"Are You Incapable of Complexity?"

Field Notes from a Slum in Northern India

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Introduction

In July, 2011, I went to Aligarh, India, a town of 3,673,849 people about 80 miles southeast of the capital, New Delhi. I had the idea of starting a vaccination program in a slum called Jeevangarh. Soon after my arrival, my ambitious plans quickly gave way to confusion and cold disappointment. Having lived the first eight years of my life in Aligarh, I had thought that I understood both the slum culture and the nature of the problems confronting it. The reality proved much more complex.

As I walked through the slum, I remembered a quotation from *Mountains Beyond Mountains*, a biography written by Tracy Kidder about Dr. Paul Farmer. Kidder describes an incident where a Haitian woman confronts Dr. Paul Farmer and asks, "Honey, are you incapable of complexity?" I too went to Aligarh with an oversimplified idea of how to achieve my goals, believing I could organize a vaccination drive that would allow me to gather data about the prevalence of disease, document the role of water in occurrence of disease and raise awareness among the people of the slum about hygienic living practices.

My uncle, an associate professor at the Medical College in Aligarh, related how illness flares up in months during and following the monsoons (June, July, August, and September). For these months, the emergency wards overflow and have to accommodate twice the number of patients. Monsoons facilitate water contamination and spread of disease, allowing malaria, cholera and dengue fever to be contracted in large numbers. For example, the number of patients in the emergency ward of the Aligarh Medical College in the month of July is approximately 3,400 as compared to 7,600 in September .

In addition to speaking with my uncle, I collaborated closely with the principal of a small, 1,000 square foot school located in the heart of the slum. Having worked in the same school before, I was able to interact with the students and learn from their unique stories. During my stay, I kept field notes documenting interviews with the children and the principal of the school. I also drew diagrams of water pipelines and hand pumps in the slum.

Diary Observations

Naseem, my grandfather's driver, warned me that the car could not take me inside the slum. The streets were simply too narrow, and much of the remaining space was taken up by wooden cots placed outside shanty homes. There were also roaming pigs, roosters, stray dogs and trash. Sure enough, Naseem parked the car by a small clearing blocked off by a broken brick wall on one side, and motioned to a dirt path that led to the slum. I climbed out of the car with my journal and pen.

I could see no visible changes from last year's visit as I made my way around puddles that had formed from the previous night's rain. Sewage flowed in open canals along both sides of the street, and small children wearing short colored knickers ran and shouted at each other. The stench of human feces began to fill my nostrils, along with the smell of swine, cow manure and other garbage. My sensibilities protested at every step. However out of place I may have felt, no-one stopped to watch me walk past. Middle-aged men sat in clusters talking excitedly around a single wooden cot as women in colorful saris poured water from a hand pump.

As we neared the school, I saw a group of nine and ten year olds playing cricket with bricks and a makeshift wooden bat. The ball often went inside the sewage, followed by a collective groan from the children. One person would dig around with his hands, fetch the ball out, and they would begin playing again.

I finally arrived at the school—the main portion was simply an open space with stone flooring and a makeshift tin roof. On one side there are 3 adjunct rooms—one for the principal, one for the smallest children and one for the students who had left the school but still came back to lend a hand or work on their homework.

Interview with the Principal of the Slum School, Mr. Shoaib Khan

"Raamis," he said warmly as he appeared at the door to his small office. We hugged.

[For the sake of convenience, the conversation is translated from Hindi.]

Me: "How are you?"

Mr. Khan: "I am perfectly fine, and how are you?"

Me: "I'm doing very well, though the temperature is unbearably hot, and it has been extremely humid over the past few days. But what has really bothered me is that every time I come, the situation seems to worsen. Last year, when the slum school shifted to this new building, I had hoped that the condition of the slum would slowly improve. However, the living conditions are just the same...the sewage water still floods the slum every monsoon season, the streets are too narrow for anything except

a bicycle. After all this time and correspondence, I feel like I have done nothing practical—I, I just don't see any concrete changes."

Mr. Khan: "You must realize that these things cannot happen so quickly. Progress is being made. When you shipped supplies here last year, it was a big lift for the students. We have more students now compared to last year, and if you look at the condition of the school, we have a larger square footage."

Me: "But even then, there is a huge dump of trash right across the school. It was not there last year. I'm not just talking about the school. My biggest hope, the reason why we are working here, is so that we can improve the conditions in the slum. The improvements in the school have to translate to improvements in the slum."

Mr. Khan: "Of course. But there is a methodology to this. What are you suggesting?"

Me: "I'm suggesting that we must make practical changes before I leave. I want to do a vaccination drive for the students. I want to set up trash bins across the slum with signs. I want every student to have a basic hygienic checkup every other week. Most of all, how can people live like this, and not be bothered? On my walk here, I seemed to be the only one bothered that there were dirty pigs everywhere, roosters all over my feet, trash at every walking step, stench from the sewage...Are these not areas in which we can make immediate changes? I know that I don't have medical expertise; I didn't come here to provide that. I simply wanted to research the basic causes of disease in this area, and one doesn't have to look far. I just saw some children playing cricket and digging the ball out of the sewage. People drink from government pipelines that run barely an inch above the sewage and are often cracked. Just to enter a shanty, one has to jump over the sewage."

Mr. Khan: "Listen. Your ideas cannot work like this. You are thinking at your level, like an outsider. First, you must understand the psychology of the slum. Let me tell you a story. Every few months, a government collector comes to inspect the area. For the most part, these inspectors are not bothered by the atrocious living conditions and don't perform their work satisfactorily. But every time they come, the people here clean the streets, they hide the trash, they put their best clothes on. Why? They are scared of the inspector, and they do not want to be interfered with. The moment he leaves, everything goes back to the way it is. The pigs come back on the street, the trash is thrown carelessly again.

The truth is that change is exotic...here, it just isn't common. You can put trash cans out if you want, but a month later, the slum will look as it did ten years ago, just with even more people. Your grandfather lives in one of the most educated areas in the city. Even there, trash is all over the place. I visit him, and I see trash all around the can and very little inside. People just toss it in that direction. So you see, the mentality is the problem. It is a sad truth to face here, and you have to go by that. I can understand your outrage.

Tell me one thing—why do people in other parts of the world keep order? Either they have a desire to keep clean and tidy, or they are pushed to do so by the law or someone else. That is the point. How do you bring that to the slum? I have already given you the example of the government inspector. There is no one here to instill fear into the people living in the slum. How will you scare them—no one is watching, and very few people outside care. This is a university town, and do you know how many

professors or courses have tried to help the children in the slum besides your grandfather? The society here is different.

Thus, the only thing you can do is the alternative—create a desire within the slum community to change, to live in better conditions. But you have seen the apathy, the lack of interest in these matters. The people have literally adapted to this mode of living, and you talking to them or putting up trash cans will do nothing."

Me: "But you have given me no choice. How and what am I supposed to do then? Let me try at least to do the vaccination drive—that will be the biggest concrete change I can make, and maybe it will inspire the students to take their health and hygiene more seriously."

Mr. Khan: "Oh no, no no no no no. The vaccination drive cannot happen. The people here do not trust it. A few years ago, polio drops were distributed to a few children and one girl developed polio. Since then, there has been distrust, and no matter what your position is, it cannot happen. Why would the people even come? Raamis, I have to warn you about this step. Among the distrust, among the nature of the people here, you will not be able to accomplish much with a vaccination drive. It is not the method to bring about change."

Me: "My worst fear is that I will leave here and accomplish nothing concrete. I came here this summer with the promise of researching in order to find solutions. Where are the solutions? You have worked here for several years as a teacher, an administrator. Surely, there is a pattern that you have seen? How can the people of the slum be made to realize their precarious health situation? The very water here is contaminated."

Mr. Khan: "As I told you, the school is your answer. Once again, if you cannot scare the people here into action, you must inspire them or create a desire in them to change. But this is a matter of generations. The adults here will be deaf to your message. They have lived out their time here and slaved away in penal jobs. But their children—there is a future for their children. You saw the conditions right outside the school. See here—the floors are clean, the students sit on rugs, they see the hand washing posters you brought last year every day. There are rules herethey must ask to go to the bathroom and wash their hands in the basin afterwards. They must speak in turn and learn how to dress. This is the most important point: we cultivate an inner desire in the students to be clean and maintain healthy practices. They stay here for five hours a day, six days a week. When they leave and go home, they notice the difference in conditions. They begin to notice the trash and become disturbed by it. It is a painstakingly slow process, but it is the best way. Use the school to create a desire within the students to improve their habits. Then, when they go home, they will make the changes inside the house. After you leave here, go inspect the houses of the students who do attend the school, and then inspect the houses of those children who do not. You will see what I mean. The best way you can help is to be here, and beyond that, craft your ideas to help this process."

Commentary

Mr. Khan stressed one important point again and again—that a certain mentality can be so deeply entrenched in the roots of society that goals have to be modified and restructured to accommodate patterns of thought, behavior and culture. In the context of his advice, the issues at hand became even more pressing. The administering of oral polio drops resulted in one

girl later developing polio. Medically speaking, there are a number of possible reasons for how this could have happened. For one, existing viral stomach infections can interfere with the replication of the attenuated vaccine. This is a cause for concern in slum areas because water contamination is rampant. Thus, booster doses are often required, but in some instances, 20% of people fail to return for these doses. Beyond a simple public health intervention, the children needed to be educated in an effective way that counteract years of adaption to the slum. Thus, in place of the vaccination drive, focusing on everyday sanitation practices, effects of living conditions on the health of children and health literacy education became the immediate goal.

Effect of the Conditions in the Slum on Children

One of my first observations was that the children were well adapted to the living conditions in the slum, making them extremely resourceful and street smart. Students who went to the slum school would find the nearest street light from their houses, sit underneath and study on the ground because there was no electricity inside their homes. On the flip side, the ability to adapt to circumstances fostered an attitude of apathy. Children in the slum would take small buckets and bathe near hand pumps in open view of the public, or think nothing of jumping into puddles that were mixed with sewage. Walking around naked was a common practice, as was jumping over sewage to enter homes and small shops. This is not a new phenomenon becoming adapted to living conditions is nothing shocking. What is shocking is how the very process of becoming adapted has caused children to stop questioning their living conditions. Noone is disgusted by periodic sewage floods in the monsoon season; few are bothered by the 14-hour electricity cuts (or the lack of electricity altogether), the piles and piles of garbage occupying every free space or the stray dogs and pigs roaming freely. In one embarrassing instance, I watched five or six mosquitoes buzzing around a child during the evening hours and ran over to wave them off. The child didn't question my act but also didn't understand the need.

This mentality of adaptation is what the principal high-lighted in the interview. Any form of concrete change hinged on the ability of the students to internalize, apply and promote healthy sanitation practices based on their own initiative. As a possible means of conveying important health literacy topics in a visual, tangible sense, I made six or seven colorful posters with illustrations and a small amount of text at the bottom. The posters featured a broad scope of topics—everything from "Cleanliness is Godliness" to why it is important not to play near animals to how water and mosquitoes are vectors of harmful diseases. Undoubtedly, drawing pictures of the causes and effects of certain diseases brought about a change. The students began to internalize the meaning behind the posters, and even the smaller children, passive up untill now, gathered around the posters to see what the pictures meant.

In one case, a group of seven-year-old girls walked over to the "Cover Your Cough!" poster and began putting their arms up to their mouths and making coughing noises. At first, they began to giggle and even went around taking turns practicing the "1-2-3!" step process on the poster. One girl beamed her face up at me and put her arm up again to her mouth. "Do you know why we do this?" I asked, smiling. They fell somewhat silent and waited for me to answer. "So that we do not cough on each other and let dirty little germs go from one person to another." The children listened carefully, trying to learn not just what practices are hygienic but the reason behind each. To promote health, health literacy must be promoted first, and that is why starting any sort of public health effort in the slum with a vaccination program would have failed.

My Experiences with the Students

There is much to learn from the perspective of the students—their insight is the best way to gauge immediate and long-term problems. Two students I spoke to (their names will be arbitrarily referred to as Zara and Sahil, respectively) conveyed how much they cherished learning, yet at the same time, faced personal and family-related struggles.

Me: "Do you think your time at this school is what made you realize how important education is?" Zara's eyes became animated, and I could feel the passion behind her words.

Zara: "I have always dreamed about studying! I am lucky enough to have a mother who wants me to grow and live a better life than she could provide me with. Not all the parents here are like that. Many are happy in their conditions and see no reason to change. But I love learning! I love to read good books and see how different the world can be from the way in which I live. By coming here, I realized there are so many other students who want to learn just as much I do. I am trying to teach my younger brother why education at his early age is so important—why he should appreciate the school, the work and the learning."

I asked Sahil a few days later, "How has the transition been from studying here to a mainstream school?"

Sahil: "I am enjoying my chance to learn, but the transition has been difficult. Homework is a problem because my parents cannot help me with it, and I have no one else to go to, except come here. Usually, I come here in the evenings to do my homework and help my parents work in the afternoons after I come back from school."

Me: "How difficult is it to live in the slum and what sorts of challenges do you currently face?"

Sahil: "My family came here as refugees from another state [Bihar] when our house was destroyed there. Sometime later, my father abandoned the family, and it was up to me and my mother to care for my siblings. I had never known anything different until I began to come to the school. Our conditions are hard—we have little food on many days, we have to conserve water, we have no money to afford the rich schools and wear uniforms."

Zara highlighted how important it was to cultivate a passion for learning among the children. She mentioned how reading books and learning in school had given her a vision of exactly how life could be better than the slums. Illustrating that picture for the younger students would help create that inner desire Mr. Khan had stressed in his interview.

Sahil, on the other hand, imparted a sense of how real certain challenges are in the slum. Many children have unsupportive parents, or parents who simply do not see the need for an education. He spoke in practical terms and indicated that, despite what the school offered, other challenges remained. In essence, our conversation boiled down to one key point: sustainability. As one of the older students, he was beginning to deal with obstacles in mainstream schools: lack of family support, harder classes and more academic work. However, he also related a sense of camaraderie with other students his age, with whom he could study

together and share experiences. In the future, forming a strong network of older students in the slum who are going through similar challenges may be a possible way to offer sustainability.

It was heartwarming to listen to Zara and Sahil's narratives, heartwarming to hear two students speak about their change in mentality. Zara's little brother, however, was inordinately bashful—the more I tried to coax him to talk with me, the harder he clung to his sister. Part natural shyness, part uncertainty at what my purpose was, the smaller children in general were more hesitant to interact with me. Mr. Khan suggested addressing the younger and older students together. The presence of the older students would put the smaller children at ease and let them see my role as an observer, friend and helper. His advice worked. At first, I had the older students sit with me facing the smaller

children and had each one hold a poster. All of a sudden, the younger students pulled in more closely to see what their own older friends were doing. A few of them scrambled to the front excitedly, straining to get a better look. I requested one of the smaller children to come forward and read aloud what was written on the poster. The boy came forward and struggled to read, pausing, rolling the letters on his tongue and then reading again. For the first time, every single eye in the room was concentrated on him. He dictated the message to keen-eyed fellow students and smiling teachersit was the ideal way to reach out

to all of the smaller children, who were suddenly interested in seeing their own friend in front of them speaking about hygiene, health and sanitation.

Solutions, Reflections, Implications, Future Research

Simple, low-key measures are often the most effective in crafting solutions to fit the psychology of the slum. For example, I worked with the principal of the school to create a "health chart' that would be used to evaluate every student biweekly. The chart consists of the student's name on the left hand side and criteria such as "Combed Hair," "Brushed Teeth," "Cut Nails," "Signs of Illness" and "Stomach Pains." This will allow the teachers to instill a need for cleanliness and hygiene among the students, as well as identify students who are at a greater risk of illness.

The kinds of challenges faced since the beginning of the trip—drafting the health chart, foregoing the vaccination drive, trying to gauge the effectiveness of my interventions and the children's response and looking closely at water contaminationserved as topics of discussion in the first health assembly. The health assemblies would be held once every week by a teacher or the principal, as a way to remind the students of effective hygienic practices, early recognition of sickness and careful attention to water contamination. It would be the first step to integrate health literacy into their school education. As one of the older students told me, "You can speak all day about hygiene, but if the smaller

children do not hear the message consistently, they will forget it." I began telling the students that disease and illness could cause an interruption in their studies, or create problems for their families. In the long run, giving simple advice like not stepping on nails to avoid tetanus, washing hands frequently, not playing with pigs and roosters or jumping in dirty puddles may cause these lessons to become second nature. It was my last day at the slum, a point not lost on the children. They began to clap loudly, talk excitedly amongst each other and collectively said a loud "Thank You!" Several of the older students profusely thanked me for coming, for encouraging them and for promising to come back. I replied that this was our project, one that had to be sustained and one that could only improve as time went on and awareness grew. It was our moment of greatest trust, and in that moment, I asked

> every student to promise me to talk about what they learned at home, to share their lessons with parents, friends and siblings. "Don't be shy! Tell your friends why it is an unclean thing to play with a cricket ball that has been in the sewage." They nodded, and several of the more talkative and serious children promised to share as soon as they went home.

> The latter emphasis on sharing lessons through word-of-mouth is my biggest hope for how health literacy can extend to children in the slum who do not attend the school. Though I did interact



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with these children occasionally, it was in light situations when they were outside running or playing on the street. In that context, I had no authority to impart the lessons about hygiene that I could inside the school.

The hope is that slowly, students will learn the basics of hygiene at the slum and create a difference in their households. If one household at a time can be made aware of the dangers certain health practices hold, the slum can continually improve. Perhaps most significantly, the long held mentality of apathy towards change can be reversed to foster an atmosphere of deep interest in health and sanitation.

My goal is that my interdisciplinary, qualitative approach will highlight key points for conducting research in slum areas and identify the need to implement short-term practices in order to influence long-term mentality.

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