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Student's Projects for Health as a Tool for Equitable Access to Health Services

By Hiba Mahgoub[1], Elhadi Ibrahim Miskeen [2,3], MBBS, MD, Mohammed Almobarak[2,4]

1. Final Year medical Student, University of Gezira Faculty of Medicine.
2. MBBS, University of Gezira.
3. Department of obstetrics and Gynaecology, college of medicine, university of Bisha, Bisha 61922, P.O. Box0011, Saudi Arabia.
4. Core Surgical Trainee, Sudan Medical Specialty Board SMSB, Khartoum Sudan.

Abstract

In developing countries, especially where a large proportion of the population still resides in rural areas, health care access and delivery are often poor, and can potentially benefit from innovative service models and supporting technologies. In these rural areas, the challenges of health care quality are many, ranging from poor infrastructure, low literacy, poverty, to inadequate monitoring of patients with chronic or serious diseases. The myriad of challenges requires innovative solutions that are affordable, robust, and sustainable over time. Engaging stakeholders, policymakers, and empowering community leaders to take the lead in addressing their own health problems and planning the management of them are of the main objectives of the rural field training program offered by the University of Gezira. This program aims to raise community awareness and address the main health issues that face the community it serves.

Key Words

Health Projects, Rural areas, Underserved communities, stakeholder engagement, students' efforts.

Introduction

It was not until 1976 that University of Gezira was established in Wad Medani, with a purpose and commitment to serve the community in which it is located. This is evident from the content of educational mission entrusted to it and identified in its function "to study the environment of Sudan and in particular the rural environment, to identify the issues and conduct research around it." Adoption and implementation of Community orientation

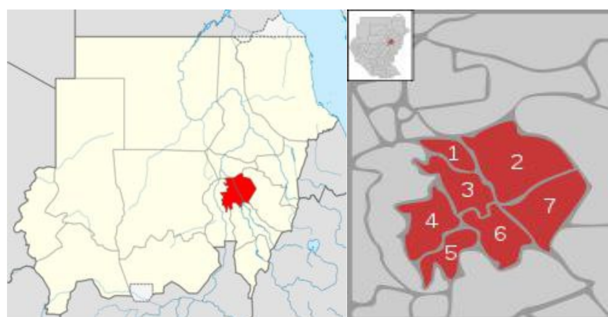
Community Based Education (CBE) strategy in which part of the curriculum is learnt in the community, an integration of basic, clinical, and socio-behavioral sciences is the basis for the Faculty of Medicine, University of Gezira FMUG to achieve its vision and mission. This includes graduating doctors who are qualified for providing preventive and curative health services to promote the health of the society and who participate actively in solving its health problems. [i]

"The village is the cell of the national body, and the cell-life must be healthy and developed for the national body to be healthy and developed" said Sri Aurobindo. This article seeks to focus attention on the necessity of developing and meeting the health needs of a community where we live, as well as fostering clarity of vision on cooperation with all related sectors.

Settings

The students of FMUG are engaged and involved in the community where they live and interact. Among the different levels of their study, each course requirement meets their level of knowledge and determines the intervention and actions they are allowed to take.

An integrated program of field training, research, and rural development (IFRRD), is one of the programs which the students practice CBE. This program is for students in higher levels (second and third years), where they are divided in groups of 18-20 medical students in collaboration with the Faculty of Dentistry, and sent to rural areas in Gezira state.[ii] It is a program of two phases/two years, each group spends a week per phase in a village selected in collaboration with the locality and the head of the village.



Phase 1: During this week various activities are done; health education that meets community needs, targeting of main problems through survey questionnaires, observation and personal interviews, prioritizing them through scoring system, and in support of the village local associations and policymakers conduct the project which solves problem(s) of priority. Phase 2: During this phase students are asked to measuring the impact of their work (Health Education, addressing health and environmental problems, health projects), the village's status, and comparison of data in both phases 1 and 2, are conducted for the elected project. Staff members visit the village to evaluate the overall work achieved.

In this article, we look at an example; a Project of FMUG Students who worked to promote health among school aged children. It reflects stakeholders, policymakers, ad community public figures participating in solving their problems. The project won the Student Project For Health competition SPFH 2019, offered by GEMx, FAIMER.[iii]

Methodology and justifications

This project was implemented at Wadsrair El-Dar village, which is located 85 kilometers west of Wad-Medani (capital of Gezira state). with a population of 4,600. The problems of the village can be classified into:

- Childhood problems: lack of health awareness, increased incidence of diarrheal diseases 38%, UTI 35%, malaria 29%, Bilharsiasis 10%, and dental problems 60% (prior to our visit).
- Services problems: no health center, medical care is provided only by a "medical assistant." The "national health insurance fund services" covers only 15% of the population.
- Community problems: 55% diagnose and treat malaria at home; without seeking medical advice. 28% of mothers did not know about EPI and if their babies complete their vaccination or not. 65% of girls marry at young ages.

The goals of the project were to decrease the morbidity and mortality rates, increase the level of health awareness, enhance the educational environment for school aged children, and provide diagnostic, therapeutic, and PHC services.

This project was conducted throughout two phases as a part of academic course IFFRD. Each phase is five weeks with a one week cite-visit. In the first phase (December 2017) we observed the village and studied the community, health system, and health statuses by conducting a home-to-home survey, analyzing the data, detecting the problems, and classifying them. In the period between the two phases (one year), we designed the intervention after listing the priority of problems through designing a "criterion of prioritization" to guide our project for the most serious cases, and so the application of the intervention can achieve its objectives. We wrote a proposal of the project with a rationale budget, held a meeting with the local committee of citizens, in which we discussed the project, its components, justifications, objectives, strategies, plan of working, and the expected results. We coordinated the implementation with the related authorities, including visits, writing proposals, and requesting funds. The authorities include: the "Ministry of Health" in Gezira state, "Health services administration" in the locality, "Administration of the national health insurance fund,"" Engineering Department at Al-Gezira University," the local committee of citizens, "Association of Wadsrair students in universities and institutes," and "Sudanese red crescent society." Then we went to the village and applied our interventions throughout the year with the help of supervision and monitoring from the village citizens themselves. In the third phase (December 2018) we assessed the effects of the interventions by running the same sample of survey (150 families), and comparing the results to phase 1 results, and then projecting and discussing them in the class. We measured the incomes, processes, outcomes, and impact indicators.

Considering the innovation and creativity I would like to highlight following points:
The approach on which we based our implementation depends on priority as we select problems which have the highest scores. The following are the components of the priority criteria: importance, urgency, danger, the community concern, solvability, and cost. In order to reduce the morbidity and mortality rates, and to promote health, we designed our project to be an integrated approach, composed of:

- Rebuilding and rehabilitation of the primary school.
- Completing the building of the health center, to be capable of providing health services.
- Providing the service of a mobile immunization trunk among the week in which we were in the village with the aim to cover unvaccinated children underage five and ensuring the continuity of the services through contacting the "EPI administration" of the locality.

- Providing a school health day (prior to the treatment day), which includes small clinics and use of a form designed by our seniors to measure vital signs, general examinations and systemic examinations, and the referral of cases (50 out of 150) to the treatment day to be checked by the doctors.
- Massive health education program, and using of multimedia, projector, and videos especially with children and practical practice of the subjects. The program also had a major focus on mothers learning preventive manners in response to the increasing health issues of bilharsiasis and diarrheal diseases among children.
- Foundation of a simple, active, and permanent waste disposal system.

[iv]

Measurement of the Project Impact

In the second phase we evaluated the effects of the interventions by running the same survey (150 copies, simple random sample), and comparing the results. The following figures can provide an idea about the impacts of the project:

- The usage of impregnated mosquito nets by the families to combat malaria in December 2017 was 43.6%, and in December 2018 it increased to 65%.
- Malaria cases in the two weeks prior to the survey in December 2017 were 34%, and in December 2018 they were 32%.
- In December 2017, the means used to diagnose malaria was health worker without testing in 50% of samples, lab test in 25%, and only by symptoms at home in 25%. But in December 2018 60% of cases were diagnosed based on lab tests.
- The ratio of antibiotics being used without prescription has dropped from 17.2% in December 2017 to 10% in December 2018.

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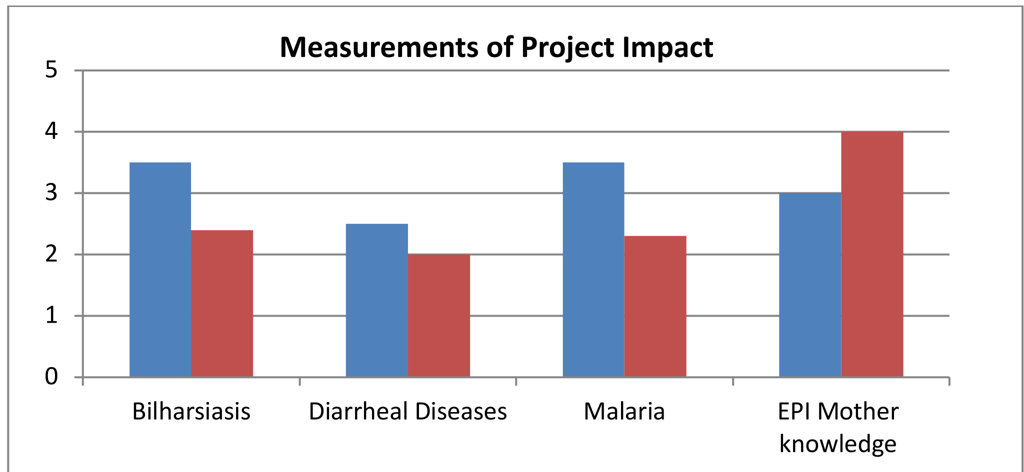
- The ratio of diarrheal diseases and dental caries among school aged children has dropped from 38% and 66% in December 2017 to 26% and 42% in December 2018, respectively.
- The mothers' knowledge about expanded programs of immunization increased from 69% to 84%, in December 2017 to December 2018, respectively.
- The percentage of children who wanted to continue their education increased by 29% in December 2018.



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In terms of project sustainability, the continuity and sustainability of the project is assured by forming a committee of three members of the village citizen's association, a teacher from the school, and an engineer from the locality. The committee is tasked with rechecking and evaluating the situations and fixes needed every six months especially among the autumn season, the first component of our intervention (Rebuilding and rehabilitation of the primary school). The second component (completing the building of the health center) of sustainability was being assured by registration of the health center in the ministry of health, then a general

practitioner and lab technician from the village were redirected to work in it so that they will be available at night, weekends, and holidays. The third component of our intervention (massive health education program) is sustainable, as the health center works, the medical staff give health education as a part of their job description, and posts are available and provided by the "ministry of health" and "Sudanese red crescent." The foundation of a sustainable and simple, active, and permanent waste disposal system was made possible by providing a donkey cart and employment of a worker to take care of the donkey, collecting the wastes two times per week by burning it outside of the village. He had been authorized to use the donkey cart for his own benefit the rest of the week and also taxes every house monthly (100 SDGs) to support his salary.

In terms of extending the project, we presented the project to our colleagues in the class through a seminar session, we told them about doing similar things according to their circumstances. We listened to their own trips and projects, we communicated and shared the experience to get the best benefit and accomplish the different projects in the ideal manner. Also, we helped juniors by telling them about the steps and processes that they will need to walk through to establish their own projects. This project was also presented as an exhibition to students of other departments, staff members, the dean of the faculty, and the university manager. Moreover, this project had been presented at The Net: Towards Unity of Health TUFH 2019 annual conference, which took place in Australia, in the morning sessions of SPFH winners and a one-hour group discussion followed the presentation of all projects.

Discussion

Why does this project work? What can others learn from your experience with this project? We initiated and promoted the work according to PHC concepts in its broadest meaning, as we led the community initiatives, followed them through their full participation, and encouraged them to develop their health system by themselves. At a cost that they can afford to maintain the development at every stage, and in the spirit of self-reliance and self-determination. Many people were wondering; what does rehabilitation of the primary school have to do with health? In fact, it is a solution for a community problem of early marriage of young girls. It was heartwarming that one young lady came to us while working to say –in her words -: "one day I will become like you, I will study hard and become a doctor as you!". Rehabilitation of the buildings and providing those children with the suitable and safe environment for studying became one of our priorities once

we knew that it was an unsuitable environment for learning. Furthermore, our project was characterized by multi authorities, so we helped in strengthening the cooperation between various authorities and building active partnerships and relations for development. Our project gave health system managers a good understanding about beginning the planning and development from the base of the health system going upward, based on need and using simple techniques. The project pointed out that health promotion and disease prevention have a role in socioeconomic development. And finally, the project indicates that students have a remarkable impact on societies.

In rural communities, the health care facilities are not in a well-developed state. In some cases, the rural individuals do not have access to these facilities and are required to travel to distant places or urban areas. PHC, teaching communities, and providing the community the services which meets its needs is a successful implementation of the concept of equity in health care delivery and Universal Health Coverage (UHC).[vi]

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[i] http://med.uofg.edu.sd/en/about.aspx
[ii] Pictures of Sudan Map Gezira Pic
[iii] SPFH, GEMx, FAIMER https://www.ecfmg.org/news/2019/06/17/ecfmg-faimer-announces-recipients-of-2019-student-projects-for-health-awards/
[iv] Students During the activities of the week; Health education, Mother's tent, and School Health Day
[v] Measurements of Project Impact, data is corresponded to group reports
[vi] Weisgrau, S. "Issues in rural health: access, hospitals, and reform." Health care financing review vol. 17,1 (1995): 1-14

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