[1]Improving the Health of Underserved Communities: A UNI-UCC Institutional Development Partnership

Community Needs assessment

Introduction

This is a report of a needs assessment conducted as part of a project whose summary is presented below. The executive summary of the project is followed by a summary of the needs assessment and the detailed report. Any inquiries about the needs assessment report or the project should be directed to Dr Joseph Ogah, 220 WRC, University of Northern Iowa, Cedar Falls, IA 50614, USA; Tel.: +319-273-6411; e-mail: global@globalhealthcorps.org. OR: Dept. of Health, Physical Education and Recreation, University of Cape Coast, Cape Coast, Ghana. Tel: +233-42-30634.

A. Executive Summary of Project

The University of Northern Iowa (UNI) in the US will partner with the University of Cape Coast (UCC) in Ghana to respond to the health needs of underserved Ghanaians through a train-the-trainer program that integrates cultural competency, public health education, and field-based experiential learning. The project directly addresses USAID goal of increasing the contribution of the host-country higher education institution to sustainable development, one USAID Ghana mission strategic objective of improving family health, as well as having implications for increasing effectiveness of the primary education system.

The program will:

1. *Increase the capacity of UCC and UNI to train effective health educators*
2. *Develop better prepared health education professionals, especially for underserved communities*
3. *Improve access to community health education in schools and underserved communities*
4. *Reduce health risk in underserved communities*

The phases of the proposed project are to:

1. *Evaluate health needs of underserved local communities, and assess the competence and preparedness of students to provide health education in these communities.*
2. *Adapt GHC community health education practicum curriculum, and implement it locally.*

[1] In the project the terms underserved, deprived, underprivileged, and disadvantaged are used synonymously to describe communities that, as a result of several factors, are exposed to multiple health risk factors.

3. *Assist in placing students in underserved communities for student teaching, assess impact of the program on students and participating communities.*
4. *Assist in placing students in teacher training and community health nursing colleges, where they are expected to replicate the program.*

The project is led by the UNI Global Health Corps, an award winning cultural competency education model program, established through assistance from the US Health Resource and Services Association (HRSA). Since 1996, the program has educated 350 students who have provided services to over 20,000 underserved individuals in the U.S., Mexico, the Caribbean, the Middle East, Eastern Europe and Ghana.

B. Summary of Needs Assessment

This needs assessment was conducted with three goals:

I. Determine the preparedness of University of Cape Coast students to teach health education in underprivileged communities.
II. Determine health status, health needs, and health resources of underprivileged communities.
III. Use health needs assessment process as a learning experience for students.

An eclectic approach, utilizing both quantitative and qualitative methods, was used in collecting data. Whereas quantitative data were collected over a period of 2 weeks, qualitative data were collected over a longer period. This was done to verify and clarify initial data claims. Data collection tools used included a health education knowledge test, “Preparedness to Teach Health Education Scale,” community health needs survey, focus group discussion (FGD), and observations. Quantitative data were collected from 292 students and 622 household units from selected underprivileged communities around the University of Cape Coast.

Among the results for students were high levels of health education content knowledge, and moderate to high self-rated preparedness to teach health education in underprivileged communities. The results of the community health needs assessment partially confirmed pre-existing notions about underprivileged communities, but also revealed unexpected outcomes. Results are briefly discussed in the context of health education planning.

C. Methods

II. Assessment of Student Academic and Professional Preparedness to Provide Health Education in Underserved Communities

A key assumption for the success of this project is that students have already acquired health education content knowledge, and the project only seeks to develop an effective pedagogical approach to teaching health education under conditions termed

"underprivileged." Thus, to ensure that participants had acceptable levels of health knowledge, they were tested on a health education knowledge test specifically designed for the purpose.

Data collection tools and protocol were developed through several meetings of UNI and UCC faculty and student leaders. A "Health Education Knowledge Test" was developed and administered to students in selected health related academic programs. Students also responded to a "Preparedness to Teach Health education Scale." Additionally, several discussion meetings were held with students during the recruitment period and qualitative data were collected concerning students' preparedness to teach health education after graduation.

II. Community Health Needs Assessment

Community health needs assessment data collection tools and protocol were developed through the process described above. Three main data collection methods were used.

a. Household Survey

A structured household interview guide was developed to collection information about the communities. A household unit, about which data were collected, was defined as a group of persons who "eat from one pot." Students were trained in how to interview and went out to interview in pairs or threes under the guidance of a faculty. Student leaders from both UNI and UCC were trained to enter the data collected. Data analysis was done by faculty.

b. Focus Group Discussions (FGD)

Students were also trained in conducting FGD and to collecting qualitative data concerning key community health issues and resources. Key issues included in the FGD were findings from the household survey. Results of FGDs were discussed at large group meetings.

c. Observation

Student groups visited communities to observe physical conditions and to identify health resources. This was to enable students learn how the organization of communities and the availability of local resources affect health, and how the availability and accessibility of resources are crucial in health education programming.

D. Summary of Results

I. Student Needs Assessment

a. Demographics

Total number of students tested (N) was 292 (Male 42%, Female 58%; Age: Mean = 25.12 years, mini 17 years, max 45 years, SD 5.28 years). The distribution of students by academic program was as follows: Science Education, 44% (n = 128); Home Economics, 42% (n = 123); Physical Education, 8% (n = 24); and Health Science Education 6% (n = 17). These students were at different levels in their academic programs: Level 100, 6% (n = 17); Level 200, 50% (n = 145); and Level 300, 44% (n = 128). Level 100 students who were also Health Science Education students were experienced nurses going through a 2-year professional education program to equip them to teach in basic nursing training colleges.

It should be pointed out that the students who took part in the project came from a larger number of academic programs. In addition to those listed above, students were recruited from the following programs: Primary education, Basic education, and Population and Family Life Education. All these majors lead to a Bachelor of Education degree in the respective fields, except the Health Science Education, which leads to a diploma. Students from these programs are used because the programs have health-related content and there is expectation that graduates will provide health information in their teaching careers. Four graduate students also participated in the project.

The selected sample of students spoke eight major Ghanaian languages. The most mentioned language was Fante, spoken by 72% (n = 210) of the sample. The other languages were Twi, 49% (n = 144); Ga, 36% (n = 106); Ewe, 21% (60); Hausa, 11% (n = 32); Dangme, 8% (n = 24%); Dagbani, 7% (n = 19); and Nzema, 5% (n = 14). Additionally, 15 other local languages were mentioned: Ahanta, Dagaare, Gonja, Walewale, Efutu, Nankani, Guan, Kassem, Krachi, Kusasi, Kyerepon, Moshie, Siseli, Wale, Taleni.

Fante is the most mentioned language probably because the University of Cape Coast is located in a Fante-speaking area. Many students pick up Fante while attending the university. It is also possible that some students lied about their Fante speaking for fear that they might be excluded from the project. The language diversity is an indication of the ethnic diversity among students. Such diversity is very important in discussing cultural issues in health education, where students bring different knowledge and views to the discussion. A note of caution is that many university students have been raised in cosmopolitan environments and whatever knowledge they present about their cultures may not represent the accurate situation in the traditional underprivileged communities.

b. Health Education Content Knowledge of Participants

Figure 1 shows the distribution of the performance of students in the Health Knowledge Test. Only 7% (n = 20) scored below 70% on the test. This confirmed the assumption that students already have a high level of health education content knowledge. A breakdown of results by gender (Figure 2), academic program type (Figure 3), and academic level (Figure 4) showed no significant differences. Health Science students scored highest on the test and, because they were Level 100 students, they made Level 100 score highest on the test.

Figure 1: Distribution of health education Knowledge

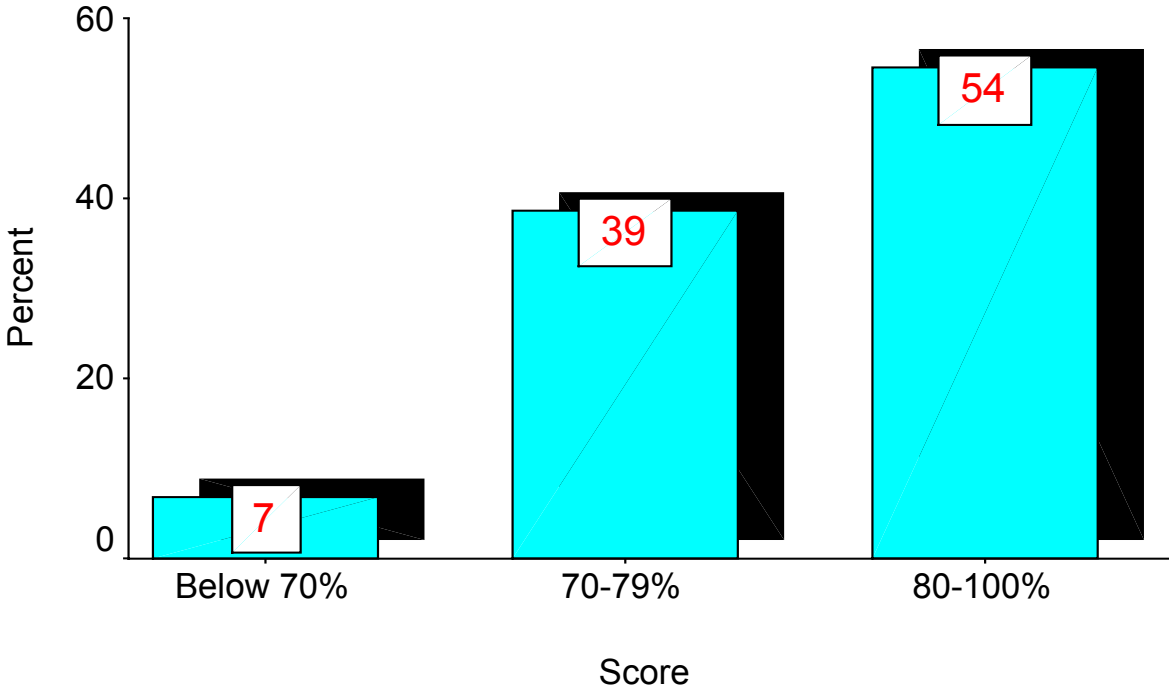
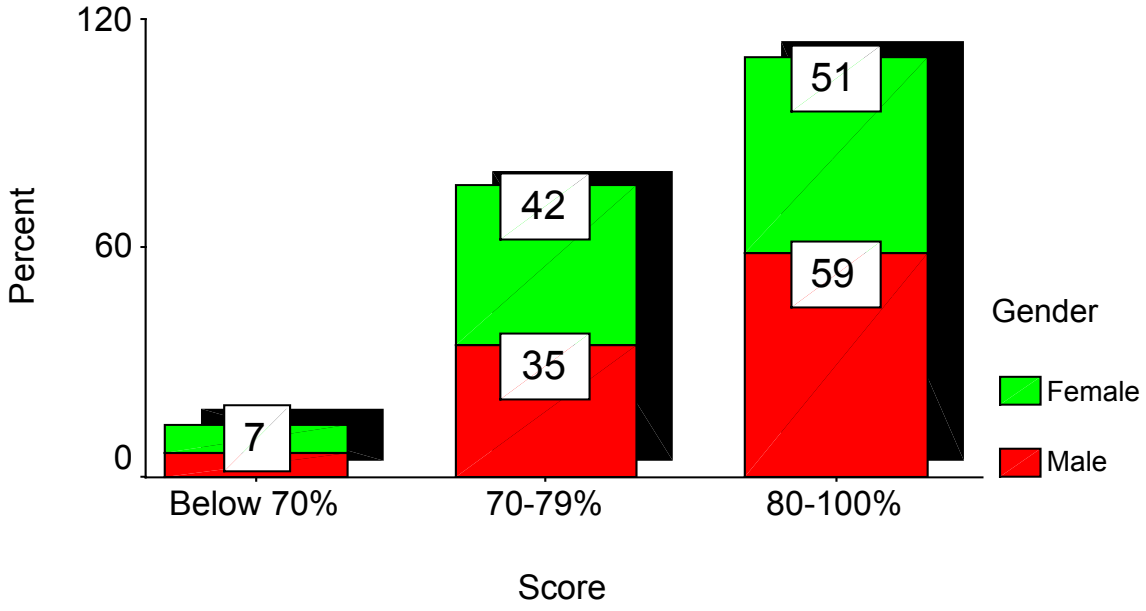


Figure 2: Distribution of health education knowledge by Gender



Gigure 3: Distribution of health education knowledge by Program of study

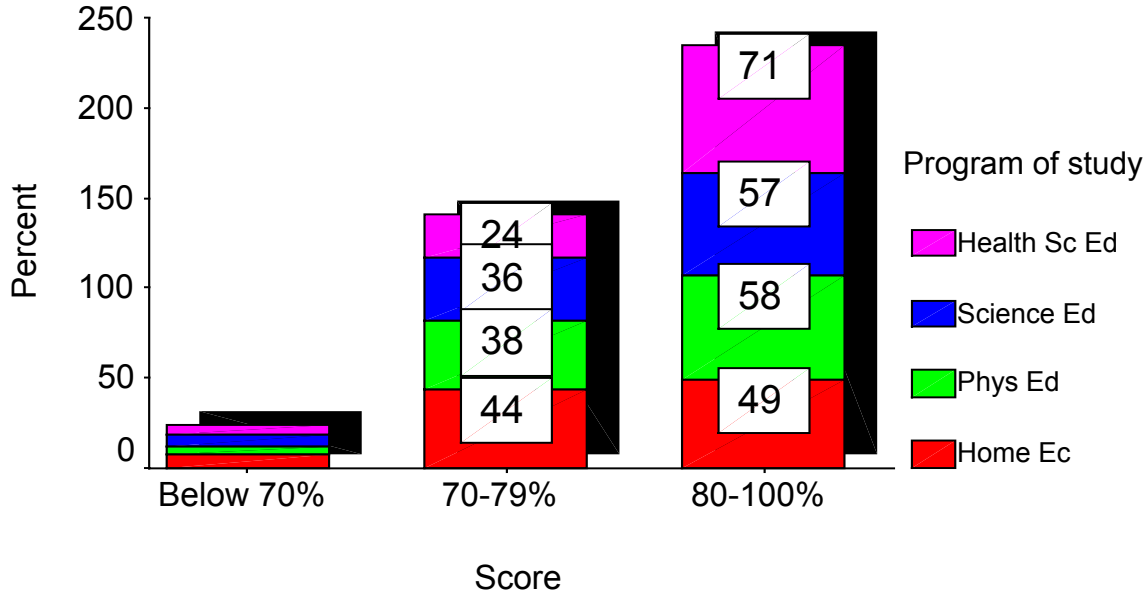
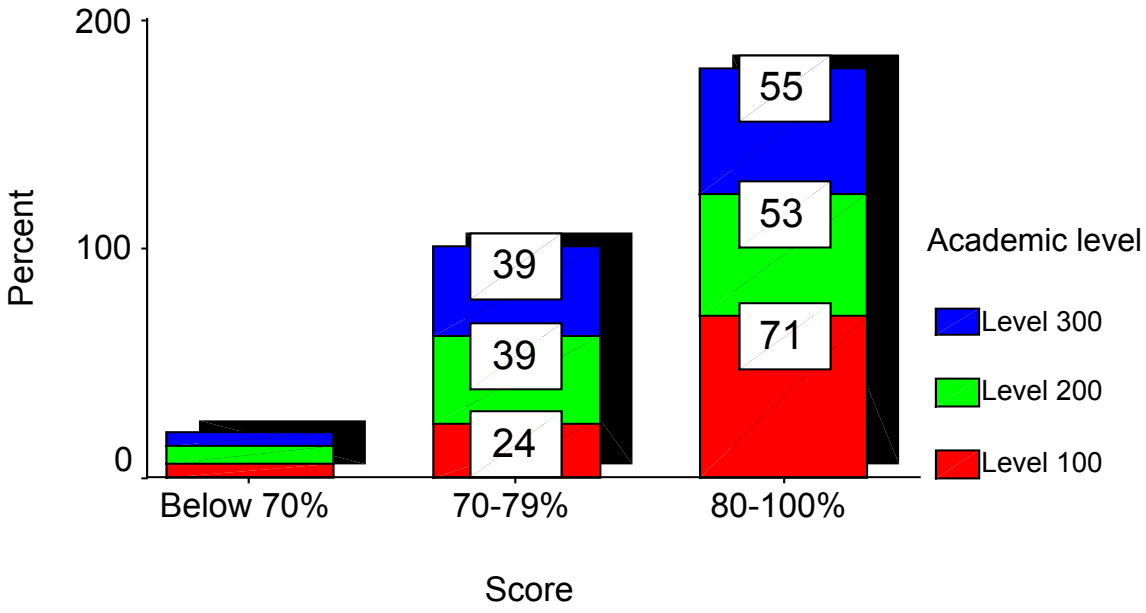


Figure 4: Distribution of health education knowledge by Academic level



c. Preparedness to Teach Health Education in Underserved Communities

As health education is not an independent subject in pre-university education, the general expectation is that health education will appear in a number of subject areas. Without a clear health education teacher education program, it is not clear how professionally prepared pre-service teachers are for teaching health education. The results presented in this section (Table 1) provide an insight into student preparedness to teach health education in underprivileged communities. In discussing the results, we focus mainly on “Strongly Agree” as acceptable, and combined “Disagree” and “Not sure” as unacceptable.

In all, 65% of students strongly agreed that it was their professional duty to provide health education in underprivileged communities. However, only 17% strongly agreed that their academic departments prepared students towards this duty, and as much as 30% either disagreed or were not sure that departments performed this function. It appears that health related academic programs at the University of Cape Coast do not emphasize activities aimed at preparing teachers to provide health information in underprivileged communities.

This lack of preparation may account for the fact that only about one-fifth of students said they knew how to do health needs assessment, plan, implement and evaluate health education activities in underprivileged communities. In fact, the proportion of

students who said they could not, or were not sure they could perform these elementary health education activities ranged from 27-35%. This admission of students on their inability to teach health education in underprivileged communities underscores the need for a project like this.

In spite of this obvious lack of ability, 40% of students said they had strong confidence in their ability to provide health education in underprivileged communities, and only 16% doubted their ability. Also, 49% of students were willing to teach health education in underprivileged communities, with only 13% unwilling or not sure. While it is heartening that the majority of pre-service teachers are willing to teach health education in underprivileged communities after graduation, the number can be raised if ability to teach in underprivileged communities is improved.

Table 1: Student self-rated preparedness to teach health education in underprivileged communities
(SA = Strongly agree, A = Agree, NS = Not sure, D = Disagree, N = Number of Responses)

Preparedness to Teach Health Education Item	**Level of Agreement (%)**				
	SA	**A**	**NS**	**D**	**N**
Perceived expectation to provide health education					
1. Providing health information in underprivileged communities is a professionally expected duty of me	65	28	5	2	287
Perceived academic preparation to provide health education					
3. My department prepares students to provide health education in underprivileged communities	17	53	13	17	283
Perceived preparedness to provide health education					
4. I know how to assess and identify health needs of underprivileged communities	26	48	17	9	279
5. I know how to plan health education activities to help reduce health problems in underprivileged communities	21	52	15	12	281
6. I know how to implement health education activities to help reduce health problems in underprivileged communities	20	51	17	12	280
7. I know how to evaluate health education activities to determine program effectiveness	19	45	25	10	278
Perceived confidence to provide health education					
8. I am confident in my ability to provide health education in underprivileged communities	40	44	11	5	280
Willingness to provide health education					
9. I am willing to provide health education in underprivileged communities when I complete my current program and start teaching	49	38	9	4	278

B. Summary of Results of Community Needs assessment

Location and Population

Ten disadvantaged communities within a distance of 0.5-15.0 km from the University of Cape Coast were selected for the project. The communities were put into five pairs for the sake of convenience. One pair is made up of two fishing communities, Duakor and Abakam and located on the coast of the Atlantic Ocean. The inhabitants are Ewe-speaking migrant fisher folks who hail from the southern part of the Volta Region of Ghana. They have lived in this location for many years. The rest of the communities are Akotokyir, Kwapror, Atonkwa, Ntranoa, Amoanda, Amisno, Abee and Simiw. These are Fante speaking indigenous communities. It should be mentioned that a few inhabitants of these communities are well-educated persons who commute to work in the cities. Table 2 shows the distribution of household units surveyed.

Table 2: Distribution of number of households surveyed by community pair

Communities	**Frequency**	**Percent**
Abakam/Duakor	130	21
Atonkwa/Ntranoa	101	16
Akotokyir/Kwapror	141	23
Amissano/Amoanda	106	17
Abee/Simiw	144	23
Total	622	100

Community Organization

The communities are run like little kingdoms. Each community has a chief through whom important issues of the community must pass. Government representatives in the communities are called Honourable Assemblymen and women. These are elected officers who govern at the local level through Unit Committees. Chiefs and assemblymen and women are the official gatekeepers to the communities.

Number of persons per household unit varies from 1 to 12 or more (Table 2), but the majority (50%) of households has 4 to 6 residents. There is generally an equal distribution of males and females in households (Table 3), however, 11% (n = 71) of households are headed by single males, 27% (n = 167) by single females, and 62% (n = 383) by both male and female (double head).

Table 3: Distribution of number of persons Per household

Persons/Household	Frequency	Percent
1-3 persons	139	22
4-6 persons	307	50
7-9 persons	132	21
10-12 persons	31	5
> 12 persons	11	2
Total	620	100

Table 4: Distribution of number of persons per household by gender

Number of Persons / Household	Male		Female	
	Frequency	Percent	Frequency	Percent
0-3	443	76	403	68
4-6	128	22	168	28
7 or more	12	2	25	4
Total	583	100	596	100

The larger number of single female heads could be explained as the result of failed marriages and widowhood. It was however with difficulty that the concept of “double headed” households was included in the survey, and with even greater difficulty that we tried to explain the large proportion of households indicating that they had double heads. In a typically patriarchal society like Ghana, the male is supposed to be the automatic head. However, among the Fantes, there is what is called matrilineal inheritance, where children inherit maternal uncles. We observed that there were many homes in these communities where household headship with regard to day-to-day decision-making was either shared, or, in some cases, fell on women. It was therefore not surprising, although against conventional thinking, that we found 62% of households indicating having double headship.

It was not clear whether the matrilineal tradition of the Fante communities contributed to the prevalence of the double head phenomenon. To try to verify this, we analysed the data by community inheritance status (matrilineal vs. patrilineal). The result showed that the proportion of patrilineal communities with double heads was 41%, compared to 67% of matrilineal communities. Subsequently, patrilineal communities had a larger number of single male heads (16%) than matrilineal communities (10%). It is interesting to note that as much as 43% of patrilineal households were headed by single female heads, compared to only 19% of matrilineal households.

This finding does not suggest that patriarchal tendencies in traditional Fante communities is no more an issue; it is possible that the concept may have been misunderstood as simply “marriage.” Nonetheless, the lesson we learned was that health educators should look beyond popular traditional beliefs and take advantage of

areas where women have some control in family decision making in trying to improve the health of family members.

Considering the age distribution of household members (Table 5), 61% of households had at least one preschool age child, and 23% had at least one person who was 55 years or older. The diversification of households by gender and age suggests a health education approach that should be multifaceted and integrated. Our observation was that, under the pretext that life expectancy is low in underprivileged communities in developing countries, the health needs of many elderly persons in these communities have been completely ignored. Indeed, during our study, there was an incident in one of the communities that we report here. A 70-year old (or so) man was burned to death when he was trying to light a lantern in his room. Injury prevention education in underprivileged communities, especially among children and the elderly, is a pressing need in underserved communities.

Religion of Household Heads

Christianity is the predominant religion in these communities, making up 84% of all household heads. Other religions represented are Islam (4%), Traditional Religion (6%), and no religion (7%). It was not surprising that the majority of these community members are Christians. It is however, necessary to understand that there are many differences among numerous sects within each major religion. It is also important not to marginalize religious groups in the minority. For instance, it will be inappropriate to use only Christian principles in health education activities in these communities without regard to the beliefs of the 17% who are not Christians.

Table 5: Percentage of household units having at least one person certain age groups

Age Group (Yrs)	Frequency	Percentage
0-5	379	61
6-12	404	65
13-18	299	48
19-24	218	35
25-54	554	89
55 and older	143	23

Economic Activities

In table 6, we display the kinds of work done by household heads. The data have been arranged to highlight gender issues. There are a number of interesting observations about the data. First, all the jobs are low-income, except for public service jobs, such as teaching and nursing. Note how only 3% of women, compared to 18% of men, are in public service jobs. Second, note the small number of jobs common to both male and female, and the greater proportion of female traders. Third, note the nature of jobs done exclusively by each gender. Fourth, observe the fact that no female head claimed to be

unemployed. In fact, it is said that “self-employed” is a soft term for “unemployed.” Our observations also revealed that many of the men who said they were artisans (carpenters, auto mechanics, masons, electricians, etc.) and drivers were not necessarily working regularly. Our conclusion from these data is that most people in underprivileged communities do not have stable sources of income, and any health education activity that involves additional expenses on the part of community members is likely to fail.

Table 6: Distribution of Employment status of household unit heads

Job	Male	Percent	Female	Percent
Farmer	132	31	157	29
Public servant	75	18	14	3
Trader	11	3	212	40
Artisan	109	26	-	-
Fisherman	26	7	-	-
Security person	25	8	-	-
Labourer	21	5	-	-
Driver	18	4	-	-
Unemployed	14	3	-	-
Self-employed	9	2	-	-
Fishmonger	-	-	44	8
Beautician	-	-	32	6
Food processor	-	-	27	5
Caterer/food seller/bar tender	-	-	24	5
Other	-	-	13	2
Total	428	100	537	100

Water

All the communities have at least a hand pump well, which is often not in working order. A few communities have pipe-borne water, but available only in a few homes, where it is sold by the bucket. Most people do not buy water. The wells are inadequate and are often broken down. Besides, well water is hard in most cases (at least that was the complain). Thus, the majority of the communities rely on streams for water; streams that dry up every year at the pick of the dry season, setting off an annual water crisis not only in these villages, but also in the entire Cape Coast area. Furthermore, in some of the communities, people bathe and wash clothes in the stream.

Sanitation

Some of the communities have nice looking toilets, built by some foreign organizations. Very few people use these toilets for at least two reasons. First, there is only one of such toilets in each community, and some residents have to walk a long way across the village to get to it. Second, there is a fee for using the toilet, which at the time of the

project, was 100 cedis. At a dollar rate of 9,000 cedis at the time, that is approximately 1cent. However, in a household of 5 persons, if each person is entitled to two bowel movements a day, that amounts to 1,000 cedis or 10 cents a day. Thus, a family would spend 30,000 cedis a month on bowel movement alone! Most households in these communities do not have 30,000 cedis cash to spend on food per month, let alone on bowel movement!

This state of affairs results in a situation where about 27% of households use "free range," that is, making bowel movements at the beach or nearby bushes. Over 80% of households in the two coastal communities use free range. The difficulty in digging and maintaining pit-latrines in the sandy coastal communities may have led to the development, over the centuries, of the habit of defecating along the beach for waves to wash away. Although a few KVIPs are located in these communities, residents say they are not encouraged to use them because of the distance, and the stench in these facilities.

Table 7: Unit's main toilet facility

Facility	Frequency	Percent
Water Closet	5	1
KVIP	351	62
Pit Latrine	59	10
Free range	155	27
Total	570	100

Table 8: Unit's main Bathroom facility

Facility	Frequency	Percent
Private	174	28
Shared private	315	51
Public	115	19
Free range	13	2
Total	617	100

Survey results showed that 52% (n = 315) of households said they throw refuse away, 45% (n = 273 said they burned it, and 3% (n = 21) said they buried it. Our observation is that each community has several places where people dumped refuse. Occasionally, fire is set to the refuse, and this is what some referred to as "burning." In other words, dumping and burning of refuse are not necessarily different methods of disposal. We also observed that, in many of the communities, children use the refuse dumps as free range for bowel movement. Some of the refuse dumps are located near the stream in the village, and when it rains, run off water drains from the dump to the stream.

Energy

All the communities, except Simiw, are connected to the national electricity grid, but very few people use electricity. First, most houses are not wired for electricity; such houses do not meet the standard for electrification. Second, people cannot afford the cost of electricity. The main sources of energy are firewood, charcoal, and kerosene.

Communication

Apart from Duakor and Abakam that lie on the Accra Takorandi highway, and Simiw that is about 3 KM from a major motorable road, the rest of the villages lie within less than

half a kilometre to 2 KM to major roads. There is no regular motor traffic from the communities of the main roads. There are no telephone facilities in these communities although a few people (teachers and other government workers) have access to cellular phones.

Education

Table 8 shows the distribution of highest educational attainment in household units. In all, 74% of households have not had any household member attain higher than elementary school education. Going through the communities, we observed that basic education is available in all the communities, although the schools may be described as non-performing. Most of the schools have reasonably good school buildings, and are fairly well staffed, except one community, Simiw, that lies in a remote area and has no good access road, no good source of drinking water, and no electricity. Many of the schools lack textbooks and other materials. In one class of about 50 children in one school, there were less than 10 English reading books.

While low-level education is generally characteristic of underprivileged communities, the numbers are frighteningly high, especially because these communities are very close to Cape Coast, a regional capital of the country. Low-level education poses at least two major challenges in health education. First, preventive health lies very low on the priority list of needs of people in underserved communities. Second, the task of providing health education to people with low-level education is delicate.

Table 8: Highest Educational Attainment in Household Unit

Educational Attainment	Frequency	Percent
None/Preschool	39	6
Primary/Some primary school	78	13
Middle/JSS/Some Middle/JSS	342	55
SSS/Vocational/Technical/Some SSS/Voc./Tech.	109	18
Post Secondary	49	8
Total	617	100

Child Health

In order to learn about child spacing in the communities, units were asked to indicate the shortest spacing between any two children under-5 years of age. The results show that 72% (n = 116) of responding household units had minimum spacing that was two years or longer, 19% (n = 30) had minimum spacing between 1-2 years, and 10% (n = 16) had minimum child spacing that was shorter than a year. The negative consequences of very short child spacing in deprived communities include malnutrition (kwashiorkor), anaemia, stunted growth, inadequate attention for the children, as well as anaemia, stress, and increased family poverty, especially for the mother and her family.

This situation calls for increased family planning services, as well as enhancing the education of girls. Nutrition education for the management and prevention of malnutrition is needed.

With regard to child immunization, we found that a very high percentage of children (Table 9) have been immunized, or are following the recommended course. This high immunization coverage has been a result of massive national and international collaborative efforts to immunize children in Ghana. Community health nurses visit communities regularly to monitor child growth and provide immunization at no cost to community members. These efforts need to be reinforced so that the high coverage does not result in complacency.

Table 9: Immunization status of children below age 3 years

	Child 1		Child 2	
Immunization status	Frequency	Percent	Frequency	Percent
Complete/On course	176	96	16	84
Defaulting	6	3	-	-
Never started	2	1	3	16
Total	184	100	19	100

Nutrition

We observed, as shown in Table 10, that the main energy sources of food in the communities are cassava and maize. These food items are often processed into many different kinds of food items, the most popular being gari and fufu from cassava. By far the most common source of protein is fish, which 95% of households said they consumed frequently. Note that very few people consume meat, and that the consumption of beans, which has been marketed for many years as a substitute for meat in low-income areas, is even lower than the consumption of meat. We also observed that although most people eat fish, very small quantities are eaten. With regard to vegetables, we observed that they are used as garnishment in most cases. Occasionally people make okra, garden egg, or contomire (green leaves) stew or soup. Fruit eating in these communities has no dietary considerations. Fruits are regarded as sweets. People eat fruits once a while, i.e., when they “feel like eating” them. Fruits are relatively expensive in these communities and, considering the low levels of income, some people say regular eating of fruits is a foreign practice.

Table 10: Percentage of households that indicates eating this food frequently

Food stuff	Number	Percent
Cassava	562	90
Maize	518	83
Rice	234	38
Plantain	142	23
Yam/coco yam/potatoes	44	7
Fish	591	95
Meat	57	9
Beans	45	7
N	622	100

Nutrition has to be conceptualised in a different way from the “servings per person per day” approach. Nutrition should be viewed on a continuum of optimum to inadequate within a household. The goal of health education should be to help slide families towards the optimum end. There are also perceptions such as children should eat more “food” than fish, and men should eat the lion’s share of meat or fish. Gender issues in feeding, such as the pressure on women to feed men well, have many marital and social implications that are not elaborated in this report. Suffice it to say that men need to be educated to voluntarily begin moving away from their privileged position as far as family feeding is concerned. In many homes children come first in the eating order by time, but not necessarily by the quality and quantity of what is eaten. There is a story about the response of men when they were advised to give better food (more meat and fish) to their children. They wanted to know why the advice did not come when they were young, but has come at the time when they are old and enjoying meat. This may sound like a joke, but it characterizes the attitude of many men in underprivileged communities.

We also examined school related feeding practices of children. Children from 26% (n = 121) of households eat light breakfast, 63% (n = 291) eat heavy breakfast, while 10% (n = 48) eat no breakfast before going to school. Of those who eat before going to school 71%, (N = 412) eat heavy food. Although heavy food was not very clearly defined, some teachers complained that children who eat heavy breakfast sleep in class more than others. Teachers have been advising parents to feed children on light breakfast before school. Some parents said the only food they have and can afford is heavy. Some of the heavy food can easily be reorganized into light food. Parents need food preparation skills that will make this happen. Home economic lessons should consider including some of these issues in the teaching curriculum.

Table 11 contain survey data on how children feed in school. Children from the majority of homes take money to school for lunch (56%, n = 265), but those from 19% (n = 90) of homes go to school without food or money for food. Teachers corroborated these data. Such children probably eat a heavy breakfast and go home to eat again after school. School ends at about 2:00 pm for primary schools and 3:00 pm for junior secondary schools. Note that children from a small number of homes (2%) who live close to

schools go home to eat during the lunch break. The main concern about children taking money to school is about what they spend it on. At all schools food, snacks, and sweets are sold. Some children spend their food money on sweets (candy) and ice cream.

The main health issues include food choices being made by school children, and food safety. Food safety with how children handle the food they take to school, and the conditions under which food is prepared and sold at schools. The schools already try to improve safety through guidelines to school food vendors. What is needed is for these measures to be reviewed and strengthened.

Table 11: How children eat in school

Type	Frequency	Percent
Take food to school	59	13
Take money to school	265	56
Take money and food to school	40	9
Take nothing to school	90	19
Fed by school	9	2
Come home to eat	8	2
Total	471	100

Concerns about water are similar to those of food. Children from 45% (Table 12) of homes drink water supplied by the school. What this means is that each school day a number of school children go the well or stream and draw water for drinking that day. Some children also buy water (iced where there is electricity) from water sellers. In these communities, the water being sold has been drawn from the well or the stream and poured into plastic bags. Improving the conditions under which children drink water in school is a major health education goal.

Table 12: How children drink water in school

Type	Frequency	Percent
Take water to school	123	26
Buy water at school	92	20
Drink from public pipe/well	27	6
Drink water supplied by school	204	43
Come home to drink	25	5
Total	471	100

Health Care Resources and Utilization

There are a large number of health care facilities that serve the communities of the project. The following are some of the specific health facilities that community members attend: Central Regional Hospital (state of the arts facility), the Cape District hospital,

University of Cape Coast hospital, Elmina Clinic, Ankaful General Hospital, Sisters of Charity Clinic, and Ankaful Psychiatric Hospital. These facilities are cash-and-carry (fee-for-service) facilities within a distance of 2-15 km depending on community and facility. It should be mentioned however that, unless one has money to charter a taxi, some of the distance between homes and these facilities is covered on foot.

Community health nurses also conduct routine visits to the communities for child immunization, maternal health education and, occasionally, school health education (oral and vision screening). Some sort of a chemical shop (called drug store) is located in each of these communities. These chemical shops are very critical to health care in the communities in a way that requires research. The shopkeepers diagnose diseases, suggest alternative medication, recombine medication, administer injections, and, above all, they have flexible payment plans for clients. Other sources of health care include herbalists, spiritualists and self-medication.

We sought to find out which health resources household units utilize most. The results in Table 13 indicate that 88% of households said they frequently utilize hospitals and clinics, 18% of households said they frequently do self-medication, while 38% said they used the drug store. Note the low patronage of herbalists (6%) and spiritualists (2%), which is against the general belief that underprivileged communities rely heavily on traditional medicine (United States non-traditional medicine). We however caution that there may be severe under reporting of usage of traditional health resources due to social desirability. There is a negative perception for these traditional health resources because they are associated with juju or evil. As these communities are made up predominantly of Christians, people may not want to be associated with traditional health practices.

Table 13: Percentage of households that frequently use particular health facilities

Health Resource	Number	Percent
Hospital/Clinic	547	88
Herbalist	37	6
Spiritualist	12	2
Drug store	236	38
Self-medication	112	18

Health Status

Hand washing: The majority (64%, n = 386) of households said hand washing is a regular practice, 37% (n = 204) said they do hand washing sometimes, while 3% (n = 18) said regular hand washing is not their practice. However, follow up qualitative data showed that “hand washing” was construed to include hand washing just before a meal. As most people use their fingers in eating Ghanaian dishes, people usually wash their hands before eating. Thus, some sort of hand washing exists in all homes and the

questions that arise are (1) when exactly should people wash their hands? (2) What is the right way to wash hands?

Alcohol drinking: In answer to the question whether any person in the household unit had an alcohol-drinking problem, 18% answered in the affirmative (n = 106) while 82% (n = 494) answered in the negative. Alcohol drinking problem was not defined but it was used because in these communities, alcohol drinking per se is a normal practice, and it is only when people overdo it that it becomes a problem. Thus, an alcohol-drinking problem may be anything from binging, addiction, to simply spending money on alcohol instead of food or paying school fees. The fact that some people are not satisfied with alcohol drinking in their homes offers a window of opportunity for health education.

Household health status rating: We also sought to find out how household unit heads felt generally about health in the household. Table 14 shows that 44% (n = 274) of household heads said they were generally satisfied with health in the unit, 48% (n = 297) were not quite as satisfied, and 8% (n = 47) were not satisfied at all. Follow up questions sort to find out what health problems were of most concern in households. The results showed clearly that for people in these communities health is the absence of ill health. List A is a partial list of health problems that community members said they frequently experience.

Table 14: General satisfaction about health in the unit

	Frequency	Percent
Very satisfied	274	44
Not quite satisfied	297	48
Not satisfied at all	47	8
Total	618	100

List A: Most stated health problems experienced

Abdominal disorders	Coughing	Ear problems
Diarrhoea	Dizziness	Epilepsy/fits/convulsion
	Anaemia	Fever
Headaches	Swollen feet	Hernia
Bodily pain		Hypertension
Rheumatism	Eye problems	
Joint pains – waist/knees		Injuries
		Asthma
		Skin

Abdominal disorders and diarrhoea may be due to lack of dietary fibre or infection from contaminated water and food. The preponderance of aches and pains may be related to the major occupations in these communities: farming. Malnutrition may

also account for dizziness and anaemia, while hypertension, dizziness and swollen feet may also be in the same category of health problems. Fever often refers to malaria in these communities, and it is very common because mosquitoes abound. Many people do not have mosquito nets. The frequency at which ear, eye and skin problems, as well as injuries were mentioned was alarming. Most skin problems and injuries are observable in the communities.

Community members have a clear understanding between mosquito bites and illness, but the understanding of the link between health and nutrition, sanitation and water was not very strong. For instance, some people prefer drinking stream water (which may be contaminated) to well water (which tasted salty and was not “filling”). To support their claims they used arguments such as “our people have drunk water from this stream for 100s of years and, if the stream is full of diseases, how come we are all not dead; our forebodes even lived longer than us?” These concerns provide unique opportunities for health education.

Conclusions

Students

A need exists at the university of Cape Coast to enhance the professional and pedagogical proficiency of pre-service teachers and nurse educators in their ability to provide culturally appropriate health education especially in deprived communities. Students are of a wide variety of social, economic, cultural, and geographic backgrounds. This makes students a great resource for cultural competency training. Specific need areas may include the following:

- How to conduct simple personal, family, small group, and community health needs assessment.
- How to collaborate with community members to decide health improvement goals.
- How to identify, evaluate and utilise community resources in health education.
- How to identify and factor social, age, gender, economic, occupational, environmental, attitudinal, and cultural issues into health education.
- How to utilise appropriate participatory health education strategies.
- How to apply multiple health education strategies matching them to appropriate situations and conditions.
- How to collaborate with other health care and social service providers to improve the health conditions of communities served.
- How to apply simple health education activity evaluation techniques.
- How to raise funds for community health education activities.

Deprived Communities

The general attributes of deprived communities were observed:

- Low education
- Low income
- Lack of social, economic, and communication infrastructure
- Lack of opportunity for development
- Low access to health care
- Lack of good sources of water
- Inadequate availability of food.

There are, however, critical variations and combinations of these attributes that make the health needs of each community unique. In general, health education needs of deprived communities include the following:

- Nutrition education: knowledge; creative and innovative food preparation skills; attitudes.
- Food and water storage and safety skills.
- Personal hygiene: regular hand washing, tooth cleaning, etc.
- Injury prevention: fire, tools; children, the elderly, occupational, etc.
- First aid.
- Reproductive health, sex education, STI/HIV and undesirable pregnancy prevention among adolescents and youth.
- Family planning education among adults.
- Sanitation and environmental health.
- Disease prevention, especially malaria and gastro-intestinal infections.
- Maternal and child health.
- Health screening: blood pressure, diabetes, vision, etc.
- Alcohol and other drug use.
- Health seeking behaviours.
- Advocacy for the supply of social, economic, and health care needs.

This project was supported with funds from the United States Agency for International Development (USAID) through the Association Liaison Office for University Cooperation in Development (ALO).