

A Preliminary Survey of Health Education in Indiana Home Schools

Adam M. Havice, Jeffrey K. Clark

ABSTRACT: The total US school enrollment of 52.7 million students in 1998 excluded an estimated 1.2 million students educated in their homes. In 1989, some 1,148 home school families enrolled with the Indiana Department of Education. Just over a decade later, some 18,260 home school families had registered, and this number continues to increase. Despite knowledge about the growing numbers of families choosing to home school, limited empirical data exists of how health education is presented in home schools or the needs of home school educators who teach health education. This preliminary study examined health education content areas taught by home school educators in Indiana. An instrument was developed, piloted, and administered to a random sample of 600 home school educators. Results indicated most home school educators taught a variety of health education topics. Three topics – first aid, physical activity and fitness, and nutrition and diet – were taught most frequently in the health curriculum of home schools. Violence prevention, suicide prevention, and consumer health were covered less frequently in the health curriculum. Health was typically taught in a nonstructured, teachable moment format. Implications for coordinated school health programs and suggestions for further research are discussed. (*J Sch Health*. 2003;73(8):300-304)

Educating members of one's own family is not a recent educational development. Education historically has been recognized as a primary role of the family unit. Today's families are showing renewed interest in home school education, and rapid growth continues in the number of people choosing to educate their children at home. Growth of the US population has increased enrollment considerably in public and private schools. School enrollment reached an all-time high of 52.7 million students in 1998.¹ However, this number excludes an estimated 1.2 million students being home schooled.² In 1989, some 1,148 home school families enrolled with the Indiana Department of Education. Just over a decade later, some 18,260 home school families had registered.³

Despite knowledge about the growing numbers of families choosing to home school, limited empirical data exists about home school education curricula. Ray⁴ found that 71% of home school families select instructional materials, and custom design a curriculum to suit the needs of their children, their family lifestyle, and applicable government regulations. No evidence describes how health education is presented in home schools or the needs of home school educators who teach health education.

Coordinated school health programs can provide a means to deliver health promotion messages to individuals in public schools. Research suggests such efforts provide a means to minimize the impact of health risks facing youth and their families. Studies have shown that health education motivates students to maintain and improve their health, prevent disease, and reduce health-related risk behavior.⁵ Students who participated in health education are not as likely as students with no health instruction to use alcohol and tobacco, take drugs, get pregnant, or ride with drivers who have been drinking.⁶ Similar studies demonstrated the impact of comprehensive health education programs on the health of students.⁷⁻⁹

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Because home schools in Indiana are considered nonaccredited private schools, the home schools do not have state oversight in testing, curriculum, and other rules. Yet, no studies have examined health education in home school education. This preliminary study described how health education was taught among home schools registered with the Indiana Department of Education.

SURVEY METHODS

Survey Instrument

A pool of items was generated using a table of specifications. Twenty-two items were generated and sent to a jury of experts to review for content validity. Jurors' comments were tabulated, and appropriate changes were made to the instrument. The revised instrument was sent back to jurors to identify items essential for measuring the concepts of the investigation. Results from the second review were used to calculate the content validity ratio. Fifteen items with a content validity ratio > .62 were retained in the final instrument.¹⁰

The instrument collected data in six areas: six items collected data related to the home school health education curriculum; three items addressed respondents' professional development and experience; two items asked respondents to provide information about the amount of time spent on health education in their home school; and information about respondents' feelings for the importance of health education and resources was obtained using one single item for each.

A pilot administration was conducted to test the data collection procedures and to establish reliability of the instrument. A sample of home educators was recruited to participate in the pilot. The instrument was distributed to the sample and collected by a home educator. The procedure was repeated one week later. Respondents to both data collection points were included in the analysis. Pearson's correlation was calculated for each item. Correlation scores for the 15 items ranged from $r^2 = .90$ - $.97$.

Subjects

A mailing list of 18,222 home school families was obtained from the Indiana Department of Education and a random sample of 600 home schools was selected. After

receiving clearance from the Institutional Review Board, subjects were mailed a post card to notify each subject they had been selected to participate in the study. To increase the response rate, the study's purpose and support for the study by a home school education professional organization were included. Three days later, a two-page survey was mailed to the subjects. A follow-up post card was mailed one week later. In addition, subjects were informed that for each returned survey a donation would be made to the organization of their choice.¹¹ Data were collected during spring 2001.

SURVEY FINDINGS

Of 130 returned surveys, 40 were returned unopened. Five respondents indicated they no longer were home schooling and did not complete the survey. Due to the low response rate, a follow-up phone survey was conducted with nonrespondents to determine if a difference exists between responders and nonresponders.¹² Sixty names were selected at random and called during a one-week period. Results from the phone interviews indicated that the called respondents offer health education topics in their home school at a slightly higher rate than did the letter respondents (86% vs 75%).

The first group of items inquired about the home educator's professional development. Educational background of individuals with primary responsibility for educating students in home schools ranged from less than a high

school diploma to completion of a graduate degree. Most (75%) home educators had completed some college work. In addition, most home educators indicated they received some training in health education. Subjects were asked to identify health education topics in which they received training. Twenty-four topics were identified (Table 1). First aid training was cited most frequently (71%) as an area in which they received training. Nutrition and diet, CPR, and fitness all were topics that more than one-half of respondents indicated receiving training. Consumer health and tobacco use prevention were the two topics respondents were least likely to receive training. Length of time the home school educators had been home schooling ranged from less than one year ($n = 12$) to more than 10 years ($n = 8$). The most frequent response for length of time in home schooling was 1-3 years ($n = 34$).

Of the returned surveys, 74 (87%) indicated health education was taught in their home school (Table 2). Twenty-four health education topics were identified by the home school educators as topics they felt should be in the home schools' curriculum. First aid and personal hygiene (88.24%) were the topics most often identified. Other topics identified by more than one-half the home school educators as topics to include were physical activity and fitness (85.8%), nutrition and diet (82.3%), growth and development (77.6%), cardiopulmonary resuscitation (74.1%), sun safety and skin cancer prevention (71%), alcohol and drug prevention (68.2%), accident and injury

Table 1
Frequency and Percentage
of Home School Educator's Training
in Health Education Topics ($n = 81$)

Topic of Training	N	%
First Aid	58	71.60
CPR	50	61.73
Nutrition and Diet	49	60.49
Physical Activity and Fitness	44	54.32
Emotional and Mental Health	44	54.32
Stress Management	40	49.38
Growth and Development	37	45.68
Personal Hygiene	36	44.44
Alcohol or Other Drug Use Prevention	36	44.44
STD	34	41.98
Spirituality in Health	33	40.74
Death and Dying	33	40.74
Dental and Oral Health	32	39.51
Pregnancy Prevention	32	39.51
Accident and Injury Prevention	30	37.04
HIV Prevention	30	37.04
Human Sexuality	30	37.04
Immunizations and Vaccinations	29	35.80
Violence Prevention	26	32.10
Suicide Prevention	25	30.86
Sun Safety and Skin Cancer Prevention	25	30.86
Tobacco Use Prevention	23	28.40
Environmental Health	21	25.93
Consumer Health	15	18.52

Table 2
Frequency and Percentage
of Topics Home School Educators
Felt Should Be Taught in Home Schools ($n = 81$)

Topics	N	%
First Aid	75	88.24
Personal Hygiene	75	88.24
Nutrition and Diet	73	85.88
Growth and Development	66	77.65
CPR	63	74.12
Dental and Oral Health	60	70.59
Sun Safety and Skin Cancer Prevention	60	70.59
Alcohol or Other Drug Use Prevention	58	68.24
Accident and Injury Prevention	56	65.88
Physical Activity and Fitness	54	63.53
Emotional and Mental Health	54	63.53
Tobacco Use Prevention	53	62.35
Stress Management	52	61.18
HIV Prevention	48	56.47
STD	47	55.29
Immunizations and Vaccinations	47	55.29
Human Sexuality	44	51.76
Environmental Health	44	51.76
Pregnancy Prevention	43	50.59
Spirituality in Health	42	49.41
Death and Dying	41	48.24
Violence Prevention	37	43.53
Consumer Health	33	38.82
Suicide Prevention	31	36.47

prevention (65.9%), emotional and mental health (63.5%), tobacco use prevention (62.3%), stress management (61.1%), HIV prevention (56.5%), immunizations and vaccinations (55.3%), STD prevention (55.3%), environmental health (51.8%), human sexuality (51.8%), and pregnancy prevention (50.6%).

Home school educators were asked to identify the major goals of health education in home schools. Respondents could select from 18 stated goals and objectives, as well as respond to one open-ended item. Three goals for health education in home schools most frequently identified were "recognition of the importance of good nutrition" (n = 60), "development of skills needed to promote a healthy lifestyle" (n = 53), and "recognition of the importance of exercise" (n = 52). The goal least often identified was recognizing the importance of cultural influences on health (n = 10).

A variety of health education topics were identified as being taught in the home schools (Table 3). The content most frequently included in the home schools' curriculum was physical activity and fitness, and nutrition and diet (80.82%). Personal hygiene (77%), first aid (67%), and dental and oral health (63%) also were frequently identified as topics taught in the curriculum. Suicide prevention (8%) and consumer health (18%) were taught the least.

Duration of the health education lesson also was examined. Two items identified amount of time devoted to health education topics in home schools. Responses to the average number of days per week students received health educa-

tion ranged from less than one day to seven days. The most frequent response was "when your children have questions" (n = 21). Collapsing the remaining responses into two categories (two days or less, and three days or more) provided a near equal division of the remaining respondents. Twenty-nine respondents indicated the average number of days students received health education was two days or less, while 31 respondents selected three days or more. Duration of the lesson ranged in length from one to five minutes to longer than an hour. The most frequent response was 16 to 30 minutes (n = 24).

The delivery method most often (55%) used for teaching health education subjects was an unstructured lesson or a teachable moment. Other methods included teaching health as a separate subject (39%), combining health with physical education (34%), integrating health with other subjects (32%), and using co-ops or other outside arrangements (14%) to teach health topics.

Most (71.6%) respondents considered health education a "very important" part of the home school curriculum. None indicated health education was unimportant, though 11 indicated they did not teach health education in their curriculum.

Results indicated that home school educators use a variety of resources and curricular materials when teaching health education. Resources including the public library (62%), the Bible (55%), self-developed instructional materials (50%), accredited curricula (50%), field trips and other outside social opportunities (46%), commercial textbooks (41%), and the Internet (37%) were frequently identified. Curricula or guides available from the state or district were used by only 13.5% of respondents. Resources identified the least were the National Health Education Standards (11%), correspondence courses (11%), co-operative classes (7%), classes offered by public/private schools (6%), and a licensed teacher (6%).

SURVEY IMPLICATIONS

Results from this study indicated health education topics are frequently taught in home schools. Topics most often taught related to personal health and hygiene with less emphasis on broader societal problems. In the School Health Policies and Program Study (SHPPS) 2000, public and private schools were most likely to teach alcohol and other drug use prevention (91%), HIV prevention (86%), tobacco use prevention (90%), nutrition and dietary behavior (87%), and STD prevention (85%) at the senior high level.¹³ These topics traditionally have been organized around the six risk behaviors identified by the US Centers for Disease Control and Prevention (CDC) and data generated from the Youth Risk Behavior Surveillance System (YRBSS).¹⁴ In addition to differences between health topics taught by public/private schools and home schools, some dissonance exists between what home school educators believe they should teach in health education and content actually taught by home school educators.

Nutrition and diet was the only topic identified both by home schools and the public and private schools. Topics public and private schools were least likely to address, first aid (49%) and dental health (46%), were the most heavily emphasized health topics in Indiana home schools.¹³

Topics identified in this survey as seldom addressed in home school curricula include violence and suicide preven-

Table 3
Frequency and Percentage of Health Education Topics
Taught in Home Schools (n = 81)

Topics	N	%
Nutrition and Diet	59	80.82
Physical Activity and Fitness	59	80.82
Personal Hygiene	56	76.71
First Aid	49	67.12
Dental and Oral Health	46	63.01
Growth and Development	43	58.90
Tobacco Use Prevention	36	49.32
Accident and Injury Prevention	35	47.95
Alcohol or Other Drug Use Prevention	34	46.58
Stress Management	31	42.47
Emotional and Mental Health	30	41.08
Spirituality in Health	27	36.99
Sun Safety and Skin Cancer Prevention	25	34.25
Human Sexuality	25	34.25
Environmental Health	23	31.51
STD	19	26.03
Immunizations and Vaccinations	19	26.03
Violence Prevention	19	26.03
Death and Dying	18	24.66
HIV Prevention	16	21.92
CPR	15	20.55
Pregnancy Prevention	14	19.18
Consumer Health	13	17.81
Suicide Prevention	6	8.22

tion and consumer health. Several other topics also were addressed by less than one-half of respondents, such as HIV/STD prevention, immunization and vaccinations, environmental health, and sexuality. Of these topics, only sexuality, suicide prevention, and immunization and vaccinations were identified by SHPPS with coverage of less than 50% in public elementary schools.¹³ Many of the topics not addressed in home schools' curricula relate to broader social issues rather than personal health issues. A narrow understanding of the various topics also may explain the low number of home school educators covering these topics.

One can make a case that health education needs of home school students differ from those of public schools, thus explaining the need for different health topics taught in home schools. For example, Rudner¹⁵ found that home school parents completed more formal education than the general population, and earned higher median incomes than all families with children. Almost all home school students live in married-couple families, and they reported watching much less television than students nationwide.

Methods used in YRBSS data collection exclude home-schooled youth.¹⁶ A comparable data set for home-schooled youth does not exist. Therefore, one may not necessarily assume that home-schooled youth express the same health education needs based upon national data.

Public and private schools must follow state proficiency guides and regulations. State proficiency guides seldom are used by home school educators to create curricula. Ray⁴ found 71% of home school educators selected instructional materials, and designed a curriculum to meet the needs of their children, their family lifestyle, and applicable government regulations. Home school educators in Indiana can develop their own curriculum and use resources such as the Bible to meet the needs of their family. Home schools do not have to comply with state-mandated regulations with which public and private schools must comply. The average home school educator will teach core courses in reading, writing, mathematics, science, geography, social studies, literature, religious studies, and special courses that meet their family's interests. Amount of time spent on each subject varies. One home school educator in a survey by Van Galen¹⁷ said: "I never bought a curriculum - never used a curriculum. At this point in time I don't think I ever will use a curriculum, because a curriculum is designed for a child that doesn't exist. It's designed for some ideal, and there is no such thing. There are only individual people, and each person is so unique that a curriculum can never suit anybody."

Researchers know little about the delivery of health education in home schools. In this survey, most health instruction occurred during nonstructured, teachable moments when the home educators' children ask health-related questions. Less than one-half of respondents indicated a specific amount of time was devoted to teaching health as a separate topic. Health was taught as a separate topic 30 minutes or less, several times a week, as the norm. Home school educators follow a reactive approach to health instruction instead of a proactive approach. This approach allows them to structure health education classes to meet the needs of their family lifestyle. However, when used in public schools, this approach was not effective in meeting the goals of health education.¹⁸

Patterns of health education in home school education differ significantly from patterns advocated by researchers and national health education organizations. SHPPS 2000 found most states (60%) provide written guidelines to help schools teach health education, and many schools provide written curricula and student textbooks that health education teachers use when teaching. SHPPS 2000 also found nearly 90% of middle/junior high and senior high schools require instruction in specified health topics, and many provide instruction through a required course.

Required health courses in public/private schools that provided 900 minutes of instruction (equivalent to two, 50-minute classes per week for nine weeks) were found in 66.8% of all middle/junior high schools, and 13.5% of schools required health education for one semester.¹³ The Joint Committee on Health Education Terminology¹⁹ recommended health instruction and evaluation as part of a planned curriculum, preschool through 12, with goals, objectives, content sequence, and specific classroom lessons. While these findings suggest home school educators often set specific goals and objectives for health education, they do not use planned and sequential health curriculum. Health education professional organizations could provide resources to home school organizations to assist individual home schools in curriculum development.

Health behaviors associated with the leading causes of morbidity and mortality among home-schooled children may differ from most school-aged children in the United States. Differences certainly exist in lifestyles of home school families when compared to families nationwide. Home school educators earn a higher median income, are more likely to continue their education beyond high school, and have more children compared to the nation.^{4,15,20-22} One home school educator in this survey, said regarding health education topics taught by home school educators: "Most of these are not necessary for us (ex: pregnancy prevent.) [Because] of our lifestyle and principles - [therefore] we discuss them as they come up - but not formally present them."

Rudner¹⁵ indicated that 88% of home school parents continued their education beyond high school. This survey found that most home school educators completed at least some college education. This survey also revealed that most home school educators received some training in health education.

The limited training in health education can be explained in part by the reasons families choose home school education. The largest group (65.2%) of home school educators identified in Mayberry's²⁰ study chose to home school for religious reasons, and religious conviction may at times conflict with health education topics. For example, Mayberry²⁰ found 88.6% of religious home school educators opposed to teaching sexuality education.

SURVEY LIMITATIONS

Many barriers emerge when conducting this type of research. These barriers are also associated with reasons families choose to home school their children.²⁰ One barrier relates to the variety of structures in which home schooling occurs. Privacy issues and philosophical perspectives that lead to home schooling also may produce minimal participation in research endeavors.

Because estimating the home school population proved

problematic,^{23,24} obtaining reliable data from this population posed even greater difficulty. As with other studies of home schooling, the major limitation of this survey was response rate. Despite using a variety of methods^{11,25,26} to increase response rate, only a 14% response rate was achieved. Similarly low response rates were reported in other studies of home schools.^{24,27,28} While Babbie²⁹ labeled a response rate less than 50% as "adequate," Neutens and Rubinson³⁰ indicated a lower response rate may be acceptable depending on the target population.

Attempts to contact nonrespondents by telephone indicated only small differences existed between respondents and nonrespondents. The primary reason for not responding was they no longer home schooled their children. Thus, exercise caution in generalizing results from this study.

CONCLUSION

As the number of home-schooled students increases, the need to accurately identify their health education needs becomes more pressing. Further research should extend this preliminary study to identify the needs of home-schooled students, as well as training needs of home school educators. Data from this preliminary survey can provide a basis for developing expanded health education services for entire communities. Home school educators and communities also should explore ways health resources can be provided for home schools to improve the quality of health education.

Historically, schools felt no need to market their educational programs. Yet, as the number of home schooling families increases, and political support for school vouchers grows, schools should consider social marketing for their health education programs. A worksite health promotion model by Eddy and colleagues³¹ may help schools market their curricula to home school families. As a focus of this outreach, schools could structure their coordinated school health programs efforts to support the family and the community. Use of school health services, and school counseling, psychological, and social services, as well as after-school programs, can provide a natural point of connection for home school families. ■

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