DEVELOPMENT OF A HEALTH EDUCATION CURRICULUM FOR A RURAL GUATEMALAN SCHOOL

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Introduction

With a population of 13 million, Guatemala is the largest country in Central America. The majority of Guatemala's population lives below the poverty line. People living in urban areas, primarily Guatemala City, may live in poverty but still have better access to public services than their rural counterparts. For those living in rural areas, access to clean water, sanitation facilities, and sufficiently equipped hospitals can be challenging (Goldman, 2000). While many villages have a safe water supply, not all the people have access, particularly in schools. Many restrooms in schools do not have sinks that supply safe water. Without clean water, hand-washing becomes an issue of concern for students and teachers (Water for People, 2005). Hand-washing after using the restroom, before meals, and after coughing or sneezing is one of the most effective techniques for preventing the two problems that rural Guatemalan children suffer from most frequently: acute respiratory infections and gastrointestinal infections with diarrhea (Squibb & Yardley, 1999).

In many small towns health education materials are supplied to the people by their local clinic or medical facility. Many focus on disease transmission, prenatal care, and immunizations. These facilities are often understaffed and insufficiently funded to handle preventative health education (Lindstrom & Munoz-Franco, 2006). Schools must play a more active role in encouraging health education by developing an organized, progressive curriculum that addresses the current health issues of their students and families.

A Curriculum for Colegio Evangelical Shaddai

The idea of developing a health education curriculum originated from the McMaster scholars and fellows and school administrators at Colegio Evangelical Shaddai (CES) during a trip in 2005. The school had an active physical education program and a successful athletic program but was lacking an organized health education component. Research on current health issues and educational programming in Guatemala supported the need for increased health education in the school setting.

This project focused on the following questions. Would providing health education curriculum and in-service training to teachers:

1--Increase the likelihood that school children would develop a greater awareness of healthy behaviors?
2--Help school children make the connection between unhealthy behaviors and disease?
3--Help prevent disease transmission among school children and their families?

With an eye to answering these questions, I began developing the scope and sequence of the material to be included in the curriculum.

The structure of the project centered around developing a health education curriculum for teachers to use as a guide and resource for teaching health in a school setting, in this case, CES. I began by analyzing the American Alliance for Health Education (AAHE) content standards used in the United States, focusing on the standards that corresponded closely with the areas of concern identified in the research of rural Guatemalan health issues. The most common disorders among children and young adults in rural Guatemala were upper respiratory infections and diarrhea. The majority of these illnesses were caused by parasitic or bacterial contamination of food and water and person-to-person contact (Peebley, Hurtado, & Goldman, 1999).

With this information I concluded that the curriculum should be based around disease transmission, proper hygiene practices, nutrition, and understanding the human body systems. Using the AAHE content standards as a guide, I developed a developmentally appropriate progression for the health education curriculum that would be introduced to teachers and students at CES. This included goals and performance indicators for three levels: grades K-2, grades 3-5, and grades 6-8, as well as the development of activities that supported the knowledge and levels of performance that the students would hopefully achieve. The activities provided for each lesson were designed to serve as an example of how to teach various health concepts, therefore leaving individual teachers the freedom to develop additional learning activities as needed to meet the appropriate level of proficiency for a particular standard. Using the website PECentral.com for ideas, I developed activities that were student-centered and culturally appropriate for the students of CES.

Finally, all lesson plans were translated into Spanish and bound into a convenient curriculum guide. Materials needed for various activities were prepared in advance. Reference books and support materials were purchased in Spanish to be shared and re-used by the classroom teachers.

Our in-country experience gave the McMaster team firsthand knowledge of the health issues that we had read about. Improper food storage and contaminated water were the most obvious issues; however, tours of local medical facilities gave us a clearer understanding of what rural Guatemalans were up against. The nurses who met with us spoke candidly about the health issues in the region, as well as the needs of the medical facilities. Although the facilities were clean and well-maintained, they were clearly insufficiently staffed and lacked appropriate medical supplies. One clinic lacked rubber gloves and any type of disposable bedding or cleaning supplies. All materials used had to be hand-washed every day. Basic equipment, such as stethoscopes, sphygmomameters, microscopes, and ultrasound equipment were in critical demand. Most local clinics were responsible for treating every type of ailment; however, if the medical condition became too serious, then the patient was responsible for transportation to an urban hospital. As Lindstrom and Munoz-Franco (2006)

point out, most rural clinics do not have access to ambulatory transportation.

With the community conditions in mind, we set about the task of decreasing disease transmission and increasing healthy behaviors by introducing a health education curriculum and in-service training to teachers at CES.

We were greeted with many surprises on our first day at CES. The class sizes were large, which made some of the planned activities somewhat difficult but not impossible to facilitate. There was very little time allocated to spend with the teachers for the in-service training. Most teachers were with their students at all times. There was not an opportunity to explain in detail the progression of the health education plan; however, the teachers all received a copy of the plan and were able to participate in one or more activities that were facilitated in the classrooms. Most teachers appeared interested in the new materials.

The students at the school were eager to engage in the more student-centered lessons that were introduced. They approached each lesson with enthusiasm and motivation to understand the new concept or show proudly that they already were knowledgeable in the area being covered. The following examples illustrate the kinds of educational activities that we introduced.

- *Germ Ball*: Passing a glitter covered ball around the circle, demonstrating how germs spread from person to person contact. (grades K-2)
- *Rush to Brush*: Teeth brushing activity. CES students were given toothbrushes and paste. In small groups we practiced proper brushing techniques and discussed the importance of brushing after meals. (grades K-2)
- *Food Pyramid*: Using food advertisements from a local newspaper, students constructed food pyramids that represented a balanced daily diet. The student pyramids were then displayed in the classroom. (grades 3-5)
- *Skeletal Jigsaw*: Putting together a puzzle of the human skeletal system. (grades 3-5)
- *Target Heart Activity*: Locating and graphing heart rate readings after various levels of exertion. This led to a discussion of the importance of exercising within one's target heart rate zone. (grades 6-8)

Reflection

Developing a health education curriculum for teachers to use in their classrooms at CES definitely increased student awareness of healthy behavioral choices. Without having much time for in-service training with teachers, I am hesitant to say that long-term behavioral change will take place. If teachers continue to develop the curriculum and integrate new activities, students will benefit by incorporating many of the new concepts into their daily lifestyle. Having knowledge of healthy behaviors is the critical first step; however, students must be given the opportunity to practice these new behaviors frequently if we expect assimilation to occur.

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