

MAKING A DIFFERENCE

An Interview of Hafiz El Shazali Osman



Hafiz El Shazali Osman is Vice Dean for Academic Affairs in the College of Medicine and Medical Sciences at the Arabian Gulf University. He has been a member of the Executive Committee of The Network since 1997. I interviewed him at The Network meeting in Londrina, Brazil and had follow-up communications with him. This edited, abridged interview is based on those conversations.

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How did you get involved in medicine?

Even in elementary school, I had a desire to become a doctor. At that time in Sudan, being a doctor was a prestigious job. Out of 1500 applicants, only 30 students were selected to our country's only medical school. That meant one had to work hard to get into medicine. Also, there wasn't a single doctor at that time in my tribe in the mid northern region in Sudan.

I attended boarding secondary school, which was good for me. That gave me more time to read in the library. At that time the facilities in my home area were not that good.

I was admitted to the faculty of medicine at the University of Khartoum. It went smoothly, but it was very tough. Out of the 29 students in my class, only 16 students graduated on time. We had to memorize a lot of things that we knew we would forget shortly after the exam.

Was there any part of your experience that later on caused you to want to change medical curricula?

Yes. I'm good at memorizing, but all the time I was wondering why we needed to do this. When I asked the professor of anatomy why we needed to memorize

so many things, he said, “A doctor needs this, and you might become a surgeon”. I wasn’t satisfied with his answer, but I continued with the memorizing because I had to pass.

There were some good things at this school though. Starting in our fourth year, and then in years 5 and 6 for one month during every summer vacation, our whole class was taken to different parts of Sudan, especially to the underserved places. In terms of landmass, Sudan is the seventh biggest country in the world, but I have seen most of it. We went by boat to the south of Sudan. In a two-week journey up the White Nile, we saw crocodiles, hippos, lions, and other wild animals. We also went to Gezira province where 70% of the people had bilharsi mansoni, and we went to areas where malaria was hyperendemic.

One time during the school year there was a case of small pox. Small pox was so rare that they took us 250 kilometers by train to see the patient. It was the first and last time in my life that I saw small pox.

It sounds like these experiences had an impact on you.

Yes, we got a good idea about the prevalent problems in Sudan and how they are tackled on a community level rather than as individual cases. Coupled with this, starting in our fourth year, we interviewed and examined pregnant ladies and children in health centers in Khartoum during the school year. We were doing what is now called primary care even before the word was coined. These experiences alerted us quite early to the common problems.

After six years in the medical school I graduated and did my housemanship in the Khartoum teaching hospital. Immediately after that, as a medical officer in the ministry of health, I worked in single-doctored hospitals in different provinces of the Sudan. I got to see different problems in the various parts of the country. Since we only had the support of simple laboratories, I had the challenge of making diagnoses clinically.

I vividly remember how I clinically diagnosed and surgically treated a case of volvolus—intestinal obstruction—in a man of about 35 years. There was no x-ray available. I phoned the provincial surgeon who was about 200 kilometers away and asked if I could send the patient to him. He said that he didn’t think the patient could stand the trip so I would have to do the surgery. I found a book about practical surgery. I closed the door to my room and read about this kind of obstruction and the needed operation. When I did the surgery, I found my diagnosis was correct. It was volvolus, and it was gangrenous. I had to remove about two feet of the large intestine. The anesthesia was just ether drops. There was no blood to give him. Every moment I was expecting the patient to die, but he survived.

I finished the operation about noon. In the evening when I went to the surgical ward, the patient wasn’t in his bed. I thought he had died. Then I found him sitting outside. The second day he was eating. The third day, even before

we removed his stitches, he left without permission. I'm still amazed, even though I later learned he's from a group of people who are known to be very strong.

After this experience, others and I thought I'd pursue surgery as a career. I applied for surgery. Unfortunately, that year there were no positions available. I was asked if I was interested in pediatrics. I like children. But I like them healthy. I decided this would be an incentive for me to try to make them well.

Did you have children?

That year I got married. We stayed in Sudan for two years, during which time our first son was born. He now is a pediatric cardiologist in New Castle, England.

In this period, from 1964 until 1966 I was a research assistant [resident] in the department of pediatrics in the Faculty of Medicine, University of Khartoum, and I worked in Khartoum Hospital. Then my family and I went to England where I got my membership from the Royal College of Physicians, London in 1967 and my diploma in Child Health from London University in 1968. I returned to Sudan where I was assistant professor and then chairman of the pediatric department at the University of Khartoum.

In 1971 I attended a nine-month-long UNICEF/WHO traveling seminar for senior teachers of pediatrics in developing countries. It included six months in England and three months of touring underserved areas in India. Nutrition and malnutrition were my main area of interest, so, as part of the seminar, I attended the Hyderabad Institute of Nutrition in Bombay.

Malnutrition is a big problem in Sudan. I decided to pursue my interest and work on nutrition and nutritional problems. My professor suggested that I take child nutrition as the area of my PhD [MD], which I did.

At that time Sudan was economically quite well. Poverty was not the main cause of malnutrition. The main causes were ignorance, bad habits, cultural issues, and infections. Although there was enough food in the homes, out of ignorance some mothers didn't give certain items to their children because they thought these foods were bad for them. For example, they thought if they gave eggs to children, the children would become dumb or their speaking would be delayed. Children were kept primarily on sorghum, which is not very nutritious.

Bad habits also led to malnutrition. As soon as a mother knew she was pregnant, she would stop breastfeeding. Usually this happened when her baby was about six months old. The baby then would be subjected to contaminated food and could get diarrhea.

Cultural problems resulted in malnutrition. Fathers and older male children get the best food in the family. Also, even in small villages there were guesthouses for travelers, who were just passing through. These guests also got the best food. The mothers and young children got only what was left.

Infections, especially measles, were another common problem leading to malnutrition. The vaccine was new, expensive, and not popular. WHO didn't support it at that time.

I thought about the problem of malnutrition and the common contributing factors. I got an idea. Why not make a special food for children to be cooked at home and served only to children? I made two such recipes and gave them names with a religious flavor. (People are quite religious; they are more likely to accept something with such a flavor.) One food was called "*Naima*", which in Arabic means a blessing; the other food was named, "*Isma*", which means to prevent.

To increase the chance that mothers would make the foods, we made sure that the ingredients were normally available at home and that the foods could be cooked in the same manner that the other foods in the house are cooked. We also said that the food was only for children five years and younger, so that older people wouldn't eat it. I wrote a simple book for mothers about how to cook the foods. Because measuring utensils usually are not available, I explained how they could use the cup of their hands and their fingers to measure the ingredients. The project was very successful.

In London I had worked with Professors Otto Wolffe and David Morley of the Institute of Child Health who ran the course for senior teachers of pediatrics in developing countries. From them I got the idea of setting up a comprehensive clinic for children out in the community. In 1969 we did this in a village outside of Khartoum. We asked mothers to come and bring their children. We (faculty, medical students and residents) taught the mothers three things and gave them three things to do.

We taught them about the need for vaccinations and the importance of breastfeeding and nutrition. We also taught them about family planning, although for religious reasons we couldn't use that term. Instead we said that to keep their children healthy, they should wait until the youngest child is at least two years old before having another child.

The three things we taught them to do at the centers were how to cook the *Niama* and *Isma*, how to make hydration fluid, and how to weigh their children and track their growth on a "Road to Health" chart.

Fifth- and sixth-year students worked in these comprehensive clinics as part of their pediatrics clerkship. They were involved in all of the activities, including the cooking.

In the hospital the students saw children who were ill with diseases like protein-energy-malnutrition, rheumatic fever, malaria and other problems. In the hospital the students wanted to learn and so liked to see patients with as many signs as possible, such as big livers and heart murmurs. However, when they examined children at the comprehensive clinic in the presence of their families, the students wanted to be able to give the good news to the family that the child was well. At the clinics the students were able to see the children in a total, holistic way.

Later we expanded the project and worked with students and residents in other villages. People were appreciative of the students and residents. They even had parties for them. Many of the students became pediatricians. Even now graduates tell me that they still remember and appreciate their involvement in those villages and that those experiences affected their career choice.

You were clearly being innovative in the teaching of pediatrics. Were you able to influence the rest of the school?

Unfortunately, I cannot say that I did so directly, but indirectly, yes.

I was a member of the curriculum committee that modified the curriculum. When I came to the school, pediatrics was under the department of medicine. I helped bring about the creation of the autonomous department of pediatrics, so that we would have a more free hand in introducing innovations. For example, the department actively involved the community in pediatric training. In 1970, we were the first department in Sudan to introduce multiple-choice questions (MCQ) in the final exams. We also used real problems in problem solving questions.

In 1975 I became the senior pediatrician in the Blue Nile Province, Wad Medani. I was responsible for the promotion of child health services in the province. At the teaching hospital, which was the referral center from all the district hospitals in the province, I was responsible for the pediatric wards and child health promotion. In 1978 I became the senior pediatrician in the Ministry of Health in Sudan. I was responsible for all the pediatric and child health services in the country.

In 1978 the Gezira Medical School came into existence. The next year I accepted their invitation to become a professor of pediatrics. The school uses a community-oriented, problem-based curriculum, so I fit well into the program.

Did you help shape the new school?

Yes. There were seven of us who made the whole curriculum. Bashir Hamad was the dean. I was the professor of pediatrics and deputy dean. When we got involved, the students were just finishing their first (preclinical) year, which was very traditional. We knew we had to have the new curriculum ready for them when they started their second year in three months. First we made the other five faculty members believe in and accept PBL. Then we made the program together, often working until 2 am.

Were you introducing PBL?

Yes.

How did you prepare yourself for doing that?

At that time Maastricht and McMaster were among the very few schools using PBL. Two other schools were multidisciplinary but not problem-based. One

was Ankara University in Turkey and the other, the Cameroon University in West Africa. Each of us read the literature on PBL. Then we discussed the new curriculum taking into consideration our own facilities and the educational environment. In the end we came up with our version of PBL.

We developed units, centered on organs/systems. We used real patients whenever possible. For example, when dealing with the problem of kwashiorkor, we got one patient for each of the eight groups.

The International Year of the Child was 1979. In 1978 the Institute of Child Health made an international committee of 10 people from around the world. I was chosen to represent Africa. We devised the Child-to-Child program with different projects that helped to promote the idea of older children helping infants and younger children. Each country was to choose a project suitable for helping its own children.

We in Gezira chose a project called “health scouts” in which we taught 13- and 14-year-old children in the seventh and eighth grade how to teach mothers the three things to learn and the three things to do that I mentioned earlier. We identified 10 schools. The ministry of education appointed a school headmaster to serve as a liaison between us and the ministry of education.

Medical students from Gezira University and residents from Medani Hospital helped us. We traveled to the schools by boat and bus and one time by donkeys. When we started working in the villages, we would usually play national songs, slay a lamb, and make a sort of festival, so that the people would come. (If we had told them just to come for food, they would not have come because they would have thought that we thought they were poor.) We invited mothers as well as fathers because the latter sometimes have the last word in the house and can stop a mother from cooperating.

A committee of 10 senior pupils headed by the schoolmaster assigned five infants and young children to each of the older children. After school the older children visited the homes of the younger children and taught the mothers the three things to do and the three things to learn. Each student was given a simple weighing machine. There was a booklet for each small child showing his vaccinations, schedules, and growth chart.

Has the program continued?

I feel guilty because I left and went to the Gulf Region. The program continued for a while but couldn't sustain itself.

In 1983 I was assigned by the Gezira University to work for a period of time for the program for training physicians in comprehensive primary care. This program was linked to the Family and Community Medicine Program at the King Faisal University in Saudi Arabia. In addition to teaching pediatrics and child health, I helped in planning and coordinating the program.

In 1985 I was asked to be Professor and Chairman of Pediatrics at the College of Medicine and Medical Sciences at the Arabian Gulf University (AGU). The first class started in 1982–1983 with a traditional program. I came

on just before they were to start their clinical training. The Minister of Education was a proponent of PBL. Some AGU faculty members had already done faculty development on PBL at New Castle, Australia. In fact, the majority of the faculty members were convinced we should use PBL.

As PBL was new, the first groups of students were naturally worried that they would be second-class physicians. They thought they wouldn't know medicine if they did a PBL program. We told them about the advantages of PBL and assured them that they would do well, which has been the case.

Has the faculty at AGU continued to support the new approaches?

When we select new faculty, we make sure that they are committed to PBL. In fact, many of them have already been involved in this kind of teaching. We also have regular faculty development workshops for all the faculty in different areas of PBL, such as tutoring, problem writing, assessment, etc.

We are now taking 110 students a year, so we have around 600 students all together. There are only 42 full-time faculty and about 120 part-timers, but all of us, even those who are administrators, continue to be involved in the whole program, writing problems, participating in tutorials, and doing clinical and community teaching.

When our students graduated, the consultants could easily see that Arabian Gulf University graduates are more responsible and can handle clinical situations more comfortably than graduates of traditional programs. This has resulted in our graduates usually getting their first choice both in their internship and in the residency training program.

That's wonderful. You clearly have made important contributions in education and health care. Thank you so much for sharing your adventures with our readers.