of much improvement (U.S. Department of Health and Human Services/U.S. Public Health Service [DHHS], 1991). The state of adolescent and child health is such that youth are increasingly living in single-parent, low-income homes, with needs for better health care, improved nutrition, and safer living environments (Igoe, 1994).

National survey data show us that adolescent health needs to improve in the following six health risk areas: physical activity, tobacco use, alcohol and other drug use, sexual behaviors, nutrition, and violence and safety (CDC, 1996). Additionally, schools and school-aged children are in need of far more school nurses than currently exist (Burt et al., 1996; Vail, 1996). Finally, although health education is required in grades K-12 in most states, the inconsistencies of teacher preparation impede uniform and constructive implementation of health instruction across grade levels (Butler, 1993; National Action Plan for CSHE, 1993).

Parent involvement has long been known for its ability to improve student academic success in general education (Becher, 1984; Edwards, 1995; Goodson & Hess, 1975; Jencks, 1972; Scott-Jones, 1987; Slaughter & Epps, 1987; Stevenson & Baker, 1987). This involvement generally takes place on three levels: home-level involvement, school-level involvement, and policy level involvement (Ascher, 1988; Gordon, 1977, 1978). Parents tend to be involved with schools to greatest extents while children are young. Involvement then decreases as children age (Dauber & Epstein, 1993; Snow et al., 1991). In general school settings, parents are most likely to be involved if the following barriers are minimized: traditional hierarchical parental models (Comer & Haynes, 1991; Cooper & Jackson, 1989); language (Cooper & Jackson, 1989); a lack of understanding on the school's part of families' cultures, strengths, and goals (Edwards, 1995); perceived alienation perpetuated by school personnel (Thompson, 1991); mistrust (Edwards & Young, 1992); social class

(Slaughter &Epps, 1987); parent educational level (Stevenson & Baker, 1987); lack of time (Leitch & Tangri, 1988); and limited training for parents on how to be involved with the school (Becker & Epstein, 1982).

School health education literature puts great emphasis on parent involvement just as the general education literature does (Allensworth, 1993; ALSDE, 1997a; JCNHES, 1995). Also, similar to the findings in general education, school health education demonstrates a drop-off in parent involvement as students age (Walter, 1989). The health risks that students engage in and are exposed to today are many (ALSDE, 1995b; CDC, 1996). CSHE is a progressive, age-appropriate, all-inclusive effort to improve the health of school children and to help stem these health risks (Kane, 1993; NPSHEO, 1984). The central aim of CSHE is to create a healthy or health-literate adult.

A current national and State of Alabama goal is to assure that every student is not only healthy, but also has the ability to make wise decisions that will positively affect his or her health (ALSDE, 1997a; JCNHES, 1995). One fundamental way to help achieve the goal of schools fostering the growth and development of health- literate students is through effective parent involvement, an issue that receives much attention in the opportunity to learn standards within the new Alabama Health Education Course of Study (ALSDE, 1997a). These standards actively place the focus of much of school health promotion on involving parents in the entire learning process.

Future Directions

Apparent limits to parent involvement. A review of the parental involvement literature reveals that the majority of parental involvement studies focus on early-elementary and elementary-aged children and their parents. A small number of studies focus on middle school parent involvement, and even fewer focus on parent involvement at the high school level. In a study of 2,317 elementary and middle school parents, Dauber and Epstein (1993) discovered that elementary school parents are more involved in the school than are middle school parents. Snow and colleagues (1991) discovered that the drop-off in parent involvement as students entered high school had a significant effect on student progress in the area of literacy. Dauber and Epstein found that greater parent participation in elementary school was most likely the result of elementary programs and teachers doing more to involve parents at school and at home. Parents are generally more easily reached when children are younger, and services offered to young children are traditionally less controversial than those offered to adolescents (Dryfoos, 1994). Researchers identified parent intimidation with the maze of high school staff, assistant principles, guidance counselors, and others to be the primary reason for avoiding contact with schools once their children left middle school (Snow et al., 1991). Other findings show that, regardless of student grade level and family background, parents are most likely to be participate in their children's education when parents perceive schools to have strong programs for involving them with homework and reading activities at both home and school (Dauber & Epstein, 1993). Of those parents who were involved in high schools, Fehrmann and colleagues

(1987) observed that involvement was highest among non-White families who were of higher SES background and that had female high school students rather than males.

The school-based health education literature shows that the majority of studies are also based on the elementary grades (Greenberg, 1977; Jackson, Bee-Gates, & Henriksen, 1994; Johnson et al., 1994; Landis & Janes, 1995; Nader et al., 1992; Perry, 1986; Perry et al., 1988; Perry et al., 1990; Walter, 1989; Werch et al., 1991). Although many researchers have stressed the importance of parent involvement through a child's educational career (Allensworth, 1993, 1994; ALSDE, 1997a; Epstein, 1990; Gordon, 1978; JCNHES, 1995; Killip et al., 1987), both the general and school health education literature illustrate that this is not a reality. Parent activity is greatest when children are youngest, and as children age, parent participation wanes (Dauber & Epstein, 1993; Snow et al., 1991; Walter, 1989). Additionally, interventions appear to be less frequent in the upper (middle and high school) grades.

Walter (1989) evaluated the 5-year and 6-year results of the "Know Your Body Program," which included a major parent involvement component. Results showed varied student and parent participation over time. Participation and interest were greatest in early and middle elementary years and declined as students entered junior high school. There was no explanation given for this phenomenon (Walter).

Gaps in the literature. School health-education literature strongly recommends that parent involvement should be a major part of any school health-education initiative (Allensworth, 1993, 1994; ALSDE, 1997a; JCNHES, 1995; Killip et al., 1987). This literature also points to the many likely benefits of parent involvement in school health

education (Dryfoos & Santelli, 1992; Greenberg, 1977; Hahn et al., 1996; Johnson et al., 1994; Nader et al., 1992; Perry, 1986; Perry et al., 1987; Perry et al., 1990; Vincent et al., 1987; Werch et al., 1991). Unfortunately, the literature has little to say in terms of identifying proven barriers and enablers to that parent involvement. English (1994) noted that there is a definite gap between the rhetoric of parent involvement and the actuality of its occurrence. The literature makes recommendations for including parents, but generally fails to identify factors that prevent or promote parent involvement as the general education literature does. These recommendations rather appear to be based on findings from general education, which may or may not generalize to health education. Because health education involves topics that are potentially controversial, parents may be more or less likely to be involved than they would with general education. Additionally, the area of health education may conjure up additional barriers and even additional enablers to parent involvement than does traditional education (Pollock, 1987; Welshimer & Harris, 1994). Health education literature is beginning to identify barriers to parent involvement. Murray and colleagues (1998) found that historically non-English-speaking parents found language to be a barrier to their participation with schools. Additionally, parents appear to prefer receiving information from the school in the form of newsletters, rather than through classes or meetings at the school (Crocket, Perry, & Pirie, 1989). Because of limited inquiry and findings in this area, research is needed to more thoroughly identify barriers and enablers to parent involvement, specific to school health education and promotion, rather than to simply assume that factors which are applicable to general education are also applicable to school health education and promotion.

Two published studies have addressed the need for parent involvement research in school health education. One study done with parents and teachers of early elementary children attempted to identify strategies for promoting parent involvement (Hahn et al., 1996). This study conducted focus groups with parent and teachers, constructing focus group questions based on HBM constructs. Findings from this study identify HBM cues to action as the primary identifiers of parental involvement. The study only involved 20 parents and 18 teachers and is, therefore, difficult to generalize to other audiences. Additionally, the study focuses only on parent of early elementary children, parents who are most likely to be involved (Dauber & Epstein, 1993; Snow et al., 1991; Walter, 1989). Brock and Beazley (1995) also used the HBM to construct a questionnaire to examine the participation of parents of ninth graders in an at-home sexuality education program in Nova Scotia, Canada. The study showed a weak overall correlation between HBM constructs and parents' actual participation in the program (21%). This study did test the utility of the HBM in predicting parent involvement; however, it did not test to see what parents perceived as barriers or enablers to their involvement.

Both of the above studies used the HBM to create questions to better understand parent involvement in school health education. The study that best exposes reasons for and barriers to parent involvement was done by Hahn and colleagues (1996). This study identified barriers and enablers or cues to parent involvement that were pertinent to a few (N = 20) early elementary parents in an alcohol, tobacco, and other drug prevention program; however, the limited internal validity of this study

strongly suggested a need for further study, especially relating to middle and high school parent involvement.

Future research building on Hahn and colleagues' (1996) findings should include a larger sample and should focus on capturing parents who do not generally participate in school health education and promotion efforts. More importantly, because parent involvement wanes as children age (Walter, 1989), more needs to be known about parent involvement in junior and senior high school. In this way, future school health interventions that involve parents will know specific barriers and enablers to avoid and include as components of their programs. The study by Brock and Beazley (1995) is encouraging because of its focus on high school-level parents; however, it failed to identify specific reasons that parents chose to be or not to be involved. It rather focused on the utility of the HBM to predict parent involvement.

Research that identifies specific barriers and enablers to parent involvement in health education has strong potential utility in pre- and inservice education programs for future and current health education teachers. Research indicates that teachers feel more comfortable and are more effective when they have more training (Boscarino & DiClemente, 1996; Cameron, 1991; Connell et al., 1985; Darling-Hammond, 1996; Gingis, 1992; MacGilchrist, 1996). Shartrand and colleagues (1997) suggested that "family involvement initiatives require schools of education to re-examine the skills and knowledge that teachers will need in order to work effectively in the schools of the future" (p. 1). If teachers are going to be expected to incorporate parents into their health lessons and elicit the involvement of parents in different activities, then teachers will require adequate and accurate training to do so. This training should come in the

form of both pre- and inservice training (Birch, 1994). Additionally, if teachers are to be trained in soliciting and promoting parent involvement for health promotion efforts, the training should also identify issues that are perceived as potential barriers and facilitators to parent involvement in school health education and promotion.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this study was to learn what middle school parents perceived as barriers and enablers to their participation in the health education of their middle school children. This chapter outlines the methodology used in the study. Qualitative focus group interviews and a quantitative mail-out survey with telephone follow-up were the research methods employed. Research questions are listed, as is a description of the study setting, population, and sample. Data collection instruments are described, and data collection and analysis procedures are discussed.

Research Questions

Two research questions guided this investigation into the barriers and enablers to middle school parent participation in school health education in Hoover, Alabama:

1. What do middle school parents perceive as enablers or facilitators of their involvement in school health education programs?

2. What do middle school parents perceive as barriers to their involvement in school health education programs?

Setting and Population

Hoover, Alabama, is a suburb of the state's largest city, Birmingham, and is located in Jefferson County in the north-central region of the state. The current population of Hoover is approximately 51,000 (Equifax National Decision Systems [Equifax], 1997). At the time of the 1990 census, the annual population growth rate was over 100; the median family income was $53,472. Current citywide ethnic population distribution is 95.2% White, 3.3% Black, and 1.5% other (Hoover City School System [HCSS], 1997a). Roughly 2% of the population have incomes below the federal poverty level; the unemployment rate is 2.5%. Of those families below the federal poverty level, 11.1% are headed by women with children under age 18. Additionally, about one quarter of students (26.5%) live in homes affected by divorce and separation or death of a parent (HCSS, 1997a). The top five employment areas in the city are insurance, telephone services, engineering services, education, and public utilities (Equifax, 1997).

The Hoover City School system is composed of 11 schools: 8 elementary, 2 middle, and 1 high school (Alabama State Department of Education [ALSDE], 1997b). The school system employs approximately 550 teachers to meet the needs of approximately 9,500 students (HCSS, 1997b). The annual drop-out rate is 2.5% (Equifax, 1997). Schools receive additional city funding from sales and use tax collections. Approximately 24% of two thirds of these local taxes go to the schools. Approximately 46% of Hoover school system parents hold a bachelor's degree or higher; an additional 24% completed some college education courses (HCSS, 1997a).

Simmons and Berry are the two middle schools in the Hoover City School System. Each house grades 6, 7, and 8. Ira F. Simmons Middle School (Site 1) houses grades 6, 7, and 8 (Table 2). During the 1997-1998 academic year, Simmons had a total student enrollment of 1,153, with students distributed evenly across the three grades and by gender (HCSS, 1997b). This enrollment number was down from 1,340 in 1995-1996, and 1,560 in 1994-1995. Approximately 11% of the student body in the 1997-1998 academic year were minorities, an increase from previous years. Roughly 8% of students were Black, 2.2% were of Asian descent, and 0.8% were Hispanic. Statistics show a growth in minority students from about 6% in 1992-1993, to about 11% in 1997-1998 (HCSS, 1997b). In 1996, Simmons students ranked at the 80th percentile or above on the Stanford Achievement Test in virtually every subject area and for every grade. Simmons Middle School is fed by four elementary schools: Bluff Park, Gwin, South Shades Crest, and Green Valley. Simmons employs 90 full-time faculty and administrative staff members, including three administrators, one counselor, and about 86 teachers. Health education, as at Berry Middle School, is only taught as a specific class for 4.5 weeks in grade six. In grades 7 and 8, health education responsibilities are shared between science, social studies, and physical education teachers, as well as counselors (HCSS, 1997b).

Berry Middle School (Site 2) had a total student enrollment of 1,032 students in the 1997-1998 academic year (Table 2). Students were fairly evenly distributed by grade level and by gender (HCSS, 1997a). Berry is fed by four elementary schools in the district: Greystone, Trace Crossings, Rocky Ridge, and Shades Mountain. Minorities represented 8.3% of the total school population in 1995-1996. They were

11.3% of the school population for academic year 1996-1997 and 12.2% in 1997-1998. The non-White school population has been increasing over the past 3 years.

Table 2

Middle School Information

	Berry Middle School			Simmons Middle School		
	1995-1996	1996-1997	1997-1998	1995-1996	1996-1997	1997-1998
Enrollment						
Grade 6	293	331	335	374	372	372
Grade 7	290	351	346	375	375	385
Grade 8	N/A	323	351	591	364	396
Total	583	1005	1032	1340	1111	1153
Ethnic composition						
Asian	2.0%	3.4%	3.5%	n/a	1.0%	2.2%
Black	5.4%	6.8%	7.1%	n/a	8.0%	7.9%
Hispanic	0.8%	1.8%	1.6%	n/a	0.5%	0.8%
American Indian	0.0%	0.0%	0.0%	n/a	0.5%	0.3%
White	91.7%	88.7%	87.8%	n/a	90.0%	88.8%
Minority student composition	8.3%	11.3%	12.2%	6.0%	10.0%	11.2%
Number of feeder schools	4	4	4	4	4	4
Full-time faculty and staff	N/A	81	81	N/A	91	90

The 1995-1996 attendance rate was 96.9%. Berry Middle School employs 81 full-time faculty and administrative staff members, including three administrators, two guidance counselors, and 67 classroom teachers, among others. Currently, health education is taught as a 4.5-week unit which is part of the physical education class in grade 6. For

grades 7 and 8, different aspects of health education are incorporated into other classes, inclu-ding science, Drug Awareness Resistance Education (D.A.R.E.), physical education, counseling services, and others (HCSS, 1997a).

Permission to conduct this study was received from both middle school principals and the school system superintendent (Appendix A).

Instrumentation

This case study was divided into two phases. Phase 1 involved focus groups and phone interviews conducted with parents from each intervention site. Phase 2 involved completion of a mail-out survey by a sample of parents from each site.

The Phase 1 focus groups were designed to glean specific information from middle school parents. Information collected from focus groups was used to develop the Phase 2 mail-out survey, which was sent to a sample of parents from each middle school. The focus group findings were used to ensure that questions asked in the mail-out survey were easily understandable and of interest to middle school parents in the Hoover City School System. The merits of using focus group data to inform questionnaire development have been discussed by O'Brien (1993) and Goldman and Johnson (1996).

Both focus group and mail-out survey questions were constructed using constructs from the HBM as previously demonstrated by Brock and Beazley (1995) and Hahn and colleagues (1996), as well as predisposing, enabling, and reinforcing constructs identified by Green & Kreuter (1991). The utility of these constructs were not tested in this study; however, they were used to inform questionnaire development.

Model constructs can facilitate the identification of elements of parent involvement that could otherwise be overlooked. The use of these two models in this research is supported by van Ryn and Heaney (1992), who suggested that theory can be used to guide research practice. These theories should be chosen based on previous, similar research.

The focus group questions in Phase 1 (Appendix B) were developed by the primary investigator, following review of the professional education literature. The focus group instrument consisted of three questions that directly related to primary constructs of the HBM (perceived susceptibility, perceived seriousness, perceived barriers, perceived benefits, cues to action, and self-efficacy). This question framework was based on research completed by Brock and Beazley (1995) and Hahn and colleagues (1996). Modifications to questions were based upon recommendations by members of the investigative team, along with those from Hoover middle school principals. Additional question modification involved reading comprehension and face validity. Panel members included the investigative team, school principals, health-team members from each school, and four experts in the health education field, none of which will be included in the focus group interviews (27 reviewers total). A list of the four health education experts can be seen in Appendix C. The structure of the focus group questions facilitated parent participation, in that opening questions asked about general experience with schools. A sheet containing 9 demographic questions was distributed and collected prior to the beginning of the focus group (Appendix D). This information provided more background on focus group participants.

Phase 2 consisted of a mail-out survey to a random sample of 500 parents. Survey questions (Appendix E) were developed according to the literature and study research questions. Survey modifications were based on focus group findings and a review of reading comprehension and face validity, conducted by the above-mentioned panel of experts. Middle school teachers with children in the Hoover City School System, as well as school principals and school health team teachers, were used to pilot-test the survey instrument. The final instrument consisted of 53 items. With the exception of three fill-in opinion questions, the entire instrument consisted of fixed-response options. Fixed response options included 5-point Likert-type questions, 2- and 3-item appropriate option check lists, and circling the appropriate response choice. Surveys were mailed out with a cover letter and a stamped, self-addressed envelope.

Timeline and Study Duration

The duration of this study was from December 1997 through approximately July 1998 (see Table 3). School system administrators were invited to participate in December 1997. Face-to-face meetings with school principals occurred during the first two weeks of January 1998. Upon committee and Institutional Review Board approval (Appendices F & G), focus group interviews commenced during the final 2 weeks of March. Focus group analyses occurred immediately following focus group interviews during the final two weeks of March. Pretesting of the survey instruments occurred the first 2 weeks of April, as did instrument modifications. Surveys were be mailed out during the first week in May, with a request for return within 7 days. If surveys were not received by the middle of the third week in May, those not returning surveys were

contacted by telephone. Surveys were then conducted via telephone during the final week of May and the first week of June. Data entry occurred simultaneously with survey return and continued until all survey data was entered. Data analysis occurred from mid-May through mid-June.

Table 3

Timeline

Task/Date	Dec 1997	Jan 1998	Feb 1998	Mar 1998	April 1998	May 1998	June 1998	July 1998
Initial school contacting	XX							
Face-to-face school meetings		XX						
Gain school commitment		XX						
IRB application			XX					
Dissertation proposal defense			XX					
Investigator & expert panel review of focus group questions		XX	XX	XX				
Recruit parents for focus groups		XX	XX	XX				
Conduct focus groups				XX				
Conduct phone interviews				XX				
Member checking				XX				
Focus group and phone interview analysis				XX				
Survey modification				XX	XX			
Survey pretesting					XX			
Surveys sent out						XX		
Surveys returned						XX	XX	
Telephone follow-up							XX	
Data entry						XX	XX	
Data analysis						XX	XX	XX
Final defense								XX

Subject Recruitment and Data Collection

Several school systems in the state of Alabama were approached to participate in this study. Of these, the Hoover City School System agreed to participate with its two middle schools (Berry Middle School and Simmons Middle School). With the aid of a Hoover City School counselor, the superintendent gave his permission for the study to proceed (Appendix A). The counselor then made initial contacts with middle school principals. Subsequent meetings between the principals and project investigators occurred, resulting in agreement to participate in the study (Appendix A).

Parents from these schools were selected as a convenience sample for the study. Originally, two inner-city school systems with more disadvantaged and minority students were contacted to participate in the study; neither system consented. The Hoover City School System was contacted because of three factors: increasing diversity both ethnically and sociodemographically, strong expressed interest in participating in the research project, and a high level of interest in encouraging parent involvement in the education of their children.

Phase 1. Existing parent groups were contacted from each school in an attempt to recruit 10 to 15 parents. Parents were asked to meet at their respective schools at a predetermined time and participate in a focus group interview lasting approximately 1 to 1.5 hr. Parents were asked to complete informed consent forms

(Appendix C). Informed consent also included being available to answer participants' questions before, during, and after the study. Focus group interviews were audio tape-recorded for later analysis along with written notes. Parents were assured of confidentiality. Parents were also informed that the focus group facilitator would be the only person to review the recordings. Additionally, any results would be shared only in group form, eliminating the possibility of tracing individual comments. Refreshments were provided for all participants.

Member checking was included in Phase 1 in an attempt to clarify themes identified through focus group interviews. Following focus group transcript coding, participants were mailed a brief summary of focus group findings. Participants were asked to respond to whether or not these findings (specific themes identified from focus group transcripts) were truly identified during the focus group interview. This process of member checking helped insure the trustworthiness of the data collected.

A third method employed during Phase 1 was to contact parents who were traditionally nonparticipants. Because of the inherent bias present in a sample of parents who choose to participate in an hour-long focus group (Green & Kreuter, 1991), phone interviews screened for parents who were not actively participating in their childrens' education. These phone interviews helped decrease the bias present in focus group interviews, by assuring that the voice of nonparticipants was also heard. The informed consent was read and agreed to by parents, over the telephone.

Phase 2. A random sample of 500 parents was selected from the two middle schools. Because students were evenly distributed across grade levels and the schools have similar populations, sampling was not weighted by grade level. In order to be 95% certain that parent responses would be generalizable to within ±5% of the total Hoover middle school parent population, a minimum of 250 responses were necessary. Assuming a minimum 50% response rate, a total of 500 parents was need to be sampled (Kalton, 1983).

Kalton (1983) noted that response rates for mail-out surveys varies between 10% and 90%, depending on the subject of the survey and follow-up methods used. Telephone survey response rates are typically around 70%. A review of 10 parent involvement surveys (5 mail-out with written follow-up, 5 telephone) revealed the following. Mail-out surveys with post card and re-mailed surveys averaged a 59.6% response rate, with responses ranging from 48% to 77% (Bright, 1996; Brock & Beazley, 1995; Epstein, 1986; Landis & Janes, 1995; Welshimer & Harris, 1994). The lowest response rate was partially explained by the survey having absolutely no link to the school, according to the authors (Welshimer & Harris). Telephone surveys averaged an 85.4% response rate, with responses ranging from 71% to 97% (Colwell, Forman, Ballard, & Smith, 1995; Perry et al., 1989; Perry et al., 1990; Torabi & Crowe, 1995; Weathersby et al., 1995). When telephone follow-up is combined with a mail-out survey, participation rates should be increased beyond

those of mail-out surveys with only post-card follow-ups, according to the literature. Accordingly, a 50% response rate should be a conservative estimate.

Notices were printed in the weekly school newsletters prior to mailing out surveys. These notices alerted parents to the possibility of receiving a survey and asked for their cooperation. Surveys were be mailed out to randomly selected parents with a request for them to return the surveys within 3 days following their receipt. Surveys were coded to maintain anonymity, yet still allow the principal investigator to contact nonrespondents. A cover letter informed parents of the confidentiality of their responses. The cover letter also notified parents of the telephone follow-up to nonresponding parents. Parents not returning surveys were contacted via telephone, and surveys were then conducted via telephone interview.

Data Analysis

Phase 1. Focus group data were collected via tape-recording and note-taking. Tape-recorded data were transcribed verbatim and coded according to theme along with written notes. Similar themes were noted and tallied. These themes were reviewed by participants through member checking. Results from phone interviews with traditionally non-involved parents were also tallied and examined along with focus group themes. Primary themes from both groups were shared with project investigators, school principals, and other personnel and were used to inform the further development of the Phase 2 survey instrument.

Phase 2. Level of parent activity in the health education of their middle school children (Question 8) was used as the dependant main effects variable. All other survey questions were examined for their relationship to Question 8.

Survey data were coded, sorted, and analyzed using the SPSS statistical analysis software package (Norusis, 1996). Initial descriptive statistics were calculated to determine the prevalence of parental responses. Chi square analysis was performed initially as an item analysis to assure that samples of parents from each middle school did not differ significantly. Chi square tests were also employed to determine association between survey variables and the dependant variable. The proportional reduction in error coefficient known as the uncertainty coefficient was used to determine significance and the nature of associations found in all chi square tests. Significance level was set at an alpha of 0.05.

Logistic regression was employed to clarify associations uncovered by chi square analysis, again using parent activity level with health education (Question 8) as the dependant variable. This procedure also allowed for substantiation of significant relationships, as the probability of Type I error increased because of the use of multiple chi square tests. With the significance level for testing associations set at an alpha of 0.05, the 95% confidence intervals were calculated to further clarify the degree of association between the dependent and independent variables. Reliability analysis was used to test barrier and enabler scales that were developed using barrier and enabler variables. Because of questions raised by logistic regression and reliability analyses, cluster and factor analyses were used to test for interactions between variables comprised by the barrier and enabler scales. Chi square analysis was used to further test

the association between the dependent variable and resulting clusters from the cluster analyses.

Chi square analysis is a common nonparametric measure of association designed to determine differences between observed and expected frequencies. This measure tests whether two factors are independent of each other. Chi square analysis is used for the analysis of dichotomous and polychotomous categorical variables. Chi square was an appropriate test of association for this study because all survey items were categorical in nature. Proportional reduction in error (PRE) coefficients were used to make the meaning of the associations more clear. One PRE term called the uncertainty coefficient was used for this purpose. This term is a measure of error used to predict the values of one variable based on knowledge of the variable by itself and the measure of error applied to the predictions based on knowledge of an additional variable (Norman & Streiner, 1986; Norusis, 1992).

Logistic regression was employed to assess the nature of the relationships between the dependent variable and the major study variables found to be statistically significant in the chi square analysis. It was also used to clarify relationships between the dependent variable and units identified in the cluster and factor analysis. This model has several advantages over other methods of analysis. Logistic regression can examine large numbers of variables while assessing numerous empty or small-numbered cells. It allows for the identification and evaluation of multiple independent variables. Additionally, this method allows for the examination of singular, dichotomous, categorical, dependent variables and categorical or continuous independent variables. Logistic regression assumes that samples are evenly distributed across levels. When samples are

not evenly distributed across levels, logistic regression may be compromised. Additionally, this analysis method assumes independence of variables and does not consider possible interactive effects (Norman & Streiner, 1986; Rice, 1994).

Cluster analysis was used to determine whether barrier and enabler variables could be grouped or classified in a meaningful way, thus giving more meaning to barrier and enabler scores. Partitioning cluster analysis (K-cluster) allows the scientist to designate an arbitrary number of clusters into which the program will assign individual variables. These designations are made based on a comparison of means of different variables (Norman & Streiner, 1986; Romesburg, 1990). Cluster analysis examines variables for interactions that may not be identified by logistic regression.

Factor analysis allows researchers to determine whether numerous variables can be better explained by a smaller number of factors. Factor analysis assumes that it may be possible to explain the relationships among two or more variables in terms of an underlying factor or factors (Norman & Streiner, 1986; Norusis, 1990). Thus, factor analysis was used to determine whether underlying factors helped to explain the relationships among and between barrier and enabler variables.

Reliability analysis tested the scales of related items. In the case of the barrier and enabler scales, it was important to test the strength of these scales. One of the most commonly used reliability measures is Cronbach's alpha. This measure is based on the internal consistency of a scale and measures the average correlation of items within the scale. The lower the alpha coefficient, the weaker the scale will be (Norusis, 1990).

Study Assumptions

The following were assumptions made with regard to this study:

1. Study participants did not willfully misrepresent their true self-reported behaviors.

2. The sample of study participants was representative of all middle school parents in the Hoover, AL school system.

3. The telephone interviewer and focus group facilitator did not intentionally mislead participants so as to elicit false responses.

Study Limitations

The following limitations were inherent in this study due to study design and other factors.

1. Results come from a sample of middle school parents and may not generalize to parents of high school or elementary school children within the same school district.

2. Data collected in this study may be biased because of the nature of data collection (self-report).

3. Because study participation was voluntary, data collected may not equally represent traditionally nonparticipating parents.

4. Data analysis may be limited because of an unusually large number of active parents.

CHAPTER 4

RESULTS

Introduction

Chapter 4 presents the results of Phase 1 and 2 of the data collection and analysis. Phase 1 qualitative focus group and phone interview results are presented first. Phase 2 quantitative survey results are presented second.

Phase 1

Focus groups. From Site 1, 13 families were invited to participate, from a group of parents present at a monthly PTA meeting. Of the 13, 8 expressed interest in participating. These individuals were reminded by phone of the impending meeting, and 4 actually participated in the focus group (30.8%). During telephone interviews with nonparticipating parents, one parent was contacted who was very actively involved with her child's education. This mother insisted on completing the focus group questions that were completed by focus group participants. For this reason, her comments have been included in the focus group results. All participants were White mothers.

A total of 33 families at Site 2 were identified to receive invitations to participate in a focus group on parent involvement in health education. Because letters were sent home via students, there was no way to determine whether parents received these

invitations, despite admonitions and reminders from the chorus teacher. Follow-up phone calls were made to all 33 households, reminding parents about the focus group. Phone messages were left for parents who were not reachable. Of the 33 families contacted, 8 parents, representing 7 families, were present at the focus group (21.1%). Six participants were mothers, and 2 participants were fathers. All were White.

The number of focus group participants from Sites 1 and 2 totaled 13, including 1 telephone participant (see Table 4). Children of participants ranged in age from 4 years to college aged. Parent professions included homemakers, publishers, and insurance sales, a school nurse, self-employed and a college professor. One participant did not comment on employment status. Family income ranged from $25,000 to over $100,000, with most incomes falling in the over $100,000 category. All but one participant was married. Eleven of the 13 participants were mothers of middle school children. All had at least a high school education, and most had at least some college education. Furthermore, all but 1 participant were current PTA members, and all PTA members had been to at least one PTA meeting in the past school year.

When parents were asked to describe how they had been involved in the health education of their children in the past, they listed 10 different ways (Table 5). The five most frequently noted ways were family discussion, reinforcing responsible health behaviors, previewing school materials, doing health-related homework with children, and personal example. When parents were asked what factors prevent them from being involved in their children's health education, they listed 16 different ways (Table 6). The five most frequently noted ways included time and schedule conflicts, not receiving notices sent home by the school, excessive efforts made by the school to contact

Table 4

Focus Group Demographic Information (n = 13)

Questions	Number of Responses	Number of nonresponses
What is your highest level of schooling?		0
High school	1	
Some college	3	
College	7	
Graduate (master's or doctoral)	2	
What is your age range?		0
30-39	4	
40-49	7	
Over 50	2	
What is your profession?		1
Homemaker	6	
Editor/Publisher	2	
Self-employed	1	
College professor	1	
School nurse	1	
Insurance sales	1	
What is your approximate total family income?		1
$25,000-$49,000	1	
$50,000-$74,000	2	
$75,000-$99,000	3	
Over $100,000	6	
What is your relationship to your child?		0
Mother	11	
Father	2	
Are you a single parent?		0
Yes	1	
No	12	
Are you or your spouse a current PTA member?		0
Yes	12	
No	1	

Table 5

Common Modes of Past Parent Involvement in Health Education (n = 3)

Issue:	Frequency:
Through family discussion	12
Reinforcing responsible health behaviors (i.e., dating, driving, diet)	8
Previewing school materials (i.e., AIDS & maturation videos)	7
Homework with kids (i.e., High-5 curriculum)	6
Through example (grocery shopping & exercise)	6
Signing off for kids to participate in AIDS/maturation activities	5
Encouraging extracurricular activities	4
Volunteer with school health fair	4
Attending school activities (i.e., DARE graduation)	2
Parent advocacy for human sexuality curriculum	1

Note. DARE= Drug Awareness Resistance Education

parents, lack of knowledge of opportunities to participate at school, and children not wanting parents to be involved at school. When asked what factors would help promote parent involvement in health education, participants listed 11 different factors (Table 7). The five most frequently cited factors were schools needing to make greater efforts to keep parents informed, making notices more personal or using phone messages, providing parents with health information to guide at-home health discussions, not requiring long time commitments, and conducting parent meetings dealing with multiple issues, in an effort to limit the total number of parent meetings.

Telephone interviews. The number of traditionally nonparticipating parents successfully contacted by phone was 8, 4 from each site (Table 8). Twenty-five families

Table 6

Barriers to Involvement in Health Education (n = 13)

Issue:	Frequency:
Parents just do not have the time/Scheduling conflicts, work	13
Do not receive notes sent home from school	12
Methods to involve parents are too impersonal or too numerous	12
Not aware of opportunities to be involved at school or school not interested	12
Kids do not want parents around at school	7
Parents think the school is already doing a good job	5
It is especially difficult for single-parent families	5
Parents may not know the answers to hard or sensitive questions	4
Some parents see health topics as personal or religious	4
Some parents do not care	4
Kids are embarrassed about some health topics	3
The curriculum does not usually involve parents	2
Parents don't know how well current health education efforts work	2
Parents don't enjoy homework assignments with kids	2
Teachers are not trained or comfortable involving parents	1
Some parents don't trust the school	1

Table 7

Enablers to parent involvement in health education? (n = 13)

Issue:	Frequency:
Schools need to make greater efforts to keep parents informed	8
Make notices more personal (i.e., phone messages or calls)	7
Provide parents with health info to guide health discussions with kids	6
Piggy-back other parent meetings to increase participation	4
Schools should use parent skills & experience to educate students (i.e., bring in insurance person to talk about drinking and driving)	3
Schools need to empathize with parents and reinforce what's taught at home	3
Meetings are poorly organized, planned, or scheduled	2
Schools should foster parent buy-in to health initiatives	1
Schools need to improve the trust of the parents	1
Schools should give parents specific guidelines on how to be involved	1

were randomly selected from each school and telephoned, totaling 50. Screening questions were used to determine which parents qualified as traditional nonparticipants. Five questions were designed to determine parental activity level; however, the question asking parents how active they thought they were was used to determine final activity level. Parents who responded to the not very active choice were considered non-active and received the survey. It was necessary to contact all 50 households to reach 4 active parents from each school.

The demographic profile for traditionally nonparticipating parents was much like that of focus group parents (Table 8). Most parents were current PTA-PTO members and were currently married. All had at least some college education, and most had combined family incomes over $75,000 per year. Additionally, most participants were mothers of middle school children, and half were homemakers or housewives.

When parents were asked how they had been involved in their children's health education in the past, they listed four major ways: family discussion, encouraging participation in extracurricular activities, assisting with health-related homework, and keeping current with health information (Table 9). When parents were asked what prevented them from being involved in their children's health education they listed 10 different ways (Table 10). The four most frequently cited ways were time, parents not being encouraged to be involved by the school, parent embarrassment with different health topics, and parents choosing not to be involved. When parents were asked what might help promote parent involvement in health education they listed 8 different ways (Table 11). The two most frequently cited ways were sending home health-related homework to be done with parents, and providing parents with more information about what their children were learning regarding health.

Table 8

Phone Follow-Up With Non-Participants (n = 8)

Question	Number of responses	Number of nonresponses
What is your highest level of schooling?		0
Some college	3	
College	5	
What is your age range?		0
30-39	4	
40-49	4	
What is your profession?		0
Homemaker	4	
Sales	1	
Accountant	1	
Occupational therapist	1	
Manager	1	
What is your approximate total family income?		1
$25,000-$49,000	1	
$50,000-$74,000	1	
$75,000-$99,000	3	
Over $100,000	2	
What is your relationship to your child?		0
Mother	6	
Father	2	
Are you a single parent?		0
Yes	1	
No	7	
Are you or your spouse a current PTA member?		0
Yes	6	
No	2	

Table 9

Common Modes of Involvement in Health Education (n = 8)

Issue:	Frequency:
Family discussion & answering questions	8
Encourage participation in extra curricular activities	3
Assist with health-related homework	3
Keep current with health-related information	1

Table 10

Barriers to Parent Involvement in Health Education (n = 8)

Issue:	Frequency:
Time	6
Parents are not encouraged to be involved-school not interested	2
Parents are embarrassed	2
Parents don't care or choose not to get involved	2
No health-related homework	1
Grades in other subject areas are more important	1
Parent's schedules are not considered when planning meetings	1
Parents assume that kids already know	1
Kids don't tell parents what's going on	1
Assume that kids will get it at school, that school is doing fine	1

Table 11

Enablers to Parent Involvement in Health Education (n = 8)

Issue:	Frequency:
Send home health-related homework to be done with parents	2
Parents want to know what's being taught about in health	2
Parents should be involved in HE curriculum selection	1
School should provide a newsletter to keep parents up to date (mail home)	1
Parents need child care so they can attend meetings at school	1
Parent meetings are poorly organized	1
Parents want to be offered a means of participation	1
Parents want to be asked to help with health education	1

Phase 2

Description of subjects. Five hundred families were randomly sampled from both sites. Because Site 1 had a greater student population, the sample was slightly larger from that site. Site 1 represented 55% of the sample (275), and Site 2 represented 45% of the sample (225). Of the 500 families sampled, 274 completed surveys, for a response rate of 54.8%. Sixty-four (23.4%) surveys were completed over the telephone, and 210 (76.6%) surveys were returned through the mail. Of those surveys returned, 53.3% were from Site 1 (Simmons Middle School), and 46.7% were from Site 2 (Berry Middle School; Table 12). Additionally, the breakdown of middle school

students was 22.5% sixth grade, 23.6% seventh grade, and 53.8% eighth grade. Originally, 142 parents returned surveys through the mail, within 1 week of the mailing. The remaining 358 parents were contacted by telephone. Telephone messages were left for those who were not reached directly. Families who were not reached and did not have answering machines were contacted at a later date. Over 400 telephone calls were made in an effort to boost survey return rates.

Table 12

Response rates

Category	Number of responses	% response
Total responses	274	
Responses by site		
Site 1	146	53.3
Site 2	128	46.7
Method of return		
Mail	210	76.6
Phone	64	23.4

The racial breakdown of participants showed 91.1% to be White, 6.3% Black, and 2.6% other (Table 13). About 7% of parents reported having only a high school diploma, 21.9% reported some college, 42.3% reported college degrees, and 28.8% graduate degrees. Seventeen percent of parents reported their annual family incomes falling below $50,000; 50.4% reported incomes between $50,000 and $100,000, and 32.6% reported family incomes over $100,000 annually. About 6% of participants did

not report income level. About 29% of parents reported their age to be below 40, and 71% of parents reported that they were over age 40. About 80% of respondents were mothers of middle school children, 17.9% were fathers, and 1.8% were step parents. The average number of children per family was about 2.5, with 61% having one or two children, 34% having 3 or 4 children, and 5% having five or more children. About 80% of parents reported having one child in middle school, 17.6% had two, and 1.8% had three children in middle school currently.

Justification for combined analysis. In order to justify analyzing both school samples together, a chi square test of association was performed to compare every variable by school. The uncertainty coefficient was used to test for significant association between variables and demonstrated association between school and five other variables. These associations represented 7.8% of all variables, slightly larger than the 5% expected association due to chance. A more detailed review of associated variables revealed that numerous cells in each chi square table were either empty or had fewer than 4 subjects. Both of these situations compromise the integrity of the chi square test of association. For this reason, it was assumed that the school samples did not significantly differ and could, therefore, be examined as one set.

School health and education topics of interest. For Question 4 (How important is it for your children to learn about the following subjects in school? language arts, foreign language, health education, math, physical education, science, and social studies), most parents responded that it was very important that their children learn

about the included topics. The exception was foreign language, where the majority of parents responded that it was a somewhat important subject (Table 14). The mean scores fell between 1.01 and 1.84, indicating that parents felt that each subject was important to very important. Response options received from 1 to 4 points, from very important to not very important, respectively. With the exception of mean score, numbers are reported as percentages.

For Question 5 (How important is it that your child learns about the following health topics? diet, exercise, drugs, tobacco, first aid and violence prevention, HIV/AIDS and pregnancy, and preventing and controlling disease), most parents reported that all topics were very important for middle school (Table 15). For question six (How important is it that parents talk with their children about the same health topics?), all parents also replied that it was very important to do so (Table 16). Response choices received a score from 1 to 4, from very important to not at all important, respectively. The lower the score, the more important the item. Mean scores for each item in each table were between very and somewhat important. With the exception of mean score, all numbers are reported as percentages.

Levels of parent involvement. Questions 7-13 identified levels of parent and family participation in school-related issues. Questions 7-10 asked each respondent about his or her own involvement with health and general education, as well as the degree to which survey participants' own parents were also involved in these areas in their education. Parents could respond not very active, active, and very active to these questions. These response choices were scored from 1 to 3, respectively. Most parents

Table 13

Demographic Information

Category	Number of responses	% Response	% Missing
Racial background			1.1
White	247	91.1	
African American	17	6.3	
Hispanic	1	0.4	
Asian	3	1.1	
Other	3	1.1	
Highest level of schooling			0
High school	19	6.9	
Some college	60	21.9	
College degree	116	42.3	
Graduate school	79	28.8	
Annual family income			5.8
Under $25,000	9	3.5	
$25,000-$49,000	35	13.6	
$50,000-$74,000	60	23.3	
$75,000-$99,000	70	27.1	
Over $100,000	84	30.7	
Parent age			0
30 to 39	78	28.5	
40 to 49	176	64.2	
50 or older	20	7.3	
Parent relation to child			0
Mother	220	80.3	
Father	49	17.9	
Step parent	4	1.8	
Total children			0
One	27	9.9	
Two	140	51.1	
Three	65	23.7	
Four	31	11.3	
Five	11	4.0	
Middle school children			0.4
One	220	80.6	
Two	48	17.6	
Three	5	1.8	

Table 14

Importance of School Subjects

Subject	Very important	Somewhat important	Don't know/ unsure	Not very important	Mean
a. Language arts	95.3	4.4	0	0.4	1.05
b. Foreign language	33.9	55.5	3.6	6.9	1.84
c. Health education	69.6	26.7	1.1	2.6	1.37
d. Math	98.9	1.1	0	0	1.01
e. Physical education	65.0	32.5	0.7	1.8	1.40
f. Science	95.6	3.6	0.7	0	1.05
g. Social studies	85.0	14.2	0.7	0	1.16

reported being either active or very active in the health education and general education of their children. Most parents reported that their own parents were active or not very active in their education in general and health education (Table 17). Low mean scores (closer to 1) represent lower levels of parent activity, whereas higher mean scores (closer to 3) represent higher levels of activity. With the exception of mean scores, all numbers are reported as percentages.

Questions 11-13 contained response choices of yes or no. These choices were given scores of 1 and 2, respectively. Question 11 dealt with marital status of the participant. Question 12 dealt with PTA-PTO participation, and question 13 dealt with the middle school child's extra curricular activity participation. The majority of parents

Table 15

Importance of School Health Topics

Subject	Very important	Somewhat important	Not very important	Not at all important	Mean
a. Diet and healthy eating	74.7	21.6	2.2	1.5	1.30
b. Exercise and physical activity	75.5	21.2	2.2	1.1	1.29
c. Preventing alcohol and drug use	86.8	11.7	1.1	0.4	1.15
d. Preventing tobacco use	85.4	12.0	1.5	1.1	1.18
e. First aid and violence prevention	77.2	18.8	2.2	1.8	1.29
f. Preventing HIV/AIDS and pregnancy	75.7	16.2	2.9	3.3	1.39
g. Preventing and controlling disease	74.0	20.5	3.3	1.8	1.34

reported being married, being involved with PTA-PTO, and having middle school children who participated in extra-curricular activities (Table 18). All numbers are reported as percentages.

Barriers to parent involvement--Research Question 1. Questions 14 to 29 allowed parents to identify issues that they saw as barriers to their involvement. Parents responded yes, no, and don't know/unsure to statements in this section. Question 28 was omitted from analysis. Because of question construction (two questions merged into one) respondents repeatedly commented on the difficulty associated with answering the question.

Table 16

Importance for Parents to Discuss Topics

Subject	Very important	Somewhat important	Not very important	Not at all important	Mean
a. Diet and healthy eating	86.4	12.5	0.7	0.4	1.15
b. Exercise and physical activity	80.6	17.9	1.5	0	1.21
c. Preventing alcohol and drug use	95.6	4.4	0	0	1.04
d. Preventing tobacco use	95.2	4.4	0.4	0	1.05
e. First aid and violence prevention	84.6	14.3	0.7	0.4	1.17
f. Preventing HIV/AIDS and pregnancy	93.0	6.2	0.4	0.4	1.08
g. Preventing and controlling disease	87.5	11.4	0.7	0.4	1.14

Table 17

Levels of parent activity (percentages)

Question	Not Very Active	Active	Very Active	Mean Score
7. Activity in children's general education	3.7	52.7	43.6	2.40
8. Activity in children's health education	11.7	47.3	41.0	2.29
9. Parents' activity in general education	41.2	44.5	14.3	1.73
10. Parents' activity in health education	57.0	34.2	8.8	1.52

Table 18

Parent Status (percentages)

Question	Yes	No
11. Are you a single parent?	12.1	87.9
12. Are you (or spouse) a current PTA/PTO member?	85.3	14.7
13. Is your middle school child/children involved in any extra curricular activities (inside or outside of school)	91.5	8.5

Parent responses differed by issue. Most parents identified the following as barriers: time constraints, few opportunities to volunteer at school in the area of health, not knowing about opportunities to participate in health education, and not being asked to participate in health education. Most parents noted that all other issues were not barriers. Most parents also agreed that health should be taught at school, they were willing to complete health-related homework with their children, their children were not embarrassed to discuss health topics with them, and they were comfortable discussing all health subjects with their children. It should also be noted that a significant number of parents were unsure of three issues: whether health was a priority at their child's school, whether the health curriculum allowed for parent involvement, and whether there were opportunities to volunteer at school in the area of health. A yes response indicates that the issue was seen as a barrier. See Table 19 for specific responses. All numbers are reported as percentages.

Question 29 allowed parents to write in other issues that they perceived as barriers to their involvement with the health education, particularly at school. Only 31 parents (11.3%) responded to this question. The primary barriers cited by parents were that sexuality education should only be taught by parents since teacher values differ from those taught in the home (11 parents) and that the school and home do not work together enough in the area of health education (11 parents).

Question 30 (a-c) asked parents to list the three most important barriers from Questions 14-29. Only 157 parents (57%) responded to all three questions, from which six barriers stand out as most important: lack of time (22.1%), not knowing about opportunities to participate in health education (14.7%), few opportunities to volunteer in the area of health (11.0%), the school does not ask parents to participate in health (10.5%), a perception that the school health curriculum does not allow for parent involvement (7.9%), and not regularly receiving notices sent home by the school (7.7%). More specific responses from Question 30 can be seen in Table 20.

Enablers to parent involvement--Research Question 2. Questions 31-43 listed potential enablers for parent involvement in health education. As in Questions 14-28, parents responded yes, no, and don't know/unsure to statements in this section. With the exception of Question 37 (providing child care for parents participating in meetings at school), the majority of parents labeled the issues listed in Questions 31-43 as enablers to involvement in their middle school children's health education (Table 21). There were low instances of don't know/unsure responses for all variables.

A yes response indicated that the issue was seen as an enabler. A no response indicated that the issue was not seen as an enabler.

Question 45 (a-c) identified the three most important enablers listed in Questions 31-43. The top five enablers to parent involvement in health education identified by Question 45 are informing parents about health topics taught at school (19.1%), printing a list of health topics to be covered during the term in a school newsletter (17.4%), sending home notices to be signed prior to different health units in order to keep parents better informed (15.8%), assigning children health-related homework to be done with parents (11.4%), and sending home written notices asking parents for help with specific health-related tasks (10.4%). A listing of the top 10 enablers to parent involvement in health education can be seen in Table 22.

Question 44 asked participants to write in additional barriers that they felt to be of importance in enabling them to participate in health education. Only 6 participants responded to this item (2.2% of the total respondents). Additionally, responses were split unevenly between three items. There were insufficient numbers to warrant reporting on these responses.

Chi square analysis. Using chi square analysis with uncertainty coefficients, significant associations between parent activity level with the health education of their children (dependent variable--Question 8) and all other variables were identified. Significant associations were found between parent activity level (Question 8) and 15 other variables, which can be seen in Table 23. Table 23 indicates both the strength of association and the percentage impact that the independent variable has on the dependent variable (Question 8). Significant association is indicated by $p \leq 0.05$.

Table 19

Barriers to Parent Involvement in Health Education (percentages)

Statement	Yes	No	Don't Know/ Unsure
Q14. Health is not a school priority.	16.5	76.0	7.5
Q15. Insufficient time for family, work, and volunteering.	57.6	42.4	0
Q16. Health curriculum does not allow for involvement.	39.6	41.6	18.8
Q17. Few opportunities at school to volunteer in health.	53.3	24.8	22.0
Q18. I do not usually receive school notices.	26.1	72.8	1.1
Q19. I do not know about opportunities to help with health.	76.0	22.5	1.5
Q20. I do not know what child learns about health at school.	37.0	62.2	0.7
Q21. The school does not ask me to participate with health.	86.4	10.9	2.6
Q22. My child is embarrassed by my presence at school.	34.0	64.6	1.5
Q23. My child is embarrassed to talk with me about some health topics.	39.3	70.0	0.7
Q24. I do not feel comfortable talking with child about some health topics.	7.4	92.6	0
Q25. I do not have sufficient information about health to answer child's questions.	41.5	56.3	2.2
Q26. Health is a topic that should not be taught at school.	4.5	95.5	0
Q27. I am not willing to complete health homework with child.	3.3	96.7	0

Table 20

Top 10 Barriers to Participating in Health Education (percentages)

Barrier	Response Frequency	% Response
Lack of time (Q15)	126	22.1
Unaware of opportunities to participate in health (Q19)	84	14.7
Few actual chances to volunteer in health education (Q17)	63	11.0
School does not ask parents to participate in health (Q21)	60	10.5
Health curriculum does not encourage involvement (Q16)	45	7.9
Seldom receive notices sent home from school (Q18)	44	7.7
Do not know what child learns about health (Q20)	30	5.3
Have insufficient information about health to answer child's questions (Q25)	28	4.9
Child is embarrassed by parent presence at school (Q22)	23	4.0
Other (a combination of the remaining 7 barriers)	68	11.9

Table 21

Enablers to Parent Involvement in Health Education (percentages)

Statement	Yes	No	Don't Know/Unsure
Q31. Informing parents about health topics taught at school.	95.2	3.0	1.8
Q32. Printing list of health topics to be covered during the term in a school newsletter.	95.9	3.0	1.1
Q33. Send written notice home to parents asking for help with specific health-related tasks.	92.6	7.0	0.4
Q34. Assigning health homework to children to be done with their parents.	84.9	13.7	1.5
Q35. Addressing multiple issues in parent meetings, so that parents do not have to attend meetings as often.	76.5	21.3	2.2
Q36. Scheduling parent meetings only in the evening.	61.1	38.1	0.8
Q37. Providing child care for parent during meetings at school.	36.9	61.9	1.2
Q38. Asking parents to serve on review committees for health curriculum.	77.2	20.9	1.9
Q39. Sending home notices to be signed by parents prior to beginning of health units, in order to keep parents informed.	94.8	4.8	0.4
Q40. Planning health units to reinforce what children learn about health at home.	87.5	11.3	1.1
Q41. Designing health curriculum to regularly involve parents in a meaningful way.	89.1	10.1	0.7
Q42. Asking for parent guest speakers for different health topics.	87.9	11.4	0.8
Q43. Getting to know and trust the teacher.	85.0	13.5	1.5

Table 22

Top 10 Enablers

Enablers	Response Frequency	% Response
Informing parents about health topics taught at school (Q31)	127	19.1
Printing list of health topics in school newsletter (Q32)	116	17.4
Sending home notices to be signed prior to health units in order to keep parents informed (Q39)	105	15.8
Assigning health-homework to be done with parents (Q34)	76	11.4
Asking parents to help with specific health-related tasks (Q33)	69	10.4
Designing health curriculum to regularly involve parents in a meaningful way (Q41)	36	5.4
Asking parents to serve on review committees for health education curriculum (Q38)	32	4.8
Scheduling parent meeting only in the evening (Q36)	27	4.0
Getting to know and trust the teacher (Q43)	25	3.7
Asking for parents to be guest speakers on different health topics (Q42)	21	3.1
Others (combination of remaining 4 barriers)	33	4.9

Logistic regression analysis. A more focused analysis was performed on the variables that tested significant in the chi square analysis. This logistic regression analysis was performed to clarify the types and natures of relationships found in the chi square analysis. Two additional created variables were added to the logistic regression analysis. These continuous independent variables gave each participant a barrier or an enabler score based on their responses to Questions r_14-r_27 and r_31-r_43, respectively (r_total and r_total2). The degree and nature of association between these independent variables was tested with the dichotomized dependent variable (Question 8, recoded r_8). Including the two added cumulative variables (r_total and r_total2), this analysis tested the effects of 17 independent variables on the dependent variable. Of these 17 variables, 7 proved to be significantly associated with the dependent variable.

The following variables were found to be positively associated with the dependent variable: perceived importance for parents to discuss exercise and physical activity with their children (Question 6b), perceived importance for parents to discuss first aid and violence prevention with their children (Question 6e), level of parent activity with child's general education (Q7), activity level of parents' parents in health education (Q10), knowledge of what children learn about health at school (r_20), and possession of information necessary to answer child's questions on health (r_25). As importance of parent-child discussions on exercise (Q6b) and first aid and violence prevention (Q6e) increased, the likelihood of parents being very activity in health

Table 23

Chi Square Test Results--Significant Associations Between the Dependent and Independent Variables

Question (independent variable)	% Impact	p-value
How important is it for your child to learn about diet and healthy eating in middle school? (Q5a)	4.3	.01307
How important is it for your child to learn about preventing HIV/AIDS and pregnancy in middle school? (Q5f)	3.9	.02933
How important is it for parents to talk regularly with children about exercise and physical activity? (Q6b)	7.0	.00035
How important is it for parents to talk regularly with children about first aid and violence prevention? (Q6e)	5.3	.03372
How important is it for parents to talk regularly with children about preventing and controlling disease? (Q6g)	6.5	.02126
How active are you in the education of your middle school child/children? (Q7)	23.0	.00000
How active were your parents in your education in general? (Q9)	2.3	.01262
How active were your parents in your health education? (Q10)	4.5	.00020
Is your middle school child involved in any extracurricular activities? (Q13)	4.1	.03844
Is health a priority at your child's school? (Q14)	2.6	.02039
I know what my child learns about health at school. (Q20)	2.9	.00547
The school ask me to participate in health education (Q21)	3.9	.02732
My child is not embarrassed to talk about some health topics with me. (Q23)	3.1	.00619
I feel comfortable discussing all health topics with my child. (Q24)	18.3	.00001
I have information to answer all of my child's health-related questions. (Q25)	3.3	.00209

education also increased. As parent activity level in general education (Q7) and grandparent's activity level in parent's health education increased (Q10), the likelihood of parent activity in child health education also increased. This increase was most dramatic with the general education variable (Q7).

The following variables were negatively associated with the dependent variable. Parents who did not know what their children were learning about health in school (r_20), and parents who did not have sufficient health information to answer their children's questions (r_25) were more likely to have parents who had not been very active in their health education. The variable that reflects barrier score (r_total) also proved to be inversely associated with the dependent variable. As parents identified more barriers to their involvement with health, the likelihood of their being very active in their child's health education decreased. The variable reflecting enabler score (r_total2) was not significantly associated with the dependent variable. More detail of these associations can be seen in Table 24. Limitations to the logistic regression analysis were evident in the inability of the model to accurately predict cases in the very low active category. For this reason, cluster analysis was employed to search for potential interactions that logistic regression may not have been able to identify.

Because the summated barrier variable (r_total) was positively associated with the dependent variable, further testing was done with the components of this variable to test the reliability of the strength of the summated barrier variable (r_total). Each of the 14 items thatcomposed r_total were tested using reliability analysis. Chronbach's alpha (alpha = 0.5931) was used to measure the degree of correlation between these 14 variables. This measure indicated that the reliability of the scale (r_total) was weak

Table 24

Logistic Regression: Significant Associations Between Dependent and Independent Variables

Variable	B	df	SE	Wald	Sig	R value	Exp (B)	95% confidence interval
Q6b	1.888	1	.4939	14.62	.0001	.2877	6.610	2.51 to 17.40
Q6e	.864	1	.4374	3.90	.0482	.1117	2.373	1.01 to 5.59
Q7	2.408	1	.4525	28.32	.0000	.4154	11.111	4.58 to 26.97
Q10	1.036	1	.3697	7.85	.0051	.1960	2.819	1.37 to 5.82
r_20	-1.127	1	.4238	7.06	.0078	-.1864	0.324	0.14 to 0.74
r_25	-.982	1	.4145	5.61	.0178	-.1555	0.374	0.17 to 0.84
r_total	-.227	1	.0936	5.89	.0152	-.1597	0.797	0.66 to 0.96

(Table 25). The reliability of the enabler score (r_total2) was also tested and proved to be stronger than that of the barrier score (alpha = 0.7531; Table 26).

Cluster analysis. Cluster analysis was performed on the same barrier and enabler variables comprising the r_total and r_total2 cumulative variables (r_14-r_43). This analysis was intended to determine whether individual items within the variable were in any way associated. Analysis was performed, creating two and three clusters with all barrier and enabler variables.

Within the two-cluster analysis, cluster centers (means) differentiated at least at the 0.5 level for two enabler variables. Questions 38 and 43 (asking parents to serve on review committees for health education curricula, and getting to know and trust the teachers more). Cluster mean scores could range from 0 to 1. The closer the mean score was to 1, the more likely parents were to see the variable as a enabler to their involvement. As the mean score approached 0, the variable was not seen as an enabler. A difference of 0.5 indicated that individual clusters differed by more than half.

Table 25

Reliability Analysis--Barriers

Variable	Scale mean if item deleted	Scale variance if item deleted	Corrected item-total correlation	Alpha if item deleted
r_14	5.4912	4.8910	.1584	.5895
r_15	5.1814	4.8514	.1332	.5978
r_16	5.1416	4.3888	.3709	.5449
r_17	4.9956	4.4666	.4022	.5415
r_18	5.4823	4.9086	.1453	.5922
r_19	4.9735	4.2926	.5307	.5166
r_20	5.3584	4.4265	.3521	.5493
r_21	4.8673	4.8001	.3396	.5608
r_22	5.4159	4.7062	.2249	.5773
r_23	5.4513	4.8265	.1757	.5869
r_24	5.6637	5.0597	.2017	.5815
r_25	5.2876	4.8102	.1505	.5943
r_26	5.6991	5.3846	-.0417	.6056
r_27	5.7124	5.2814	.0867	.5938

Results show that parents who saw serving on health curriculum review committees and getting to know and trust the teacher more as enablers to parent involvement fell into Cluster 1. Parents who did not see these opportunities as enablers to their involvement fell into Cluster 2. The cluster strengths of these two variables are

Table 26

Reliability Analysis--Enablers

Variable	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Alpha if item deleted
r_31	9.6708	4.8577	.4078	.7385
r_32	9.6625	4.8856	.4181	.7388
r_33	9.6833	4.8365	.3801	.7394
r_34	9.7625	4.5417	.4313	.7317
r_35	9.8542	4.5853	.3010	.7486
r_36	10.0042	4.5314	.2633	.7581
r_37	10.2542	4.6088	.2302	.7622
r_38	9.8500	4.3121	.4687	.7263
r_39	9.6750	4.7893	.4595	.7343
r_40	9.7500	4.5397	.4554	.7293
r_41	9.7333	4.5729	.4655	.7290
r_42	9.7292	4.6251	.4343	.7323
r_43	9.7708	4.4201	.5033	.7232

further substantiated by F scores of 105.99 and 176.52, respectively. Other variables which clustered above the 0.4 level included Questions 34, 40, and 41 (assigning children health homework to be done with parents, planning health education to reinforce what children learn about health at home, and designing a health curriculum to regularly involve parents). These variables were also enabler variables. Once again, parents who saw these opportunities as enablers fell into Cluster 1, and parents who did not see these items as enablers fell into Cluster 2. The F scores for these items were 85.10, 81.09, and 96.83, respectively. Chi square analysis performed on Clusters 1 and 2, using Question 8 as the dependent variable, did not show a significant association.

A similar cluster analysis was performed designating three clusters at the onset of the analysis. Cluster centers (means) differentiated at least the 0.5 level for four barrier variables. The first three variables addressed the issue of parent lack of knowledge about opportunities to participate in health education (Questions 16, 17, 19).

The fourth variable addressed perceived child embarrassment by parent participation at school (Question 22). Cluster mean scores had to potential of ranging from 0 to 1. The closer the mean score was to 1, the more likely parents were to see the variable as a barrier to their involvement. As the mean score approached 0, the variable was not seen as a barrier. A difference of 0.5 indicated that individual clusters differed by over half. Mean scores for these clusters have a minimum difference of 0.62.

Questions 16, 17, and 19 grouped with F scores of 55.54, 149.31, and 233.08, respectively. If parents responded that these variables were barriers, they were grouped in Clusters 1 and 3. If parents noted that these issues were not barriers to their involvement, they were classified in Cluster 2. These three variables represent knowledge of opportunities to participate in school health education efforts. If parents had knowledge of health-related opportunities, they were classified in cluster 2; if not, they were classified into Clusters 1 and 3. An additional variable that clustered above the 0.5 level was Question 22 (my child is embarrassed by my presence or participation at school). Question 22 had an F score of 51.61. Parents whose children were embarrassed were classified into Cluster 3, and parents whose children were not embarrassed were classified into Clusters 1 and 2. Although they clustered with mean differences below 0.5, Questions 15 and 23 also demonstrated large differences of 0.42 and 0.43, respectively. Question 15 addressed time limitations faced by parents, while question 23 addressed child embarrassment to talk with parents about health issues. Questions 22 and 23 were both related to child embarrassment. Parents who identified time constraints (Q15) as a barrier were classified in Cluster 3, whereas parents who did not see

time constraints as a barrier were classified into Cluster 1. The same was true of Question 23.

Chi square analysis performed on the three-cluster variable, using Question 8 as the dependent variable, did show a significant association (Table 27). The area of the chi square table that warrants examination is the bottom right cell (very active group in Cluster 3). This cell represents issues identified as barriers to participation in health education. Because Questions 16, 17, and 19 were virtually identical in their mean centers and their dispersion, the factor that likely had the greatest impact on the low frequency of actual cases in this cell was Question 22 (child embarrassment by the presence or participation of parents in the school).

The chi square analysis predicted 31.7 cases to fall in the last cell; however, only 18 cases actually occurred, for a standardized residual of -2.4. This standardized residual score is measured in standard deviation units and indicates that the actual cases (18) fell 2.4 standard deviation units below the predicted number. This is a significant shortfall. Upon examination of the actual cases in the high active column (column 3), the numbers for Clusters 1 and 2 remain high, whereas the cases in Cluster 3 decrease. The number of cases in the high active box for cluster one is significantly higher than expected by chance. This discrepancy can best be explained by the interaction of Question 22 (child embarrassment). Parents who saw child embarrassment as a barrier to their involvement were significantly less likely to be involved, whereas parents who did not see child embarrassment as a barrier were more likely to be active in their child's health education (Table 27).

Table 27

Cluster Chi Square Analysis

Cluster 2 (QCL_2) by Question 8 (Q8)

QCL_2	Q8 1	Q8 2	Q8 3	Row Total
1	9	30	49	88
	9.8	38.9	39.3	42.7%
	10.2%	34.1%	55.7%	
	39.1%	33.0%	53.3%	
	4.4%	14.6%	23.8%	
	-.8	-8.9	9.7	
	-.3	-1.4	1.5	
	-.4	-2.5	2.7	
2	3	19	25	47
	5.2	20.8	21.0	22.8%
	6.4%	40.4%	53.2%	
	13.0%	20.9%	27.2%	
	1.5%	9.2%	12.1%	
	-2.2	-1.8	4.0	
	-1.0	-.4	.9	
	-1.2	-.6	1.3	
3	11	42	18	71
	7.9	31.4	31.7	34.5%
	15.5%	59.2%	25.4%	
	47.8%	46.2%	19.6%	
	5.3%	20.4%	8.7%	
	3.1	10.6	-13.7	
	1.1	1.9	-2.4	
	1.4	3.1	-4.0	
Column Total	23 11.2%	91 44.2%	92 44.7%	206 100.0%

Chi Square	Value	DF	Significance
Pearson	17.09135	4	.00186
Likelihood Ratio	17.85677	4	.00132
Linear-by-Linear Association	10.55494	1	.00116

Number of Missing Observations: 68

Factor analysis. Following the cluster analysis, a factor analysis which rotated the factors (VARIMAX) was done using the 14 barrier items and also the 12 enabler items (26 total variables). This analysis revealed primary relationships among specific barriers and specific enablers within the 4 factors. There was no overlapping of barrier and enabler variables. Groupings took place only within these two variable categories and occurred only above the 0.4 level. Within Factor 1, five enabler variables (r_33, r_34, and r_39-r_41) were meaningfully associated. These variables focus on involving and informing parents with regard to school health education.

Within Factor 2, the following four barrier variables meaningfully grouped together: the school health curriculum does not allow for parent involvement (r_16), there are not many opportunities to volunteer in the area of health (r_17), I know about opportunities to participate in health (r_19), and the school asks me to participate in health education (r_21). Within Factor 3, the following five enabler variables meaning-fully grouped together: informing parents about health topics taught at school (r_31), printing a list of health topics in a school newsletter (r_31), addressing multiple issues in parent meetings (r_35), asking parents to serve on health curriculum review com-mittees (r_38), and getting to know and trust the teachers more (r_43). Within Factor 4, the following two variables grouped together in a meaningful way: my child is em-barrassed by my presence or participation at school (r_22), and my child is embarrassed to talk about health topics with me (r_23). These factors addressed knowledge of school activities, comfort with the school, ownership in school decisions, and child embarrassment.

Factor 1 included enabler variables that all addressed the school-home link, more specifically involving parents in the home. There was some commonality between enablers that factor analysis grouped together and enablers that cluster analysis grouped together. Factor 2 included barrier variables that addressed parent knowledge of opportunities to participate in school health education. This factor very closely resembles the results of the three-cluster analysis and shows that these barrier variables held together as a subset. Factor 3 included enabler variables which do not appear to group together in a meaningful way. Factor 4 includes two variables that both address child embarrassment. This variable also verifies the meaningful interaction identified in the three-cluster analysis. Meaningfully associated or grouped variables possessed a factor value of at least 0.4 (Table 28).

Factors 1-4 were saved and included in a logistic regression analysis with the standard dependent variable (r_8). Results of this analysis showed a significant negative association between factor 2 (r_16, r_17, r_19, r_21) and the dependant variable. This association shows that as parent knowledge of opportunities decreased, level of parent activity in health education decreased (Table 29).

Result Dissemination

A summary report and executive summary was distributed to principals at both school sites, the superintendent, and the Safe and Drug Free Schools coordinator. Additionally, brief study descriptions were forwarded to school principals to be included in a fall-term parent newsletter.

Table 28

Rotated Factor Analysis

Variable	Factor 1	Factor 2	Factor 3	Factor 4
r_14	-.07745	.24095	-.10692	-.11521
r_15	-.05917	.04136	-.27372	.08883
r_16	-.09223	.73403*	-.01008	.05808
r_17	.03483	.80497*	-.02266	-.07963
r_18	-.10077	.13399	.04706	.18261
r_19	-.00720	.81543*	.05130	.00465
r_20	.03883	.19060	-.00563	.19417
r_21	.07400	.68694*	-.04249	.05505
r_22	-.02506	-.00159	.00417	.82529*
r_23	-.06850	.00527	.05456	.79026*
r_24	-.10239	.18534	-.03254	.31680
r_25	.10251	.21702	.10127	-.01798
r_26	-.07568	-.00745	.04092	.02348
r_27	-.03525	-.03155	-.08091	-.06094
r_31	.13324	.00852	.67364*	.09718
r_32	.23026	.06910	.63118*	.13257
r_33	.65509*	.20431	.17326	.16649
r_34	.82184*	-.01172	.03072	.04725
r_35	-.04057	-.07088	.67944*	-.13892
r_36	.07790	-.06311	.24299	-.03048
r_37	.05266	-.21961	.21746	-.00190
r_38	.29420	-.09421	.44537*	-.00592
r_39	.67647*	-.00312	.20260	-.18387
r_40	.66597*	-.05285	.20445	-.13326
r_41	.72043*	-.06561	.13841	-.05225
r_42	.25953	-.03238	.33699	.04237
r_43	.28659	-.03275	.64672*	-.05455

Table 29

Logistic Analysis--Factor Variables

Variable	B	df	S.E.	Wald	Sig	R value	Exp (B)	95% confidence interval
Factor 1	-.0068	1	.2604	.000	.9791	.0000	.9932	.60 to 1.65
Factor 2	-.5407	1	.2549	4.497	.0339	-.1437	.5824	.35 to .96
Factor 3	-.3266	1	.2961	1.216	.2700	-.0000	.7214	.40 to 1.29
Factor 4	-.1407	1	.3289	.183	.6689	.0000	.8688	.46 to 1.65

CHAPTER 5

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

Introduction

This chapter contains an overview of the purpose of the study, the research questions, the study population, study methodology, instrumentation, and data analysis. Principal study findings are outlined and discussed, conclusions are drawn, and recommendations are made.

Purpose. The purpose of this study was to identify barriers and enablers to parent involvement in middle school health education. As the school involvement research data base increases in volume, more studies are done that identify parental involvement as an essential aspect of a child's education. This involvement has repeatedly been shown to improve academic achievement, social development, and positive health habits. Although much study in parent involvement has been done in general education, this same research is somewhat lacking in the area of health education. The positive effects of parent involvement on health education are being increasingly demonstrated, but little research has identified specific factors which either promote or inhibit parental involvement in health education. This study will contribute to this literature base by identifying these barriers and enablers.

Research questions The following research questions were developed to guide the study:

1. What do middle school parents perceive as enablers or facilitators of their involvement in school health education programs?

2. What do middle school parents perceive as barriers to their involvement in school health education programs?

Study population and methodology. The study population was made up of parents of middle school students from an upper-middle-class suburb, Hoover, of Birmingham, Alabama. Phase 1 of the study involved focus groups and phone interview with parents and phone interviews with parents who were traditionally not active in their children's education. These methods were designed to identify perceived barriers and enablers to parent involvement in school health education. Low parent turnout for focus groups (4 parents from Site 1, 8 parents from Site 2) may have been a result of several factors, including lack of importance placed on focus groups by parents, scheduling of parent meetings (morning at Site 1), and the season of the year (spring). The spring season is a time in which school activities are in full swing (baseball, track, band, etc.). Season of the year may have also accounted for lower than desired response rate. Also, telephone calls were made on a Wednesday evening, a night which is noted for church attendance in many southern homes.

Results from Phase 1 were transformed into the Phase 2 questionnaire, which was mailed to a random selection of 500 parents from both middle schools. Telephone follow-up was used to prompt parents to return surveys. The survey was conducted on

the phone with willing parents. Of the 500 eligible parents, 274 returned surveys (54.8% response rate). This response rate was adequate to maintain the integrity of the study and fell within standard response rates found by similarly designed studies. Factors that may have contributed to a lower than desired response rate were related to the season of the year (spring) and parents' rigorous schedules. Additionally, failure to see the survey as important may have influenced the lower response rate.

Phase 1 focus groups (one at each school) consisted of three primary questions and lasted approximately 1 hr. Telephone interviews consisted of five screening questions, followed by the same three questions used in the focus group, as well as demographic questions. Results of these inquiries were used to develop the 52-question survey instrument used in Phase 2. Content validity was assessed by expert panel review and pilot testing with a group of teacher who were also parents within the school system (27 panelists). These teacher-parent and focus group participants were excluded from the random sampling and, therefore, did not receive the mailed surveys.

Phase 1 data were transcribed, coded, and analyzed for simple frequency counts manually, with the use of tape recorder, word processor, and hand-held calculator. Phase 2 survey results were analyzed using SPSS software (Norusis, 1996). Descriptive statistics were reviewed for the entire survey instrument. Item analysis (using chi square testing with uncertainty coefficients) compared the two sites to confirm that no significant difference in responses by school existed and that a combined analysis was appropriate. Level of parent involvement in health education (Question 8) was selected as the most appropriate dependent variable. Chi square tests were used to determine associations between the dependent variable and all other variables. Logistic regression

was used to clarify associations found with chi square analysis. Further analysis was done using reliability analysis, cluster analysis, and factor analysis. These procedures were used to further determine interactions among barrier and enabler variables (Questions 14-27 and 31-43, respectively) and the utility of combined barrier and enabler variables (the sum of Questions 14-27 = r_total, and 31-43 = r_total2).

Discussion

Phase 1. Demographic characteristics for focus group and nonparticipating telephone follow-up participants were quite similar. Most participants from both groups were mothers, homemakers, married, current PTA members, held at least a college degree, and had family earnings over $50,000 per year. Given these characteristics, the population at hand appeared to be somewhat unique, being more active, having more mothers that stay at home, and having higher incomes than would be expected in an average school setting. This is somewhat to be expected given that the average income in the city of Hoover is over $50,000 per year (HCSS, 1997a).

Focus group results may also be inherently skewed because of response bias built into the structure of the qualitative method. Parents who were willing to participate in the focus groups are likely parents who are traditionally more active. Most low-active parents would not be willing to attend a parent meeting during the day or in the evening, for little or no compensation. Also, the literature indicates that parents who are more active in their children's education are generally of a higher SES status (Slaughter & Epps, 1987). Finally, the similar demographics of nonparticipating parents reached through telephone calls may be due in part to about 30% of calls being placed

during the day time (9 am-4 pm). Parents were are reached at home during this time were often stay-at-home moms whose husbands worked to support the family or parents who work at home.

Parents from both groups responded that the primary way that they had been involved in their children's health education in the past was through family discussion. Both groups of parents also cited encouraging participation in extra-curricular activities and assisting with health-related homework as ways of past involvement in children's' health education. Again, the similarities between traditionally active and nonactive parents' involvement in health education lends support to the idea that Hoover middle school parents were a highly active group in general.

Parents were asked to identify barriers to their involvement in school health education efforts. Both groups cited the following barriers in common: lack of time and scheduling conflicts, lack of knowledge of opportunities to be involved, the assumption that the school is already doing a fine job and does not need parental help, the view that health education is not important to the school curriculum, lack of interest or concern about health, lack of trust of the school and school personnel, and lack of a health curriculum that regularly involves parents. These commonalities suggest that both active and nonactive parents view many of the same issues as barriers to their involvement. Both groups also stressed that the schools have a primary responsibility to involve parents. The general education literature identifies many of these same issues as barriers to parent involvement: time (Comer & Haynes, 1991), trust (Edwards & Young, 1992), poor communication between school and home (Leitch & Tangri,

1988), alienation by teachers uncomfortable dealing with parents (Cooper & Jackson, 1989), and lack of parent buy-in for school health initiatives (Welshimer & Harris, 1994).

When asked about factors that might promote or enable parent involvement, both groups cited the following issues in common: a need to be kept better informed by the school, better scheduling and organization of parent meetings, better understanding of what kids are learning about health at home, soliciting parent involvement in the area of health, and creation of specific tasks for parents to be involved with, and health homework to be done with parents. Again, the following factors are cited by the literature as important enablers to parent involvement: better organized and time conscious parent meetings (Leitch & Tangri, 1988), identification of specific parent tasks needed (Becker & Epstein, 1982; Bright, 1996), acknowledgment of family and cultural health issues of importance (Edwards, 1995), improved school-parent communication (Hahn et al., 1991; Werch et al., 1991), facilitation of parent buy-in for school health initiatives (Welshimer & Harris, 1994), and health homework to be done with parents (Perry, 1986).

Active parents (focus groups) and nonactive parents (phone interviews) had many of the same experiences educating their children about health. They also identified many of the same barriers and enablers to their involvement in health education. This again, may be due, in part, to Hoover parents being an overall highly active group of parents. The homogeneity apparent from these qualitative data collection methods does lend itself to identification of barriers and enablers to parent involvement in health education that are pertinent to this particular parent population. Findings from these

qualitative methods are, however, limited in their validity because of the extremely small number of subjects sampled. For more valid conclusions, a larger sample is needed.

Phase 2. Given the length of the mail-out survey (52 items, 72 response opportunities), the season of the year (spring), the proximity to the end of school (May-June), and the limited resources of the study (only one follow-up phone call per household), a 55% response rate is about average (Brock & Beazley, 1995; Epstein; 1986; Kalton, 1983; Landis & Janes, 1995; Welshimer & Harris, 1994). This response rate allows for the assumption that parent responses are generalizable to the entire population of Hoover parents with 95% certainty (to $\pm$ 5%).

Differences in response rates by school most likely reflect the differences in the initial sample because the item analysis did not reveal significant differences in response to survey items, by school. Originally, Site 1 accounted for 55% of the sample, and Site 2 accounted for 45% of the sample. Response rates show a 53% response from Site 1 and a 47% response from Site 2. Although response rates for grades 6 and 7 parents were very close (22.5% and 23.6%, respectively), the response rate for grade 8 parents was significantly higher (53.8%). This trend does not follow the student breakdown by grade, which for each school is approximately one third of the student body in each grade. There is no apparent reason for this disparity in parent response by child grade.

The racial makeup of respondents followed quite closely with the racial distributions seen in each school. There were slightly more Whites and fewer ethnic minor-

ities represented in this sample that would be expected. This could be due, in part, to an assessment instrument that is English language based (Cooper & Jackson, 1989).

Given that the majority of parents had college and graduate degrees and incomes over $75,000 annually, parents in Hoover can likely be seen as differing from the average middle school parent. This premiss is further substantiated by the high instance of married parents (88%), high degree of parent participation in PTA and PTO groups (85%), and high instance of child participation in extra curricular activities (91%). Parents who responded to the survey were overwhelmingly female (mothers).

Parent placed the highest degree of importance on school subjects that are most often considered traditional: language arts, math, science, and social studies. Parents placed less importance on subjects that are sometimes considered not essential to school curriculums: foreign language, physical education, and health. Interestingly, foreign language was seen as least important of all the subjects.

Of the health topics that should be taught at school, parents rated the health topics that generally receive the greatest media attention as most important (alcohol, tobacco, other drugs, and violence prevention). With regard to health topics that parents should discuss with their children, preventing drug use and sexual activity (pregnancy and AIDS) were ranked as most important. Interestingly, preventing sexual activity ranked among the lowest in importance for school health topics. Anecdotally, this disparity may be due, in part, to the topics of HIV/AIDS and pregnancy being viewed with personal and often religious overtones, making the teaching of these topics more appropriate for parents than for schools.

Although the majority of parents identified their own parents' activity level in their education and health education as low, very few parents reported their own activity levels in health and general education to be low. Parents reported their parents' activity levels to be lowest in the area of health education in comparison with general education. Through telephone interviews, many parents noted that the differences between generations were a direct result of the changes in society in the last 30 to 40 years. Health issues, particularly revolving around sex education, were noted to be more taboo in the 1950s and 1960s than they are today, largely because of the influence of the media. Parents acknowledged that their greater involvement in their children's health education comes as a reaction to the media.

Barriers identified by parents were quite straightforward, with the exception of Questions 14, 16, and 17. These three issues (health is not a priority at my child's school, the health curriculum does not allow for parent involvement, and there are few opportunities to volunteer at school in the are of health) had a significant number of parents who responded in the don't know/unsure category, particularly with regard to the latter two issues. Parent response to these items indicates that some parents may not be receiving written and unwritten messages from the school about the importance of health. Additionally, many more parents are not aware of opportunities to participate at school in the area of health and are not aware of a parent involvement aspect in the health education curriculum. These issues are communication issues in which either parents are not taking the initiative to learn more about the schools agenda and focus on health or the schools are not making the efforts to inform parents about what is being taught and what type of help is needed at the schools in the area of health.

Regarding the most important barriers cited by parents who chose to answer Question 30, lack of time to participate was cited as the primary barrier faced by parents, an issue supported by the literature (Leitch & Tangri, 1988). The next several barriers of importance clump into the issue of parents not knowing about and not being asked to volunteer in the area of health education. Anecdotally, many parents commented that they would like to help out in the area of health, but they were very rarely asked to do so. Several parents also commented that they were asked to sign volunteer forms at parent meetings at the beginning of the school year, but were never contacted.

With the exception of Question 37, which dealt with providing child care at parent meetings, most parents cited all enablers as important. Many parents did comment that Question 37 did not pertain to them because they did not have very young children, but that this support function would likely benefit those with young children. Those who did have very young children were very much in support of child care at parent meetings. The enablers that received the strongest support were those that dealt with school-parent communication (Questions 31-33, 39, & 41). Parents were overwhelmingly in favor of any means of keeping them better informed about what their children were learning about health at school, as well as being asked to be involved with the design of health education curricula. These enablers support existing previous research studies (Ascher, 1988; Rich, 1985). Corresponding with Question 27 of the barrier section, a large majority of parents cited a willingness to participate in health education homework with their children, another finding substantiated by the research literature (Perry, 1986).

When parents were asked to list the most important enablers to their involvement in health education (Question 45), they identified issues that would increase school-parent communication about health education. They were also in favor of participating in health-related homework with children. Finally, in concert with existing research (Becker & Epstein, 1982; Bright, 1996), parents noted the importance of being given specific volunteer opportunities related to health. These primary enablers accounted for almost 75% of response to Question 45. Anecdotally, parents commented that they had very little idea of what the school was teaching about health. They ex-pressed strong desire to be kept informed about current health topic being taught so that they could initiate discussions with their own children, concurrently with those occurring in the classroom. Parents also noted how health-related homework, to be done with parents, could again help facilitate parent-child discussions on important health topics. Parents viewed school efforts to keep them informed about current school health topics as displays of support by the school, for the tremendous responsibilities parents must face while raising children in the current generation.

Questions 6b and 6e (importance for parents to speak with their children about physical activity, and first aid and violence prevention) were significantly related to the dependant variable in both the chi square and the more precise logistic regression analysis. Results showed that when parents viewed as important talking regularly with their children about the topics of physical activity, and first aid and violence prevention, they were more likely to be highly active in their children's health education. Interestingly parental comments regarding these two questions, noted that the issues of physical activity and first aid and violence prevention were not as important as issues

surrounding sex and drug use. Parents responded overwhelmingly in favor of parent communication about drugs and sexuality. These topic areas routinely receive wide media coverage. These are also areas that are often more difficult to discuss with children, as they address sensitive issues. Physical activity and first aid, and even violence prevention may be seen as more straightforward issues to parents and, therefore, may be easier to discuss.

The high degree of positive association between parent involvement in general education and parent involvement in health education ($p = .0000$) should be noted. This finding suggests that parents who are very active in their children's education in general will likely also be very active in their children's health education.

Of note, parent activity level in their children's health education directly correlated with their parent's involvement in their health education as they were growing up. This finding suggests a possible predisposing factor for parent involvement in health education.

As parents noted their lack of knowledge of what their children were learning about health at school (Question 20), activity level in their children's health education decreased significantly. Additionally, as parents admitted to having insufficient information to appropriately answer their child's health questions (Question 25), their activity in their child's health education also decreased. Both of these variables were negatively associated with parent activity level in health education. It cannot be determined from these data, however, whether low activity caused the insufficient health information to adequately answer questions and the lack of knowledge of what

the child learned about health at school or whether low parent activity was the result of the two previous conditions.

Although the barrier scale (r_total) was significantly associated with the dependent variable in logistic regression, it did not prove viable in the reliability analysis. Conversely, the enabler scale (r_total2) was not significantly associated with the dependent variable in the logistic regression test, but it did prove viable in the reliability analysis. Further examination of the components of these two scales did show a significant interaction of barrier variables and enabler variables in the cluster analysis.

From this analysis and subsequent clarification through chi square analysis, it was learned that variables addressing parent lack of knowledge of opportunities to participate in health activities at the school, were viewed as major barriers to parent involvement. Interestingly, even when parents noted that they did not know of opportunities to participate in health education at the school, they remained active in their children's health education. In essence, acknowledging their lack of knowledge about health education opportunities as a barrier had no impact on their actual involvement. This effect may be unique to the study population, as Hoover city school parents are well known for their involvement in the schools. The confounder to this trend is child embarrassment by the presence of parents at school (Question 22). Although the identified barriers to parent involvement were present (Questions 16, 17, and 19), parent involvement did not drop off. It was not until the aspect of child embarrassement was added to the equation that parent involvement did decline significantly. Parents in this sample seemed to be less likely to participate in their child's health education when they perceived that it might embarrass their child. Other

potential issues that may also affect parent activity level are child embarrassment about talking with parents about health topics (Question 23) and parent time constraints (Question 15).

Enabler scores did not seem to have a significant impact on parent activity level in health education, most likely because this population of parents was already enabled. Most parents demonstrated through several questions that they were already active or very active in their children's' education.

This study used chi square and logistic regression analyses to search for significant relationships between the dependent variable and other study variables. The decision to dichotomize the dependent variable and use only extreme responses (not very active and very active) was made in order to increase the chances of finding significance. Although logistic regression did identify some significant relationships between the dependent variable and independent barriers and enablers, these relationships were limited. Because logistic regression assumes that variables have independent effects on each other, it does not consider that variables may interact with each other. Logistic regression, although appearing useful in this analysis, may have been limited in its ability to predict significant interaction between variables. In the case of logistic analysis, although significant associations were found, often the model failed to predict any cases in the not very active category. A potential failure to successfully identify significant associations may be due to one or more of the following factors:

1. There was really no effect. Results could have been due to type one error.

2. Measurement problems with the dependent variable. Because of the skewness of this variable (homogeneity of subjects), logistic regression may have been handicapped in its ability to accurately predict relationships.

3. Individual barriers may not independently affect parent involvement. These barriers may only impact parent involvement in concert with other barriers.

Because of the apparent nature of the data and the population, cluster and factor analysis, which have the ability to identify potential interactions, appear to have been the most useful in helping to explain relationships in the data.

Contribution to the Literature

This study identifies some barriers and enablers to parent involvement in health education that have previously been identified, reinforcing the existing literature base. Previously identified barriers that this study also identified are limited time (Edwards & Young, 1992; Leitch & Tangri, 1988; Rich, 1985), lack of knowledge of opportunities to participate and volunteer (Giannetti & Sagarese, 1998; Hahn et al., 1996; Solomon, 1991), lack of specific tasks created by the school for parents (Becker & Epstein, 1982; Bright, 1996; Giannetti & Sagarese, 1998), poor school-to-home communication (Solomon, 1991), and lack of information on what children are learning about health at school (Kellaghan et al, 1993). Previously identified enablers to parent involvement also identified in by this study are improved school to home communication (Hahn et al., 1996; Solomon, 1991; Werch et al., 1991), need for health homework designed to be completed with parents (Finn, 1998; Perry, 1986; Perry et al., 1990), improved trust

of teachers and the school (Edwards & Young, 1992), and a desire to be involved in health curriculum selection and development (Welshimer & Harris, 1994).

Prior to this study, both general education and health education literature examined, primarily, the independent impact of barriers and enablers on parent involvement. This study appears to be unique because it examined the interactive effects of multiple barriers and enablers on parent involvement in health education.

Conclusions

Conclusions are generalizable only to the study population.

1. The use of focus groups to inform questionnaire development appeared to be a viable option for creating a survey that addressed pertinent parent issues and at the same time asked questions in a way that most parents could understand them.

2. Based on sociodemographic findings and extrapolation from frequency counts of the dependent variable, the parent population from Hoover middle schools is unusually well educated, of a higher than usual income level, racially skewed (over 91% White and under 9% ethnic minority), and unusually active in their children's education. This is not a typical middle school population.

3. This study design, which searched for both independent and interactive relationships among and between study variables, was successful in identifying pertinent enablers and barriers to parent involvement in health education, among this middle school parent population.

4. Although most families in the sample consisted of both parents living in the same home, mothers were significantly more likely to respond to the survey than were fathers.

5. The primary barriers to parent involvement in health education related to a lack of awareness of opportunities to participate in school health education efforts. However, the variable which, when combined with these primary barriers, had the greatest impact on parent activity level in health education, was perceived child embarrassment at the presence or participation of parents in the school.

6. Parents identified the following factors as barriers to involvement in their children's health education: lack of time, unaware of opportunities to participate in health, parent involvement in health education not solicited by the school, the health curriculum does not encourage parent involvement, failure to receive notices sent home by the school, lack of knowledge of what children learn about health at school, insufficient information about health to answer child's questions, and child embarrassment by parent presence at school.

7. Parents identified the following factors as enablers to involvement in their children's health education: improved methods of informing parents about health topics taught at school, health homework designed to involve parents, solicitation of parent involvement for health education, designing of a health curriculum which would regularly involve parents, asking parents to sit on review committees for health education curricula, additional opportunities to get to know and trust teachers, requesting parents to act as guest speakers for specified health topics, and scheduling parent meetings only in the evening.

8. Parent activity level in their child's general education was positively associated with parent activity level in health education. Parents who were very active in their child's general education were also very active in his or her health education.

9. Grandparent participation in parent's health education was positively associated with parent participation in children's health education. Grandparent participation in parent's health education appears to be a predictor of parent participation in children's health education.

10. Although significant relationships were found between the dependent variable and multiple independent variables while using logistic regression analysis, predictions drawn from this analysis should be done so with some degree of caution. Because logistic regression assumes an equal distribution of cases among the dependent variable and cases for the dependent variable at issue were unequally distributed (drastically skewed toward the high active end), the predictive ability of the logistical regression tests may have been compromised. Stated differently, significance resulting from logistic regression analysis may be a function of sample size, which would result in a reduction in power. Additionally, logistic regression looks only for independent relationships between variables. When interactive relationships exist, logistic regression may report them only partially, or not at all.

11. The use of layers of statistical analysis to locate significant relationships when overt efforts prove ineffective is a viable solution. In the case of this study, standard methods for identifying independent associations in the data were somewhat ineffective (chi square and logistic regression analysis). For this reason, a method of analysis was used that could reveal interactions between variables was employed. This

proved successful, as a number of variables had compounding effects on each other. These relationships would not have been realized without employing alternative statistical methods.

Recommendations for Future Research

This section is divided into recommendations for program evaluators or practitioners and recommendations for empirical researchers.

Recommendations for program evaluators. Based upon the findings of this study, the following recommendations are made to guide evaluators of school health education programs.

1. Future research using this survey should broaden the definition of parent activity in health education. A single multiple response question appears to be inadequate to appropriately measure this effect. Multiple questions that are less subjective in nature should be used to create a scale for parent activity level and should incorporate or delineate between activity level inside and outside of school.

2. Future research should identify school populations that are more socio-demographically diverse. In this way, conclusions will be more generalizable. Additionally, a more diverse population should create dependent variables that are more evenly distributed and more appropriately examined using logistic regression.

3. Future use of this survey or a modification thereof should be followed by a qualitative assessment. This qualitative assessment could be useful in clarifying issues raised as a result of the survey.

4. Future research efforts involving surveying the parents of school-aged children should be conducted earlier in the academic year in order to reduce the number of competing factors (e.g., spring sports, graduations, summer vacation planning, summer moving plans, etc.).

5. Future research should also budget more funds and time for follow-up efforts. This study follow-up was limited to basically one telephone follow-up call per household. If a parent was not reached and a message could not be left, no further contact was made. If multiple calls were made to each household until a parent was directly reached, the response rate would likely have been higher.

6. Statistical analysis methods that have the ability to identify interactions between variables should be considered when examining barriers and enablers to parent involvement.

7. Future research on parent involvement should examine in greater detail the impact of parent gender on parent involvement.

Recommendations for empirical researchers. Based on the findings of this study, the following recommendations are provided to assist empirical researchers in the development of school health education program and research initiatives.

1. The barrier of perceived child embarrassment because of parent participation or presence in the school should be examined further for its impact on parent involvement in school health education. This variable should also be further examined for its interaction with parents' lack of knowledge about opportunities to participate in school health activities.

2. The barriers of inadequate time for involvement and child embarrassment at discussing health issues with parents should be examined for their interaction with child embarrassment at the presence or participation of parents at school. These barriers should also be further examined for their combined effect on parent activity level in health education.

3. Future research using parent activity as a dependent variable should broaden the definition of parent activity in health education. A single multiple-response question appears to be inadequate to appropriately measure this effect. Multiple questions that are not so subjective in nature should be used to create a scale for parent activity level and should incorporate or delineate between activity level inside and outside of school.

4. Future research should consider interactions between barriers and enablers to parent involvement in health education, as these variables may not function independent of each other.

5. Future research should further examine the role of parent gender on participation in health education.

Recommendations for Practice

These recommendations apply to school systems, school administrators, and school health educators who desire to improve parent involvement in their health education programs.

1. Schools should strive to keep parents well informed about current health topics being covered at school

2. Health homework designed to involve parents should be developed and used to enhance the existing health curriculum.

3. Parent participation should be sought in the area of health education, while providing parents with specific tasks to perform.

4. Parent meetings should be succinct and well organized.

5. Parent guest speakers should be sought to address specific health topics covered in class. Special attention should be made in order to solicit parents who have sufficient expertise in each topic area.

6. Efforts should be made to inoculate parents against the perception that their presence and participation in the school embarrasses children. Parents should be encouraged to participate more by classroom teachers and school principals. Additionally, efforts should be made within the school to foster a classroom environment that is not hostile to parent involvement. Students should be worked with so that they will view parent participation as a positive experience rather than a negative one. Parent comments suggest that children are embarrassed by the presence of their own parents in the classroom, but not by the presence of their peers' parents. Perhaps more efforts should also be made to involve parents in the classroom who do not have children in the same classroom.

7. When sharing information with parents, schools should remember that not all information sent home through students will be received by parents. Alternatives that may improve parent receipt of notices may involve information sent home through the mail, information sent home attached to report cards, and information sent home with other notices requiring parent signatures.

8. Schools should reexamine methods of parent recruitment in order to maximize participation of fathers.

9. When involving parents, schools should remember that parents have limited amounts of time to spend on any one task.

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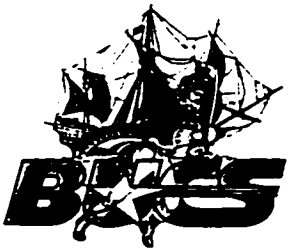
APPENDIX A

LETTERS OF SUPPORT



SIMMONS MIDDLE SCHOOL

Carol Barber
Principal
Marilyn T. Jones
8th Grade Unit Principal
Gene Godwin
7th Grade Unit Principal
Judy C. Sansom
6th Grade Unit Principal

January 30, 1998

Ms. Sheila Moore, Director
Institutional Review Board
1170 Administration Building
University of Alabama at Birmingham
Birmingham, AL 35294-0111

Dear Ms. Moore:

This letter is written in support of the application for a research grant entitled "A Study to Determine Middle School Parents' Perceptions of Barriers and Enablers to Participation in School Health Promotion and Education Activities" submitted by Mr. Scott D. Winnail, and Drs. David M. Macrina, Brian F. Geiger, Cynthia J. Petri, Steven Nagy, and Scott Snyder, investigators from the UAB School of Education. I believe there is a need for this study and that the potential findings could be beneficial to Ira F. Simmons Middle School teachers, parents, and students. Ira F. Simmons Middle School will support the efforts of this study by providing space for focus groups, contacting parents to participate in focus groups, and by providing necessary contact information in order to facilitate the dissemination of a mail-out parent survey. We strongly support the well-planned efforts by UAB faculty and staff to collaborate with local schools to facilitate greater understanding of key elements of parent involvement in their children's education.

We look forward to working with you in this new project.

Sincerely,

Carol Barber

Carol Barber
Principal

CB:rsm

1575 Patton Chapel Rd. • Hoover AL 35226
205/978-1590

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February 3, 1998

Ms. Sheila Moore, Director
Institutional Review Board
1170 Administration Building
University of Alabama at Birmingham
Birmingham, Alabama 35294-01211

Dear Ms. Moore:

This letter is written in support of the application for a research grant entitled "A Study to Determine Middle School Parents' Perceptions of Barriers and Enablers to Participation in School Health Promotion and Education Activities" submitted by Mrs. Scott D. Winnail, and Drs. David M. Macrina, Brian F. Geiger, Cynthia J. Petri, Steven Nagy, and Scott Snyder, investigators from the UAB School of Education.

Our principals feel there is a need for this study and that the potential findings could be beneficial to the schools. Mr. Scott D. Winnail may conduct research with the parents of the Hoover City School System as directed by each respective school principal. We acknowledge that information will be collected from parents through focus group interviews and a mail-out questionnaire. We do support well-planned efforts by UAB faculty and staff to collaborate with local schools to facilitate greater understanding of key elements of parent involvement in their children's education.

We look forward to working with you in this new project.

Yours truly,

Jack Farr, Ed.D.
Superintendent

Learning for Life

Berry Middle School
2826 COLUMBIANA ROAD
HOOVER, ALABAMA 35216
Phone: (205) 978-1550 • Fax: (205) 978-1517

Dr. Kathleen A. Wheaton
Principal

Ms. Sheila Moore
Director, Institutional Review Board
1170 Administration Building
University of Alabama at Birmingham
Birmingham, AL 35294-0111

January 20, 1998

Dear Ms. Moore:

This letter is written in support of the application for a research grant entitled "A Study to Determine Middle School Parents' Perceptions of Barriers and Enablers to Participation in School Health Promotion and Education Activities" submitted by Mr. Scott D. Winnail, and Drs. David M. Macrina, Brian F. Geiger, Cynthia J. Petri, Steven Nagy, and Scott Snyder, from the UAB School of Education. The potential findings could be beneficial to Berry Middle School teachers, parents, and students. Berry Middle School will support the efforts of this study by providing space for focus groups, by assisting in contacting parents to participate in focus groups, an by providing necessary contact information in order to facilitate the dissemination of a mail-out parent survey. We strongly support the well-planned efforts by UAB faculty and staff to collaborate with local schools to facilitate greater understanding of key elements of parent involvement in their children's education.

We look forward to working on this project.

Sincerely,

Kathleen Wheaton, Ed.D.
Principal, Berry Middle School

APPENDIX B

FOCUS GROUP QUESTIONS

FOCUS GROUP QUESTIONS

SCRIPT:

Many parents feel strongly about health topics taught in schools. Health education includes nutrition, HIV/AIDS and pregnancy prevention, exercise, preventing alcohol, tobacco, and other drug use and abuse, and injury prevention, just to name a few. Parent involvement is a concept that refers to your participation in your child's learning. You can be involved at home, as a volunteer with the school and school related groups, or in a formal way with the school (committees, boards, etc.).

This small group discussion will enable you to share your experiences and ideas about parent involvement in the health education of their children. Please comment whenever you like. Please also try to give some insight into why other parents choose to be or not to be involved in the health education of their children. You do not have to participate, but the information that you share today can be very helpful to Hoover City Schools administrators and classroom teachers. It will also be used to develop a questionnaire that will be sent to many more parents in the next month.

You will be tape recorded so that everything you say can be used. Your names will **not** be given out and I will be the only one who hears the tape recording. The comments you make today will not be identified by name. You can even refer to yourself by another name on the tape recording if you would like. Thank you very much for your time and participation. Are there any questions before we begin?

QUESTIONS:

PREDISPOSING FACTORS

1) **Describe how you have been involved with the health education of your children in the past? In- or outside of school.**

Probe: Do you know of ways other parents have been involved in their children's' health education.

ENABLING & REINFORCING FACTORS

2) **What factors prevent or inhibit parents from being involved in the health education of their children?**

Probe:
[ ]Intimidation by schools or teachers
[ ]Language
[ ]Schools/teachers don't understand child's home environment, morals, etc.
[ ]Mistrust of schools & teachers
[ ]Social class
[ ]Lack of time
[ ]Don't know how school wants you to become involved
[ ]Lack of transportation
[ ]Schools don't want parents involved

3) **What factors facilitate or promote parent involvement?**

Probe: **Should schools ...**
[ ]Clarify/spell out how parents can help?
[ ]Encouraging parents to be assertive?
[ ]Develop the trust of parents?
[ ]Build on a child's home experiences?
[ ]Tap into the expertise of parents?
[ ]Have homework assignments for student to work on with parents?

APPENDIX C

EXPERT PANEL PARTICIPANTS

Expert Panel Participants

Dr. Syble Brindley
Professor Emeritus - Montevallo University
Project Coordinator
The Gift of Life Foundation
882 Plantation Way
Montgomery, AL 36117

Dr. Melissa Galvin
Assistant Professor
Department of Health Behavior
School of Public Health
University of Alabama at Birmingham
Birmingham, AL 35294-0022

Ms. Linda Goodson, RN
Director, Center for Community Health Resource Development
School of Public Health
University of Alabama at Birmingham
Birmingham, AL 35294-0022

Ms. Ouida Myers
Health Curriculum Specialist
Alabama Department of Education
5348 Gordon Persons Building
P.O. Box 302101
Montgomery, AL 36130-2101

APPENDIX D

FOCUS GROUP DEMOGRAPHIC QUESTIONS

Please do NOT put your name on this form.

1) What grades are your children in this year?_____

2) What gender are your children?_____

3) What is your highest level of schooling? _____

4) What is your age range? Less than 30 30-39 40-49 50+

5) What is your profession?_____

6) What is your approximate total family income?
a. $25,000-$49,000 b. $50,000-$74,000
c. $75,000-$99,000 d. Over $100,000

7) Are you a member of PTA?

8) Roughly how many PTA meetings have you been to this year?_____

9) Is your middle child involved in extracurricular activities? Yes No

APPENDIX E

SURVEY INSTRUMENT

1998 Parent Involvement Survey

In an effort to improve educational opportunities for your child, the Hoover City Schools and UAB would like to ask you to please take 5 to 10 minutes to fill out the attached survey. We are interested in your knowledge and experience in working with the schools. We would like to know your level of involvement in your child's health education. Keep in mind that parent involvement includes being involved **at home**, as a **volunteer at school**, or by sitting on different **school committees**. Health instruction includes educating students about nutrition, pregnancy, HIV and AIDS prevention, drug use and abuse prevention, first aid, and other topics. Your answers to every question on this survey may help the school do a better job of educating your child about health. Your input is very important to us.

Please do not put your name on the survey. The information that you share is important to us, but we do not need to know who you are. Your answers will only be reported as part of a group. All surveys will be collected at UAB and your child's school will only receive group results.

Please complete this survey in the next one to two days and return it in the enclosed stamped envelope. We will be contacting everyone by phone in 7 to 10 days to see if the survey has been returned.

Thank you for contributing to a better education for your children!

If you have any questions about this survey, please call Scott Winnail at 975-6166, Dr. Brian Geiger at 934-8326, or your child's Principal.

PARENT SURVEY

Instructions: Please put a "check mark" in or fill in the box accordingly.

1. How many children do you have in middle school? [ ] one [ ] two [ ] three

Question	Child One	Child Two	Child Three
2. What grade is your middle school child in this year?			
3. What is the sex of your middle school child?			

Instructions: Circle one number for each item that best describes how you feel.

Example Question: How important is it that your child receive a good education?

Very Important	Somewhat Important	Don't Know/ Unsure	Not Very Important	Not at all Important
1	2	3	4	5

(If you feel that it is very important, circle "1")

4. How important is it for your child to learn about the following subjects in school?

	Very Important	Somewhat Important	Don't Know/ Unsure	Not Very Important	Not at all Important
a. Language Arts	1	2	3	4	5
b. Foreign Language	1	2	3	4	5
c. Health Education	1	2	3	4	5
d. Math	1	2	3	4	5
e. Physical Education	1	2	3	4	5
f. Science	1	2	3	4	5
g. Social Studies	1	2	3	4	5

5. How important is it that your child learns about the following health topics in middle school?

	Very Important	Somewhat Important	Not Very Important	Not at all Important	Don't Know/ Unsure
a. Diet and Healthy Eating	1	2	3	4	5
b. Exercise and Physical Activity	1	2	3	4	5
c. Preventing Alcohol and Drug Use	1	2	3	4	5
d. Preventing Tobacco Use	1	2	3	4	5
e. First Aid and Violence Prevention	1	2	3	4	5
f. Preventing HIV/ AIDS and Pregnancy	1	2	3	4	5
g. Preventing Disease	1	2	3	4	5

6. How important is it that **parents** talk regularly with their children about the following health topics?

	Very Important	Somewhat Important	Not Very Important	Not at all Important	Don't Know/ Unsure
a. Diet and Healthy Eating	1	2	3	4	5
b. Exercise and Physical Acitivity	1	2	3	4	5
c. Preventing Alcohol and Drug Use	1	2	3	4	5
d. Preventing Tobacco Use	1	2	3	4	5
e. First Aid and Violence Prevention	1	2	3	4	5
f. Preventing HIV/ AIDS and Pregnancy	1	2	3	4	5
g. Preventing Disease	1	2	3	4	5

Instructions: Check the box that best applies.

Questions	Not Very Active	Active	Very Active
7. How active are you in the education of your middle school child/children?			
8. How active are you in the **health education** of your middle school child/children?			
9. How active were your parents in your education in general?			
10. How active were your parents in your **health education**?			

Instructions: Place a checkmark in either the "YES" or "NO" box that best applies.

Question	YES	NO
11. Are you a single parent?		
12. Are you (or your spouse) currently a PTA or PTO member?		
13. Is your middle school child/children involved in any curricular activities (inside or outside of school)?		

Continue on next page...

Instructions: **Place a checkmark in either the "YES" or "NO" column to indicate whether each statement is true.**

Is this statement true?	YES	NO
14. Health is a priority at my child's school.		
15. I have enough time to balance work, family, and school volunteering.		
16. The school health curriculum does allow for parent involvement.		
17. There are many opportunities to volunteer at school in the area of health.		
18. I usually receive notices that are sent home from school.		
19. I know about opportunities to participate in health education.		
20. I know what my child learns about health at school.		
21. The school asks me to participate in health education.		
22. My child is not embarrassed by my presence or participation at school.		
23. My child is not embarrassed to talk about some health topics with me.		
24. I feel comfortable discussing all health topics with my child.		
25. I have all the information that I need about health topics to answer my child's questions.		
26. Health should only be taught at home or by the church. It is not a topic for school.		
27. I am willing to participate in health homework with my child.		
28. The school does a fine job with health education and does not need my help.		
29. Other (please write in)		

30. From the list above #14-#29, what are the 3 most significant factors that make it difficult for you to be involved in the health education of your child? (write in the numbers that apply from the list above)

a.#_____ b.#_____ c.#_____

Continue on next page...

Instructions: **Place a checkmark in either the "YES" or "NO" column to indicate whether each factor would make it EASIER for you to participate in the health education of your child.**

Factors making it EASIER for you to participate in health education.	YES	NO
31. Informing parents about health topics taught at school.		
32. Printing a list of health topics to be covered during the term (ahead of time) in a school newsletter.		
33. Sending a written notice home to parents asking for help with specific health-related tasks.		
34. Assigning children health-related homework to be completed with their parents.		
35. Addressing multiple issues in parent meetings, so that parents do not have to attend meetings as often.		
36. Scheduling parent meetings only in the evening.		
37. Providing child care for parents participating in meetings at school.		
38. Asking parents to serve on review committees for health education curriculum.		
39. Sending home notices to be signed prior to the beginning of different health units, in order to keep parents informed about current health topics.		
40. Planning health education to reinforce what children are learning about health at home.		
41. Designing health curriculum to regularly involve parents in a meaningful way.		
42. Asking for parental involvement, such as guest speakers for different health topics.		
43. Getting to know and trust the teacher.		
44. Other (please write in)		

45. From the list above #31-#44, what are the 3 most significant factors that would make it easier for you to participate in the health education of your child? (write in the numbers that apply from the list above)

a._____ b._____ c._____

Continue on next page...

Instructions: Place a checkmark in the appropriate box.

46. Check your racial/ethnic background?

[ ]White [ ]African American [ ]Hispanic [ ]Asian [ ]Other_____

47. Check your highest level of schooling?

[ ] Grade 11 or Less [ ] High School Diploma or Equivalent
[ ] Some College [ ] College Degree [ ] Graduate Degree

48. Check your approximate total annual family income:
[ ] under $25,000
[ ] $25,000-$49,000
[ ] $50,000-$74,000
[ ] $75,000-$99,000
[ ] over $100,000

49. What is your age?
[ ] under 30
[ ] 30 to 39
[ ] 40 to 49
[ ] 50 or older

50. What is your relation to your middle school child?
[ ] mother [ ] father [ ] step-parent
[ ] grandparent [ ] uncle or aunt [ ] foster parent or legal guardian

51. What is the total number of children in your family?
[ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 or more

52. Other

comments:_____

_____

_____

_____

_____

Thank you again for your help!

APPENDIX F

UAB INSTITUTIONAL REVIEW BOARD APPROVAL

UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

Office of the Institutional Review Board for Human Use

FORM 4: IDENTIFICATION AND CERTIFICATION OF RESEARCH PROJECTS INVOLVING HUMAN SUBJECTS

THE INSTITUTIONAL REVIEW BOARD (IRB) MUST COMPLETE THIS FORM FOR ALL APPLICATIONS FOR RESEARCH AND TRAINING GRANTS, PROGRAM PROJECT AND CENTER GRANTS, DEMONSTRATION GRANTS, FELLOWSHIPS, TRAINERSHIPS, AWARDS, AND OTHER PROPOSALS WHICH MIGHT INVOLVE THE USE OF HUMAN RESEARCH SUBJECTS INDEPENDENT OF SOURCE OF FUNDING.

THIS FORM DOES NOT APPLY TO APPLICATIONS FOR GRANTS LIMITED TO THE SUPPORT OF CONSTRUCTION, ALTERATIONS AND RENOVATIONS, OR RESEARCH RESOURCES.

PRINCIPAL INVESTIGATOR: Scott Winnail, MSPH, CHES

PROJECT TITLE: Barriers and Enablers to Parent Involvement in School Health Education

---

_____1. THIS IS A TRAINING GRANT. EACH RESEARCH PROJECT INVOLVING HUMAN SUBJECTS PROPOSED BY TRAINEES MUST BE REVIEWED SEPARATELY BY THE INSTITUTIONAL REVIEW BOARD (IRB).

__X__2. THIS APPLICATION INCLUDES RESEARCH INVOLVING HUMAN SUBJECTS. THE IRB HAS REVIEWED AND APPROVED THIS APPLICATION ON 03·10·98 IN ACCORDANCE WITH UAB'S ASSURANCE APPROVED BY THE UNITED STATES PUBLIC HEALTH SERVICE. THE PROJECT WILL BE SUBJECT TO ANNUAL CONTINUING REVIEW AS PROVIDED IN THAT ASSURANCE.

__X__ THIS PROJECT RECEIVED EXPEDITED REVIEW.

_____ THIS PROJECT RECEIVED FULL BOARD REVIEW.

_____3. THIS APPLICATION MAY INCLUDE RESEARCH INVOLVING HUMAN SUBJECTS. REVIEW IS PENDING BY THE IRB AS PROVIDED BY UAB'S ASSURANCE. COMPLETION OF REVIEW WILL BE CERTIFIED BY ISSUANCE OF ANOTHER FORM 4 AS SOON AS POSSIBLE.

_____4. EXEMPTION IS APPROVED BASED ON EXEMPTION CATEGORY NUMBER(S)_____.

DATE: 3/10/98

Marilyn Doss

MARILYN DOSS, M.A.
VICE CHAIR OF THE
INSTITUTIONAL REVIEW BOARD

The University of Alabama at Birmingham
1120A Administration Building • 701 South 20th Street
Birmingham, Alabama 35294-0111 • (205) 934-3789 • FAX (205) 975-5977

APPENDIX G

INFORMED CONSENT FORM

Parent Involvement Focus Group
INFORMED CONSENT

I understand that I am being asked to participate in a study conducted by the University of Alabama at Birmingham. This study is approved by the Hoover City Schools and is being coordinated by the School Principals and a guidance counselor. The purpose of the study is to find out why parents choose to participate or not to participate in their child's health education. If I decide to participate, I will be asked to answer questions along with a small group of other parents.

The group interview will last between one hour and 1.5 hours. My responses will be tape recorded, but there will be no information to identify me. Scott Winnail will have sole access to the recordings which will be kept in a locked desk when not being used by him.

I know that I will receive no immediate direct benefits for my participation. My child's future education and the training of teachers could benefit from the feelings and experiences that I share tonight.

I know that the information gathered tonight will be kept confidential. Any results that are reported will be group results. It will be impossible to identify my personal comments.

I realize that I can withdraw my consent to participate at any time. There will be no penalty for doing so.

I understand that my participation will cost me nothing and will not involve risk of harm. In addition, UAB will not provide benefits if any injury results from taking part in this study.

If I have further questions about the study, I can contact Scott Winnail (975-6166) or Dr. Brian Geiger (975-8326) at the University of Alabama at Birmingham. I can also contact my child's principal Mrs. Carol Barber at 439-2100, or Dr. Kathleen Wheaton at 439-2000 if I have questions regarding my rights as a participant.

My signature below indicates that I have decided to participate in this study. I have read (or been read) the information above and have a copy of this consent form.

X_____ _____
Participant's Signature Date

XX_____ _____
Signature of Witness Date

UAB-IRB
Consent Form Approved 03·10·98
Expiration Date 03·10·99

GRADUATE SCHOOL
UNIVERSITY OF ALABAMA AT BIRMINGHAM
DISSERTATION APPROVAL FORM
DOCTOR OF PHILOSOPHY

Name of Candidate Scott D. Winnail

Major Subject Health Education/Health Promotion

Title of Dissertation Determinants of Parent Involvement in Middle School Health Education: A Case Study

I certify that I have read this document and examined the student regarding its content. In my opinion, this dissertation conforms to acceptable standards of scholarly presentation and is adequate in scope and quality, and the attainments of this student are such that he may be recommended for the degree of Doctor of Philosophy.

Dissertation Committee:

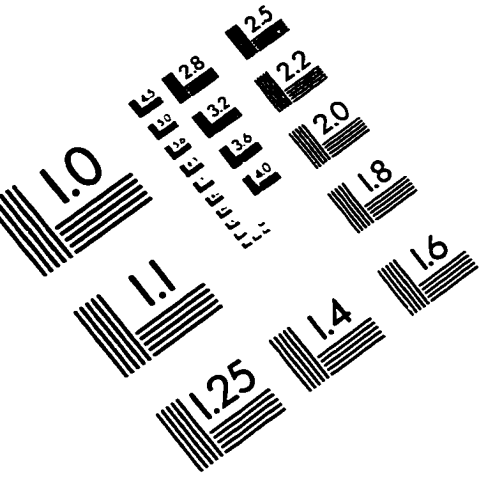
Name		Signature
Dr. David M. Macrina	**, Chair**	
Dr. Brian F. Geiger	**, Co-Chair**	
Dr. Stephen Nagy		
Dr. Cynthia J. Petri		
Dr.Scott Snyder		

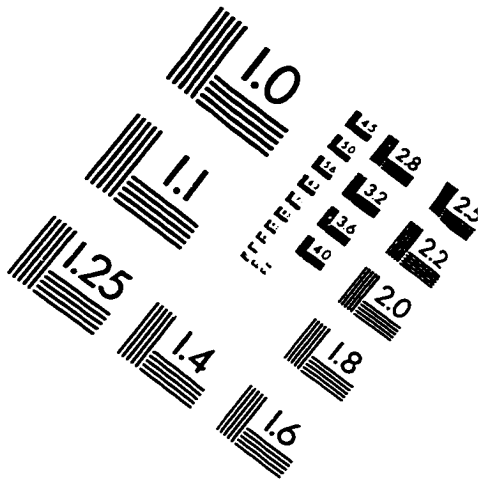
Director of Graduate Program

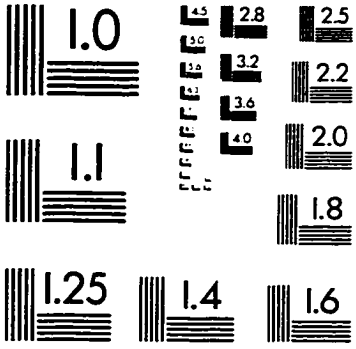
Dean, UAB Graduate School

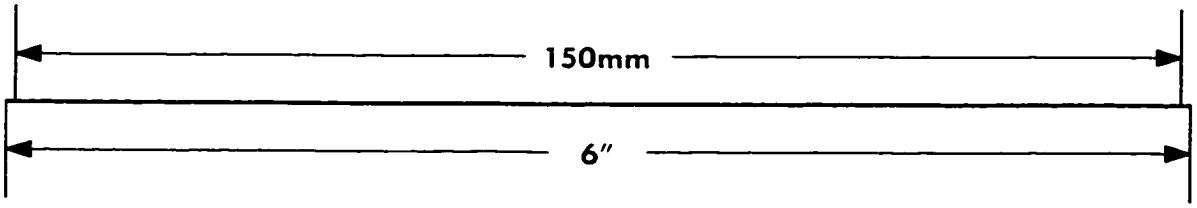
Date 9/25/98

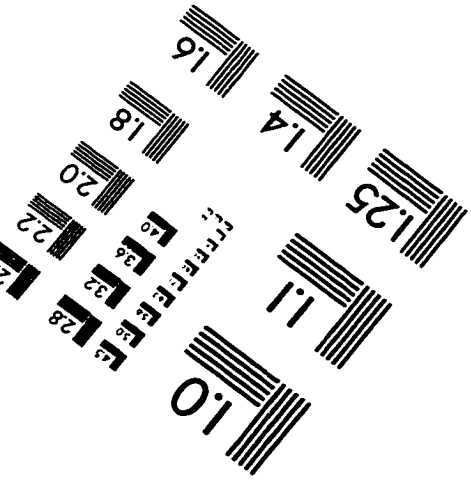
IMAGE EVALUATION TEST TARGET (QA-3)

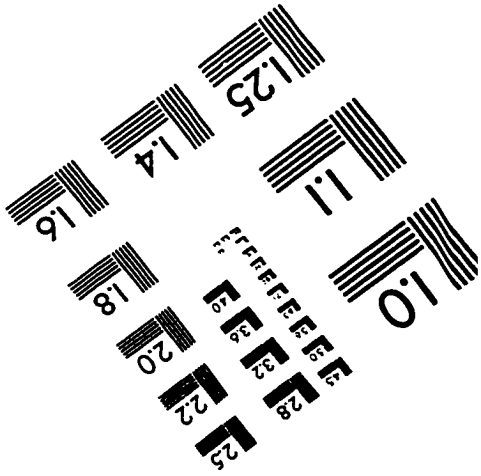












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