

Creating a role model for “Academicians” Social Responsibility (ASR) synergizing with Swachh Bharat Abhiyaan: A campus hygiene initiative by PGIMER, Chandigarh

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ABSTRACT

Background: The state of disarray from unhygienic conditions and excessive litter throughout urban highways, alleyways, and byways across rural and urban localities of India is abysmal. Such unsanitary conditions impinge upon the future health and welfare of its citizens, tourists and economic development.

Purpose: The NRL volunteered PGIMER's campus hygiene initiative" is a pioneering effort spearheaded in compliance with Indian Prime Minister's call that citizens of India work together to establish a cleaner and healthier environment.

Methods: A group of 15 highly motivated students in the Neuroscience Division of the PGIMER, worked together vigorously 2 hours a week to affect a cleaner urban environment in the city.

Result: The results were national *Kayakalp* and *Skoch award* to PGIMER as the cleanest hospital in the country, the vendors or patients no longer litter around the campus, the pot holes have been converted into greener patches, signs board adorn the campus.

Conclusion: To inspire citizens through faculty- student led sanitation programs.

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Introduction

India is a country of aspiration with the second largest population in the world. After 71 years of independence, India continues to seek solution to sanitation, social, economic and ecological issues. On one hand, it has been defined by World Bank as the largest population of poor in the world [1], on the other hand, it aspires to overtake China as the world's largest economy by the year 2050 [2]. While most of the population lives in poverty and cannot afford a sustainable healthcare, India is emerging up as an Asian epicentre of medical tourism with advanced, low-cost health care system [3]. The poor state of sanitation in the country greatly affects the health of its citizens, especially those living in rural locations [4, 5]. The

status of sanitation in India has remained highly neglected for a prolonged period. Studies carried in India and overseas highlight the lack of sanitation as the primary cause responsible for the increased number of enteric diseases like Cholera, Typhoid etc [6, 7]. Appropriate methods need to be adopted as prime objectives in the management of sanitation. Sanitation refers to domestic and personal hygiene and control over the communicable diseases. Preventive health care strategies are required to eradicate the existing problems of sanitation in India which has not been seriously successfully highlighted by successive Governments or academicians in the recent past.

According to NSSO survey, less than 32% rural houses have their own toilets. They highlight the immense inadequacy of sanitation in India. It is believed that around 47% of the

total population of India practice open defecation which can be the result of poverty and illiteracy [4] and bring the same habits when they visit hospitals 88% of diarrheal diseases are attributed to unsafe water supply, inadequate sanitation, and hygiene. Sanitation interventions including hygiene education and correct method of hand washing which can lead to a reduction of Diarrhoea cases by up to 45% [4]. It is worthwhile to take note of the great awareness campaigns initiated in London in the mid-19th century in order to counter unhygienic issues in their country [8]. Our neighbouring Asian country, Singapore also took up the challenges of cleanliness in 1968 when its first Prime Minister of independent Singapore, Mr. Lee Kuan Yew, initiated the “Keep Singapore Clean” campaign in the island [9]. This was one of the longest campaigns (1968-1990) in the nation whose visible impact on the immediate environment can be seen even today.

Given the deteriorating situation of the country, the newly elected 15th Prime Minister of India, Mr. Narendra Modi, on 2nd October 2014, on the occasion of the 145th birth centenary celebration of ‘Mahatma Gandhi’ initiated the nationwide Clean India movement under the slogan of “*Swachh Bharat Abhiyaan (SBA)*” [10]. This campaign was a citizen-centred public health initiative appealing to the citizens of India to devote 2 hours per week for litter pickup campaign. *SBA* was, therefore, proposed as the mission towards *Clean India* in order to overcome the ill-effects of unhygienic surroundings. A Finance Act 2015 has also recently levied 0.5% *Swachh Bharat* cess on all the taxable items to generate govt funds for sustaining this initiative [11].

On the path set up by Government of India, NRL, PGIMER decided to contribute to this noble mission. They started dedicating 2 hours every week by actively picking up the litter around Institute complex.

Objectives

- a) To inculcate a sense of social responsibility among the trainees and employees by aligning *SBA*
- b) To inspire citizens through faculty- student led sanitation programs.

Why and how it started?

Post Graduate Institute of Medical Education and Research (PGIMER) is a tertiary health care centre with about 8500 patients accompanied by attendants visiting the institute daily. Main source of waste generation in institute are OPDs, wards and OTs along with general waste from canteens and hostels. Besides this, the local voluntary organizations provide free food to the poor patients and their attendants outside the main gate called *Langar* that continue to generate additional waste. The area outside the main gate is neither taken care by the PGIMER nor the municipality of the city and is left unattended.

Driven by the PM’s appeal and considering the sanitation status around the Institution, the research scholars of NRL started this venture on October 2nd 2014. Every Friday, after working hours, the volunteers started devoting two hours in cleaning up the area inside and outside the institute campus.

Methods

Plan of action

Inspiration

Following the speech of Prime Minister Mr. Narendra Modi motivating citizens to initiate *SBA @ 2 hours every week*, Prof AA initiated the program in campus and highlighted the importance of sanitation by role modelling of academics.

Vision/Mission

The mission was to convert PGIMER as a cleanest and the most beautiful campus in the entire world by active engagement of faculty and students.

Team coordination

One of the senior faculty members belongs to a family of retired paramilitary personnel where cleanliness and discipline is of paramount importance. This enabled him to disseminate the sanitation behaviour among students. This also catalysed development of a new social bond between students and faculty and mentorship between them has been established.

Roster preparation

An activity planner was decided among the volunteers in a weekly rotation to take the leadership of that week and pictures, collages and videos of *Clean India campaign* which was uploaded after each week’s activity. One more responsibility was to challenge other academicians for the clean India campaign. This instilled leadership qualities among the volunteers.

Standard Operating Procedure (SOP)

A SOP was generated based on the weekly activities as well as to initiate new volunteers who wanted to join this campaign.

Activities carried out by the volunteers

Picking up the scattered litter on roads and pavements

Volunteers of NRL regularly gathered at a place, each week (different from other week), soon after their lab work and spent 2 hours cleaning the dirty areas around and picked up litter as they walked through a stretch of about 1 km. This has continued unabated for past 229 weeks @ 2hrs each week.

Interaction with general public

After the weekly cleaning activity, the volunteers assembled to interact with the waiting visitors and patient relatives to educate them about the importance of clean surrounding as most of the people among them lacked awareness about benefits of proper sanitation (figure 1). They were also taught about usefulness of maintaining hand hygiene by relating it with communicable diseases. The handouts containing vital information were also distributed among the people.



Fig. 1: (A) An artist capturing the event on canvas, surrounded by interested onlookers. (B) Workers installing large dustbins at the Langar area outside institute main gate (C) One of the volunteers addressing the gathering explaining the importance of the campaign (D) People watching the video clips and cartoons related to the campaign.

Hand washing

The research team laid special focus on hand washing technique as it is important in preventing communicable diseases [12], as prescribed by World Health Organization (WHO) because most of the bystanders were poor, uneducated and uninformed individuals from different states. As infection spread through poor hand hygiene, proper hand hygiene has potential to save many diseases from spreading and is important technique for disease prevention. Volunteers demonstrated the hand washing technique (figure 2).



Fig. 2: Different activities to inspire and educate the patients. (A) Precaution while coughing and sneezing. (B) Standard Hand Rub procedure for hand hygiene. (C) A handout prepared by the volunteers to distribute among onlookers.

Pledge

After all the instructions were given, most of the people and volunteers gathered together to secure a pledge from onlookers and participants in order to keep the surroundings clean, just like they would keep their houses clean. Following the pledge, an informal consent was obtained from the team regarding wilful participation in the initiative, without any peer pressure.

Updating weekly campaign in Swachh Bharat website

All the information regarding SBA was uploaded on the government website www.swachhbharat.mygov.in in a weekly manner so that the team's progress was visible to all and others could derive inspiration from it.

The recent uploaded pictures can be reviewed at <https://swachhbharat.mygov.in/user/907433>

Challenging others to join the campaign

Volunteers also challenged many academicians every week. They also inspired common people during their interactions to further challenge additional 7-9 individuals such that these individuals could challenge another group and so on. As this network grew, the awareness of the importance of Cleaner India spread rapidly. So far, the volunteers of NRL have challenged more than 1800 individuals. More than 15,000-20,000 individuals have been influenced so far through this campaign.

Designing comics and article

Narratives related to sanitation were published in Annals of Neurosciences and other Pubmed resources, also profiled in the form of an educational comic, 'Magical Broom'. It was prepared for the children to highlight the importance of sanitation. This comic was distributed among kids, showcasing the real-life role modelling experience through look-alike characters. Magical Broom can be openly accessed at www.annalsofneurosciences.org. (figure 3)



Fig. 3: Comic "The Magical Broom", released by Neuroscience Research Lab to teach children's about Swachhta.

Celebrations during Prime Minister Mr. Narendra Modi's visit

It was a coincidence when the Honourable PM, himself visited the Institute for 34th Convocation in 2015. The cleanliness drive heightened up to the new level when the local administration went on a plantation, converting the barren land into lush green lawns, painting the outer wall of the Institute overwhelming the previously stained marks of urination and *tobacco masala*. The team members were equally thrilled to witness the sudden change as the team vowed to sustain the "PM effect" in the adopted area around main gate.

Results

Cleaner environment inside and outside the Institute

After 4 years of continuous efforts, the visible changes brought about in the immediate environment of the Institute has attracted both media and Govt, whether in the form of awards or citations. The area outside PGIMER main gate, which was adopted by the team, has brought a tremendous transformation in the level of cleanliness and general orientation of visiting patients who continue to transmit the message among themselves. The street vendors show increased responsibility towards managing their wastes.

According to the Peter F Drucker, management is about doing the things right and leadership is doing the right things [13]. The volunteers with the help of local people have shifted the *Langar* area to the concrete pavement so it is cleaned easily after distribution of meals. This one policy has shown a broad transformation and has been very effective in regulating the generation of waste.

Managing the patient population is the most challenging job, due to their short and periodic presence in the Institute for treatment. Therefore, educating and inspiring them towards sustained cleanliness and improved sanitation appears to be short-lived because the patients change over time. However, due to continuous weekly effort by the team, there is increased awareness and in maintaining cleanliness in the area. It is pertinent to mention here that due to the effectiveness of the campaign the Institute administration also played an important role in changing the landscape of the area over time. (figure 4)



Fig. 4: Activities done in various weeks.

Sensitizing the Administration

During the entire period of the campaign, an effort was also made to sensitize the PGIMER administration so that the increased state of cleanliness could be highlighted within the campus. Letters were written to the Director, Chief Security Officer, Municipal Commissioner and Sanitation Department of PGIMER appraising of the situation. This led to the installation of several dustbins in various pockets of PGIMER such as the Upper Cafeteria lawn, Auditorium lawn, Coffee Shop, Parking areas adjacent to Research Blocks. Sanitation staff was deputized to clean the glass windows of Research Blocks and at times their sanitation team also joined the *SB* campaign, accompanied by other students and faculty members. 'Rain Basera' (night shelters) were also erected by the administration in order to accommodate patient's relatives who would otherwise squat and urinate on the open ground and litter in the adjoining lawns.

As a result of the efforts, a mobile public toilet has been installed (figure 5). Additionally, the team offered to help the Dept. to manage their staff and their duties, their priorities, and most importantly their accountability to the work they were performing. Last but not the least, Ministry of Health and Family Welfare instituted the award which was bagged by PGI as the cleanest Hospital of India Awards: The Quality Council of India and the SKOCH awards were given to NRL in appreciation of the social outreach done by the team. On 15th October, 2017, the volunteers of NRL received "Ideas for Bharat Nirman" award under the category "Behavioral Change", at 3rd India International science Festival (IISF 2017).



Fig. 5: Showing the instillation of mobile toilet by the city administration.

The Social outreach narrative

The second most important aspect of this campaign was to create awareness among common men visiting the Institute or among those working there. Increment changes in the sanitation behaviour of vendors, who were initially uncooperative

with this team, could be seen integrating with the campaign, showing a sense of responsibility to protect the adopted area as their own. The experience of participating in the SBA was a unique experience to all the volunteers because they drew a lot of attention from the staff, friends and strangers alike whom they encountered on the streets. Every time the strangers captured the photos and videos of the team of volunteers and glorified their efforts with a promise to replicate the same in their villages and cities. The growing cleanliness in patient area catalyzed and motivated the volunteers further and they were encouraged to continue the *Abhiyaan*, widening its scope and impact.

Pilot evaluation shows promising outcome

It is usually difficult to sustain any changes imposed on people [14]. The results of an independent survey carried out by research group from Panjab University were shared with NRL volunteer's team of PGIMER. This included 91 subjects and showed that 42% were aware of Clean India Campaign even though there is a dynamic population of people from four states. Using theory of diffusion model [15, 16], we have illustrated (figure 6) the change that brought about by NRL volunteers in the society. The bell-shaped graph shows the population and the blue colour which represents the awareness created.

Introducing Academic Social Responsibility (ASR)

On the line of Corporate Social Responsibility (CSR), [17, 18] the author team under the leadership of Prof. AA conceived the idea of Academic Social Responsibility (ASR).

CSR is a business model that ensures sustainable business development by delivering benefits such as economic, social and environmental to stake holders. Similar to CSR, the academicians (scholars/students) ought to have a social responsibility and give back to the society [19]. NRL volunteers showed that 'gloves' in the hands of students are meant not only for experiments and surgeries but also for picking up waste as a social responsibility. Thus, they tried to establish a concept of Academic Social Responsibility (ASR) for serving the society [20], and developing a better and beautiful India by creating role models among the academicians.

Discussion

The activity of cleaning and collecting the garbage has often helped to sensitize the people about health and hygiene. Improved sanitation has pronounced effect on people's health and wealth. Sanitation is un-ignorable fact that not only saves lives but it is also associated with economic growth [21].

The NRL team set an example for their immediate locality by sustaining the program for more than 4 years, the longest social work ever taken up by any scientific community in the city. The volunteers continue to participate in the campaign creating awareness about Hand washing technique, coughing methods, educating the patients and bystanders about how infection originates and how it can be prevented by simple hand hygiene. Interaction with people also bridged the chasm that exists between the scientists and the society. Spreading awareness among citizens requires sustained effort. This is even more challenging for a country with 1.25 billion people, majority of whom are uneducated and poor and live in unhygienic surroundings. This necessitates an effort which is

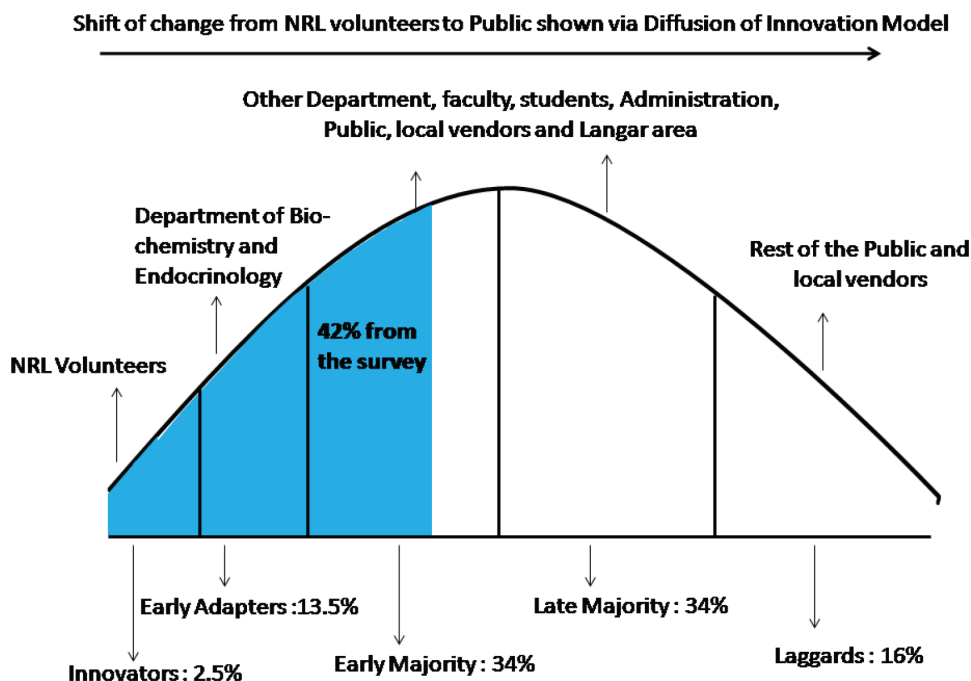


Fig. 6: Representing the response of SBA through theory of diffusion model.

locally addressed in all Institutions. Strict Laws and rules can add some impact to the cleanliness campaign because the enforcement of workmanship by street sanitation employees can ensure complete compliance to the job at hand. A study conducted among the residents of hygiene and sanitation practices in Thailand, Ethiopia and Kenya showed that continuous health education has failed in bringing the change in the practices of the households [22]. Unlike propagating only health education the volunteers themselves worked on the ground around the campus along with creating awareness of sanitation and hygiene which has made a stronger impact.

House wives and mothers are the primary teachers of the children and lead the practices of the entire house. A study conducted in the rural West Bengal has focused on the behaviors of the unsafe disposal of child faeces showed a prevalence of 72.4% [23]. An initiative like the one from the PGI showcasing a behavioral change that can be brought among mothers during their hospital stay which can bring change in the community. The change of bringing out the research scholars and the doctors from the closed environments or laboratories to the on-ground was quite effective. They were successful in instilling a civic responsibility among the public. This also decreased the superior and inferior concept between the educated and uneducated sectors of society which is quite prevalent in India.

A study from the villages of Uttar Pradesh and Madhya Pradesh shows that 76% are unaware of SBA and its implications [24]. PGI provides care to around 8500 people per day who comes from various regions of the India. Being a government institution and its cost-effective treatments, it accommodates mostly the rural population; awareness and inculcation of sanitation importance would be a little easier which makes it more sustainable because of its extensive outreach. This approach can also be replicated in schools. It is easy to train the teachers to emphasize cleanliness among school going kids. It could be incorporated as a practical activity with credits for kids.

According to Union budget, 2017 which states, 60% of sanitation coverage has been improved in the rural India [25]. To reach out to rest of the India, NRL volunteers would suggest taking the NRL volunteered PGI initiative as a working model for the sanitation awareness by the government and implementing in all the educational institutions (Medical or otherwise).

Challenges during the Journey of Swachh Bharat Abhiyan

Many challenges were faced by the team of volunteers who led the Clean India activity spreading awareness. With the assistance of sanitation Department, the major areas of activity were identified where garbage was generated and remained unattended. The volunteer team started randomly cleaning the area around the institution and finally adopted the area outside PGIMER main gate (and vowed to transform that unhygienic entrance of PGIMER into a defecation free entrance). The

activity became more and more organised with regular adherence to rosters. The campaign has been criticised by many academic intellectuals within the Institution suspecting the motive behind this but the response was spontaneous: "*Jab jago tabhi savera*" (it's never too late) confessing that the inspiration came from the honourable Prime Minister's Oct 2, 2014 speech.

Conclusion

This program is unique, novel and rarely seen especially in institutional setting which is acting as catalyst for the promoting better health care delivery which can be seen by the improvement in roadsides, lawns, parking lots appear cleaner than before, the pot holes have been converted into green patches; the site of paper plates, thrown away by the patients, have been replaced by signboards. This gave a tremendous sense of achievement and immensely satisfying experience among the NRL volunteers.

Such an effort could be emulated by other Institutions in India and other African or Asian countries where similar conditions exist. The knowledge, expertise and management skills of the faculty have not been adequately exploited in this direction so far.

Conflict of interest

The authors declare that there are no conflicts of interest.

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