Schools and health: a district-level evaluation of school health education in Ghana

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ABSTRACT

This study evaluated Ghana's school health education programme, policy guidelines, curriculum topics and evaluation methods at the district level. A modified version of the Health Education District Questionnaire, a self-administered instrument developed by the Centers for Disease Control and Prevention (CDC), was used to collect data from the country's 110 district school health education programme co-ordinators. The response rate was 80 per cent. Information was also gathered through in-depth interviews with the national co-ordinator and her staff and by reviewing programme documents. The results indicated that the programme is focused on building life skills by using participatory teaching methods. However, although the programme guidelines require the use of two strategies—the unit course approach and the integrated/infusion approach—fully to cover health topics within the curriculum, the extent of actual coverage of the topics as reported by the district co-ordinators varied (ranging from 52.3 per cent for consumer health to 98.9 per cent for personal hygiene). In addition, less than 40 per cent of the co-ordinators reported having conducted any formal or informal evaluation of key aspects of the programme at the district level. The findings of this study have implications for Ghana's school health education programme. These are discussed, along with some recommendations.

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KEYWORDS
adolescents, Ghana, health, health education, schools, school-age children, sub Saharan Africa

Introduction[2]

In 1992, recognizing the need to promote the health of school-age children and adolescents, Ghana established the Ghana School Health Education Programme (SHEP). Globally, there is a general awareness of the central role that schools play in promoting and addressing the health needs of children and adolescents. Effective health education programmes in schools are considered to be among the key forces in addressing the health risks and needs of school age children and adolescents (Allensworth and Kolbe 1987, Fabiyi and Blumenthal 1991, Kolbe et al. 2001, Lohrmann et al. 1987, Marshall et al. 2000, WHO 1999, World Bank n.d.).

There are a number of reasons why schools are vital to promoting the health of school age children and adolescents. First, in societies where a significant number of parents provide limited information about health and healthcare to their children because of their own high rates of illiteracy, schools provide the infrastructure and personnel, together with a cost effective mechanism to disseminate health information and also address the health needs of children and adolescents (World Bank 1993). Secondly, previous research has noted that healthy children are more likely to attend school regularly and they are also more likely to perform better in their academic work (Del Rosso and Marek 1996). Thirdly, children who are taught in schools to acquire essential health-related knowledge and skills are not only less likely to engage in health-compromising behaviour as adolescents, but they are more likely to carry the knowledge and skills into adulthood and lead healthier lifestyles (Del Rosso and Marek 1996). Finally, children often pass on health-related knowledge and skills acquired from schools to parents and other members of the household. As a result, school-based health

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education programmes benefit not only students but family members and the community at large (WHO 1998).

There is a dearth of published evaluation research studies on school health programmes in much of sub Saharan Africa, including Ghana. Due to the paucity of evaluation studies on the status of school health education programmes in Ghana and other countries in the region, very little is known about whether or not the programmes have been and continue to be a vital component of public health activity in many of these countries. In the case of Ghana, SHEP has been in existence for a decade, yet systematic evaluation studies on the programme are hard to find in the published literature. Given the many health problems, including HIV/AIDS and teenage pregnancy, that children and adolescents face in Ghana, as in other sub Saharan African countries, there is an urgent need for systematic studies that broaden our understanding of the effectiveness of school health education programmes in the region.

This preliminary study, therefore, contributes to the scant literature on school health education in Ghana by examining district-level school health education programme practices within the context of the national policies and guidelines. Specifically, it examines the implementation of national school health education policies and the coverage of required health topics at the district level. The district level was selected as the focus of this preliminary study because there is a need to obtain information that would provide a national picture of the programme. In addition, SHEP district co-ordinators are knowledgeable about the programme guidelines and activities and they serve as key resource personnel at the local level.

This study is timely because there is a need for systematic, published evaluation studies that examine the effectiveness of the country's school health programme and how it is incorporated into the education curriculum, as well as the critical role that schools and school health programmes play in meeting the health-related needs of schoolchildren and adolescents in the country. This study and others like it are also needed to stimulate discussion and dialogue among researchers, health educators and other stakeholders who have either an interest in or the

responsibility to promote the health of school age children and adolescents in Ghana and in sub Saharan Africa.

Theoretical background: global school health initiatives

For many years the concept of health promotion, especially promoting the health of children, adolescents and the youth has been a primary focus of international organizations such as the World Health Organization (WHO). This long-standing focus on health promotion by the WHO culminated in the formal launching of the Global School Health Initiative (GSHI) in 1995. According to the WHO (n.d.), the ongoing GSHI is guided by three previous policy decisions by the organization: the 1986 Ottawa Charter for Health Promotion, the 1997 Jakarta Declaration of the Fourth International Conference on Health Promotion and the 1995 WHO's Expert Committee Recommendation on Comprehensive School Health Education and Promotion. The primary objective of GSHI, according to the WHO, is to initiate, strengthen and promote health education effectively through mobilization of resources at all levels—local, national, regional and global. Using the school setting, the primary goal is to improve the health of not only students but also school personnel, parents and other family members as well as members of the larger community.

Since the launching of the GSHI various regional offices of the WHO have initiated regional plans of action to implement its goals and objectives. In this regard, the Africa Regional Office of WHO has initiated a regional plan for developing health-promoting schools on the continent (Cerqueira 1996). This regional plan includes country-specific activities in which the Regional Office works with individual countries to initiate or improve school health programmes, preferably through community action. The regional plan has been in place since the mid-1990s, yet very little is known about the status and viability of school health education programmes in many sub Saharan African countries, including whether or not the programmes are meeting the goals and objectives set by the WHO and other international agencies. The April 2000 launching of Focus Resources on Effective School Health (FRESH), a joint partnership initiative by the WHO, UNESCO, UNICEF, the World

Bank and Education International, sought in many ways to further and consolidate the goals and objectives of the GSHI (World Bank n. d.).

Both the GSHI and FRESH describe the ideal components of an effective school health education programme. These components include the development of health-related school education policies that emphasize the development of life skills through participatory teaching methods which enable students to acquire these life skills. The skills-based approach also emphasizes the development of knowledge, attitudes and values that in the end lead to the establishment of lifelong healthy lifestyles. Furthermore, it emphasizes active learning and the full involvement of students, teachers, parents and the community in the development and implementation of programme activities. The present evaluation of Ghana's school health education programme is informed by these underlying theoretical ideas.

The structure of Ghana's school health education programme

The national headquarters of SHEP, established under the Ghana Education Service, which is part of the Ministry of Education, has a co-ordinator and staff and an 18-member National Steering Committee (NSC). Members of the NSC are appointed from the two constituent ministries, other governmental and non-governmental organizations and representatives of donor organizations. The NSC is responsible for the overall formulation of policies and guidelines for SHEP and it also serves as a co-ordinating and overseeing body for the national, regional, district and local levels of SHEP (Ghana Education Service n.d.). The country's 10 administrative regions have regional SHEP co-ordinators and each of the 110 administrative districts has a district SHEP co-ordinator. At the local level, schools across the country—from elementary to senior secondary schools—have teachers who have been appointed as school health promoters (Ghana Education Service n.d.).

Consistent with WHO (1998) recommendations, the district co-ordinators play a pivotal role in the structure and function of SHEP. The district co-ordinators oversee and work with the school health promoters in their districts to implement SHEP policies and programme activities at the local level. In addition, the district co-ordinators organize training

sessions for the school health promoters and disseminate health education information to schools within their districts. Furthermore, the district co-ordinators are required to collaborate with district assemblies and Ministry of Health workers to establish district teams to implement and promote overall health education programme activities, including school health education programme activities. Finally, the district co-ordinators receive both oral and written reports from the school health promoters in their districts and they are also required to conduct on-site visits to ensure that SHEP policies and guidelines are being implemented by the school health promoters. In turn the co-ordinators are required to submit local inputs to their regional co-ordinators and the national headquarters to aid in policy formulation and the revision of programme guidelines and activities.

The introduction of health-related topics into the SHEP curriculum is effected through the educational programme referred to as Population and Family Life Education. SHEP's information documents list the following health issues that are required to be covered in the curriculum at the basic level: personal hygiene, environmental sanitation, the nutritional needs of individuals, avoiding diseases associated with contaminated food, food hygiene, water-borne diseases, adolescent sexual reproductive health, STD, HIV/AIDS, adolescent pregnancy, abortion, female genital mutilation, pre-marital sex, drug and substance use and abuse, rape and sexual abuse, good grooming, accidents in the home and the school and child labour (Ghana School Health Education Programme n.d.).

The curriculum guidelines of SHEP also require that schools use two strategies to cover health issues in the curriculum. The first strategy—the Unit Course Approach—is designed to introduce health issues under specific units of the course syllabi of core subjects (environmental studies, integrated science, English, social studies, science, agricultural science, geography and life skills). The second strategy—the Integrated/Infusion Approach—is designed to integrate or infuse health issues into the core subjects in a topical fashion (Ghana School Health Education Programme n.d.). Finally, SHEP curriculum guidelines recommend the use of the following participatory teaching methods in the curriculum:

role play, dramatization, case study, values clarification, future's wheel, brainstorming, storytelling and discussion.

Method

Data collection procedure and participants

Data collection commenced in the third week in August 2000 and ended in mid November 2000. Questionnaires were sent to the entire 110 district SHEP co-ordinators who were asked to participate in the study. The co-ordinators were asked to complete the questionnaires based on their knowledge of SHEP policies and activities in their districts. Specifically, they were asked to complete the questionnaire on the basis of three sets of information: (1) information contained in written and oral reports that they have received from school health promoters in their districts; (2) information they have gathered during on-site visits to schools within their districts and (3) the co-ordinators' overall assessment of SHEP in their districts.

The data sources have three limitations that must be noted. First, the quality and adequacy of reports from local schools to the co-ordinators may be limited. Secondly, information from on-site visits by co-ordinators may also be limited. Thirdly, the data are reported in aggregate form. Over-generalizations about individual districts are therefore possible. As a preliminary study, however, the data provide useful information about SHEP at the district level, notwithstanding these limitations. The co-ordinators were informed that completing the questionnaire was voluntary. A number of reminders and follow-ups were done to increase the response rate. At the end of the survey period, 88 questionnaires were completed and returned, resulting in a response rate of 80 per cent.

Survey instrument

The questionnaire was a modified version of the Health Education District Questionnaire (HEDQ), a self-administered instrument developed by the Centers for Disease Control and Prevention (CDC). There are eight components of the instrument (health education, physical education and activity, health services, mental health and social services, food service, school policy and environment, faculty and staff health

promotion and family and community involvement). In the United States data from four levels of the educational system (state, district, school and classroom) are collected with the instrument (CDC 1999, Kann et al. 1995, 2001, Smith et al. 2001). This study on Ghana is focused on only one of the eight components of the School Health Policies and Programmes Study SHPPS (namely, health education) and at only the district level. In modifying the instrument, input was solicited from the staff at the national headquarters of SHEP and the final version was also reviewed and approved by the national co-ordinator.

There are three advantages to using the modified version of HEDQ to evaluate Ghana's School Health Education Programme. Firstly, the HEDQ includes a number of methods that an effective school health education programme can use to assess compliance at the district level. In addition, it includes a number of programme areas that can be evaluated at the district level. Secondly, SHEP curriculum documents list health issues which are often broad categories with more than one health-related topic. For example, drug and substance use and abuse is listed as a health issue that is required to be covered in the curriculum. For evaluation purposes, this is a very broad category that lacks precision. Therefore in the questionnaire, substance use is categorized into two: (1) tobacco and (2) alcohol and other substance use. Thirdly, by including specific health-related topics, HEDQ makes it easier for the co-ordinators better to report on topics relating to content areas within the SHEP curriculum.

Results

The survey data were analysed using *SPSS for Windows Version 11.0* software (Norusis 2002; SPSS, Inc. 2001). There were more male district co-ordinators than female (55 per cent males vs. 45 per cent females). With respect to the highest level of educational attainment of the co-ordinators, the data showed the following: 45 per cent had a teachers' certificate 'A'; 10 per cent had a post-secondary certificate; 38 per cent had a diploma or specialist certificate and only 7 per cent had a bachelors' degree.

Seventy-eight (88.6 per cent) of the co-ordinators reported that schools in their districts are fully implementing the broad outlines of SHEP's policies and guidelines. Fifty (56.8 per cent) of the co-ordinators have at some point submitted inputs specifically designed to help policy formulation to their regional co-ordinators and national headquarters.

To assess how schools in districts are covering SHEP's required health issues in the curriculum, 17 health-related topics were included on the questionnaire. The co-ordinators were asked to respond to a series of questions on these health-related topics in the curriculum. Specifically, they were asked to indicate whether or not schools in their districts were covering the 17 health-related topics in the curriculum. The results are presented in Table I.

Table I: Percentage of district co-ordinators reporting on health education instruction, by topic, Ghana School Health Education Survey, 2000 (N = 88)

Topics in the SHEP curriculum evaluated	n	% of district co-ordinators
Personal hygiene	87	98.9
Dental and oral health	85	96.6
Nutrition and dietary behaviour	77	87.5
Physical activity and fitness	58	65.9
Growth and development	66	75.0
Human sexuality	71	80.7
Pregnancy prevention	77	87.5
HIV prevention	85	96.6
STD prevention	83	94.3
Tobacco use prevention	77	87.5
Alcohol or other drug use prevention	81	92.0
Violence prevention	62	70.5
Accident or injury prevention	72	81.8
First aid	80	90.9
Immunizations or vaccinations	81	92.0
Consumer health	46	52.3
Environmental health	81	92.0

Table I shows that 90 per cent or more of the co-ordinators reported that schools in their districts fully cover 8 out of the 17 health-related topics. Furthermore, Table I shows that 80 per cent or more of the co-ordinators indicated that 13 out of the 17 health topics were fully covered in the curriculum. Only the coverage of two out of the 17 topics (physical activity and fitness and consumer health) was reported by less than 70 per cent of the co-ordinators. The data indicate that personal hygiene was the health topic reported by the majority of the co-ordinators (98.9 per cent). The health topic reported by the lowest percentage of the co-ordinators was consumer health (53.3 per cent). Table I also shows the per cent of co-ordinators who reported on coverage of five of the major health-related topics: pregnancy prevention (87.5 per cent); HIV prevention (96.6 per cent); STD prevention (94.3 per cent); tobacco use prevention (87.5 per cent) and alcohol and other drug use prevention (92.0 per cent).

As previously noted, the CDC using the HEDQ has identified five programme areas that can be evaluated at the district level to assess the effectiveness of school health education programmes. These programme areas are: (1) student satisfaction with the programme; (2) family satisfaction with the programme; (3) health education policies; (4) health education curricula and (5) health education staff development. Five questions that cover these programme areas were included in the questionnaire as a preliminary attempt to assess whether or not the SHEP district co-ordinators have either formally or informally evaluated any of the programme areas during the two years preceding the study. The results are presented in Table II.

Table II shows that only a very small percentage of the co-ordinators have evaluated any one of the five programme areas at the district level either formally or informally. For example, only 38.6 per cent of the co-ordinators reported having evaluated student satisfaction with the health education programme. With regard to family satisfaction with the programme, only 25 per cent of the co-ordinators indicated that they had either formally or informally evaluated that aspect of the programme. Overall, less than 40 per cent of the co-ordinators reported having

Table II: Percentage of district co-ordinators reporting formal or informal district level evaluation of school health programme during the two years preceding the study, by programme areas evaluated, Ghana School Health Education Survey, 2000 (N = 88)

Programme areas co-ordinators evaluated	n	% of district co-ordinators
Student satisfaction with the health education programme	34	38.6
Family satisfaction with the health education programme	22	25.0
Health education policies	32	36.4
Health education curricula	23	26.1
Health education staff development or in-service programmes	33	37.5

evaluated any one of the five programme areas during the two years preceding the study.

Discussion

The primary purpose of this study was to assess three key areas of Ghana's school health education programme at the district level. The three areas are: policy guidelines, curriculum topics and evaluation of the programme at the district level. The assessment was done using three sources of data: a survey of district co-ordinators, an in-depth interview with the national co-ordinator and a detailed examination of programme documents. The results of the study are very informative and provide valuable insight into the country's school health education programme at the district level. The results also have important implications for the future direction of the programme.

The findings indicate that across the country the national policy guidelines are being widely implemented at the district level. About 89

per cent of the district co-ordinators reported that schools in their districts are fully implementing the national guidelines. However, although this finding is encouraging, it does suggest that about 11 per cent of the districts have schools that are not fully implementing the national policy guidelines. Because the survey data present aggregate information about schools within the districts, the specific barriers to full implementation of the national policy guidelines at individual schools cannot be determined. It is expected that future research will build upon the present findings and examine the barriers to full implementation of the national policy guidelines at local schools.

Another important finding relating to policy is that about 57 per cent of the respondents have submitted input about their district school health education programmes to their regional co-ordinators and the national headquarters to aid in the formulation and revision of the national programme policies and guidelines. This finding also needs further examination in future research. For example, it is important to identify which of the co-ordinators is more likely to submit an input, as well as the specific issues and topics that are more likely to be covered in the submissions. These questions cannot be answered with the present data. However, the answers are likely to provide the regional and national staff with valuable information about the programme from personnel who are intricately involved with its activities at the local level.

With regard to the programme's curriculum, this study examined the topics SHEP guidelines require that they be covered by schools and the extent of coverage of those topics by the schools within each district. The findings paint a mixed picture of coverage of the topics. Overall, very high percentages of the co-ordinators reported that schools in their districts are covering the required topics. It is also instructive to note that very high percentages of the co-ordinators indicated that key health topics such as HIV prevention, personal hygiene, alcohol or other drug use prevention and pregnancy prevention are fully covered by schools in their districts. The key point to note here, however, is that the co-ordinators did not report 100 per cent coverage of any one of the health topics by the schools in the districts, as required by the national policy guidelines.

Although the survey data do not specifically offer answers to why some schools are not fully covering the required health topics, information from the in-depth interview with the national co-ordinator as well as discussion with staff suggests some plausible reasons. Key among the reasons is the availability of instructional materials for school districts. Inadequate materials, especially instructional materials, were repeatedly mentioned by the national co-ordinator and her staff during discussions.

It is therefore possible that the extent of coverage of particular topics in the curriculum is directly related to the availability of instructional materials on those topics at local schools. Another plausible reason relates to the training of teachers at local schools. Again, discussions with programme staff suggested some variations in the knowledge and competence of health promoters at local schools. It is therefore reasonable to expect that the level of competence of teachers will determine, to some degree, the coverage of particular health topics in the curriculum at various schools in districts.

By far the most revealing finding from the survey data is that only a very small percentage of the district co-ordinators have conducted any formal or informal evaluation of key aspects of the SHEP programme in their districts. There is considerable amount of literature that suggests that effective national programme evaluation starts at the local level (Babbie 2001, Weiss 1998). A bottom-up evaluation strategy ensures that local inputs ultimately become the basis for national policy formulation and reform.

The survey data show that only about 39 per cent of the co-ordinators reported having formally or informally assessed students' satisfaction with the district SHEP programme in the two years preceding the study. Similarly, only 25 per cent of the co-ordinators had assessed family satisfaction with the programme within the same period. Overall, the percentages reporting assessment of health education policies and the curricula are within the range reported above. The low percentages suggest that very little is known about what programme participants think about its activities and effectiveness. This finding points to a weak spot which must be corrected in the SHEP programme.

Conclusion and recommendations

The results of this preliminary study should serve as a baseline study for which results of future evaluation studies on Ghana's school health education programme may be compared. On the basis of the present findings, a number of recommendations can be made. It is expected that school health educators, policymakers and other stakeholders in Ghana's school health education programme will seriously consider these recommendations because they can positively impact on the effectiveness of the programme.

First, there is a need to assess key aspects of the programme, especially at the local level, to obtain reliable data on issues such as student and family satisfaction. Investing in a programme but not evaluating it means that information about its effectiveness is limited. Furthermore, without reliable evaluation data, it is difficult to determine which aspects of the programme are working, which aspects need reform and which aspects must be discontinued at both the national and local levels.

Secondly, there is a need to develop better strategies at the national headquarters to identify the extent of coverage of health topics in the curriculum at the local level. Information provided by the district co-ordinators in the survey on coverage of health topics in schools in their districts appears to be at variance with views expressed by staff at the national headquarters. The district co-ordinators did not report 100 per cent coverage of any of the required topics in the curriculum, contrary to the national policy guidelines.

Finally, it is recommended that a significant effort be made to improve upon the availability of materials, especially instructional materials on the key health topics, as well as to provide teacher training that will ensure the competence and effectiveness of school health promoters. With regard to future directions for evaluation of the programme, the next logical step for future research should be at the school and classroom level. A nationwide survey of a random sample of schools and classroom teachers should generate additional data and information about the status of Ghana's school health education programme at the local level.

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