



ECHOES BY
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Did you ever ask, why you fear maths?

I Paul Samuelson, a wonderful mathematician, and an economist, once called economics the ‘queen of social science’. He couldn’t call it the ‘king’ like physics, because economics stands at a crossroad. It’s a social science that explores how people in different settings cooperate in harmony or compete in conflict.

At its core, it analyses how people and societies make decisions in different settings. This last thread led to economics being the first in the social sciences to build models. This is where maths entered economics some two centuries ago.

I have been teaching economics to undergrad and graduate students for over quarter of a century. In almost every cohort, I find a significant percentage fearing maths. Some fear maths so much, they discard mathematical courses if they are optional. I’ve always asked myself, why? I now think this fear generates from day one, at school.

II Ever since the first school started, academia has been divided into two streams. One stream is the stream that knows mathematics. The other, the complement set, knows no maths or has no interest in maths.

Ever since that first school started, the academia has also been divided into two different perceptions. Those



ILLUSTRATION: FATIMA JAHAN ENA

who show an early inclination to maths are the ‘blue’ boys and girls in the class. Everybody loves them. What happens to the complement set (the others)? Nobody sees them like the dark side of the moon. Over time, they lose interest in maths.

III Maths starts with numeracy in school. Kids are taught to recognise numbers. Their journey in arithmetic starts. It’s not until a few years down the road that kids are exposed to shapes and begin to understand the concept of angles and ratios in two-dimensional space.

In the meantime, the notion of maths becomes cemented in how good and how quick somebody is with

calculation. Kids memorise multiplication tables, but they are seldom trained to visualise these tables or other arithmetic concepts in their mind.

Those who can do complex multiplications and divisions quickly and can see the sequence in a series of numbers are the ones who get noticed more and more by the system. The complement set becomes blurred. And sadly, this is where I return to economics.

IV Universities start with the assumption that students have covered or know the basics of certain concepts in the twelve years of schooling before they enter the university.

Yet, whenever I enter a classroom and start with the question ‘who fears maths?’, initially I observe silence. Then I see one or two brave hearts raise their hands. When I tell my audience, “Don’t fear. Knowing maths well doesn’t necessarily mean you can cross the street,” I notice some hands slowly rising.

This experience of mine is not endemic to economics. It’s high time for schools to start debating a simple question that’s been overlooked for centuries: Why do students fear maths? There’s much more to maths than numeracy.

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Colorectal Cancer is most common around the world, usually ranks top three of Cancers: Prof Dr. Emile

Colorectal Cancer is one of the most common cancers around the world, usually ranks in the top three of Cancers, said Prof. Dr. Emile John Tan Kwong Wei, Head & Senior Consultant, Singapore General Hospital (SGH) in an interview.

“In Singapore and in other parts of Asia, colorectal is the first or the second most diagnosed cancer. In Singapore, colorectal cancer is ranked number one in men and the second most prevalent after breast cancer in women. So incidence is relatively high, said Prof. Emile.

He was on a visit to Bangladesh in mid-November to join an International event on oncology.

Dr. Emile replied to some queries particularly upon the scenario of Surgical Oncology in Singapore, Bangladesh and other neighboring countries.

The excerpts of his interview is produced for our valued readers.

Question: At the outset, could you please brief us about the prevalence of the cases of colorectal Cancer and its socio-economic impact globally?

Prof. Emile: Colorectal Cancer is one of the most common cancer around the world, usually ranks in the top three of Cancers. In Singapore and in other parts of Asia, colorectal is the first or the second most diagnosed cancer in men. In Singapore, colorectal cancer is ranked number one in men and the second most prevalent after breast cancer in women. So the incidence is relatively high. In population only more than 5 million we get about 2000 cases of colorectal cancer in a year. As you know most cancers are genetic diseases, it’s related to family background of medical conditions. It matters if you lead a good and healthy life to remain free from Colorectal Cancer. For example, if you have obesity problem, if you smoke excessively and practices unhealthy food habits, these may cause chronic diseases. Although colorectal cancer is a serious health condition with complexities, but fortunately it is treatable and curable.

Question: Please brief us about the causes of this disease, also please share it’s remedial and preventive measures.

Prof. Emile: Colorectal cancer usually affects people in the age range of 50 or 60 years old. There are 2 main reasons of why people are



has colorectal cancer. The best way is to identify colorectal cancer through early screening and detection. Ideally, the screening should be done at least 5 to 10 years before you hit the high risk age range of colorectal cancer. It is advisable to refrain from eating too much of meat and to reduce excessive smoking.

Question: What about the latest technological development in treating the colorectal Cancer globally? How about in your country Singapore?

Prof. Emile: For treating colorectal cancer, my department in particular, as part of the SingHealth Group, we have the latest technology. My department is fully specialized in treating colorectal cancer. Our main focus is to encourage early screening, detection and provide effective treatment for the patients. We also have a very efficient, highly trained and experienced team to treat the disease. Secondly to ensure the delivery of high quality diagnostics for the patients, our organization emphasized on training, development and maintenance along with the influence of technology. So the technology we have, includes Robotic Systems, the VGXI. We have two Robots XI with all the generations which are put into use to treat colorectal cancer. Thirdly, we have another system that allows us to go from anus upwards. Most surgery for rectal cancer is done from the front going down from

being diagnosed with colorectal cancer. The first reason is because of environment and the second reason is because of family history of medical conditions. The first reason is easy to identify if someone in the family

abdomen, this newer skillset allows us to go from anus up, this is important because there are occasions the cancer is in such a position and approaching from both top and bottom can help you to achieve better outcome.

Question: We know that you are visiting Bangladesh to participate in a Cancer Congress? What are your evaluations regarding such an International event? Is this your first visit to Bangladesh?

Prof. Emile: Yes, this is my first ever visit to Bangladesh. Joining an International Congress here is much interesting for me because a good number of doctors have been gathered here to join the event. It is really a very fruitful and informative discussion which took place during this event. It has created opportunities for exchange of ideas, experiences and for collaborations between different countries.

Question: What type of investigation and screening is basically needed to detect Colorectal Cancer?

Prof. Emile: There are two forms of screening, which are relatively easy to deliver: The first form is called fimo-cobbler testing, this type of testing is offered in most developed countries, mostly for patients at the age of 50 years old. If there are traces of blood present in the test results, then you are referred to a doctor for a Colonoscopy. Colonoscopy allows to look into the bow for detection of polyps which is the precursors of early growth and eventually becomes the colorectal cancer. If the patient could do the screening with Colonoscopy, it is possible to remove polyps at the early stages and maximize the chances of preventing or reducing the occurrence of colorectal cancer.

Question: We know that your Institute, Singapore General Hospital (SGH) is very specialized and dedicated in many disciplines, so please brief us something about the Institute.

Prof. Emile: SingHealth Group is the only fully specialized institution for solutions of various health related problems including surgery. It started journey 33 years ago by the former Secretary of the country’s Ministry of Health. It responded to the growing needs of Colorectal diseases in Singapore. Since then there are growing number of Colorectal Surgeons in Singapore. We have the opportunity to train and develop the Surgeons not only within the SGH,

but also for some of our partner Institutions. So we have a very big group of specialized surgeons. Therefore, every year we take the initiative to upgrade and improve our expertise, so we could provide utmost confidence and the best of class services to our patients.

Question: Do you have any regular screening program at SingHealth, which is targeted to detect cancer at its early stages?

Prof. Emile: Actually we are fortunate to be sponsored by the Ministry of Health to organise health promotion programs targeted to strengthen the cancer preventive measures in Singapore. We have implemented the national screening program, and according to our health system, if anybody is detected positive within 5 weeks, they will be scheduled for Colonoscopy. This is the level of qualitative standards that we offer to everyone. In fact, we are the largest center for Colonoscopy in Singapore and my department performs huge numbers of testing. We perform Colonoscopy for both the screening and diagnosis of colorectal cancer.

Question: What kind of complications may arise during the post-surgery period? What is your advice to avoid complications?

Prof. Emile: We assessed our rate of complications with Americans or top ranked hospitals in the world and SGH came up very well. The common complications we experienced are bleeding and infections. These are common complications that we usually experience and it is easy to treat. However, sometimes bigger complications may also arise. Therefore, the key factor is to reduce the complications, through a system of people who can help each other to achieve the desired results.

Question: What sorts of collaborations could be developed between the doctors in Singapore and Bangladesh?

Prof. Emile: I strongly believed that collaborations are possible and can be developed at many levels. It could be at personal level collaborations and this is the area where we continue to work on and support. For example, the exchange of ideas and knowledge between doctors whereby the experts could learn from each other. In my opinion, the International Congress has created a valuable opportunity for the like-minded professionals to talk and discuss about the latest technological advancements related to cancer management. In addition, long term collaborations could be established in areas of research and education. This includes how we educate our people and operating room staffs so that everyone could be benefited from collaboration initiatives.